

Adventures Around the Farm



Whether living in the country, a small town, or a big city, people depend on farms for food, clothing, and many other things used every day. Farmers produce crops such as fruits, vegetables, nuts, and grains. They also raise livestock such as cattle, pigs, chickens, and sheep. Without the crops and livestock that come from farms, we would all go hungry.

In the song, Old MacDonald had a little bit of everything on his farm. A long time ago, many farmers raised a wide variety of livestock and crops, but only a small amount of each. Over time, farms have changed dramatically. Today, family farms usually raise just one kind of livestock or two or three crops. Now we have grain farms, cattle farms, poultry farms, and so on.

The lessons and materials in this kit will help students understand what a farm is, what farmers do, and what comes from farms. They will also learn that there are many different kinds of farms. Students will learn that while we purchase our food from the store, it begins with plants or animals raised on farms, which are the heart of the agriculture industry. From the farm, products are transported, processed, marketed and distributed, involving a multitude of agricultural careers in this chain of events. Through this kit, students will discover that they all depend on agriculture every day of their lives.



Adventures Around the Farm



Table of Contents

- General Introduction
- Vocabulary/Top Terms
- Arts & Crafts
- Music & Rhythm
- Snacktivities
- Language Arts/Poetry
- Math
- Science
- Social Studies
- Reproducible
- **More** – List of websites, videos, books and posters (not found in kit)

Adventures Around the Farm

Table of Contents

▪ Overview

1. Introduction
2. About this Kit
3. Inventory
4. Inventory & Prices

▪ Vocabulary/Top Terms

1. Vocabulary List
2. Vocabulary List Flash Card Size
3. Vocabulary Cloze Activity and Answer Key

▪ Arts & Crafts

1. Paper Plate Pig, Wooly Sheep, Hand Print Animals
2. Horseshoe Sponge Printing, Paper Plate Turkey, Grazing Cows
3. Muddy Pigs, Stuffed Animal Shapes, Feather Painting
4. "Pig Food" Prints, Tissue Paper Ducks, Magazine Collage
5. Build a Farm
6. Horse-ing Around With Puppets
7. "B" is for Chicken?
8. Paper Weaving
9. Additional Arts & Craft Ideas

▪ Music & Rhythm

1. Agriculture is a Big Word Project
2. Farm, Food and Fun Project
3. Farm Songs
4. Finger Plays
5. Physical Education Activities and Games
6. OK AITC Physical Education Activities List and Link

▪ Snacktivities

1. Chef Combo
2. Bee Line newsletter of ideas
3. "Udderly" Delicious!
4. Yummy Barns
5. Tractor Treats
6. Vegetable "Crop" Crackers & Happy Hay Stacks
7. Additional Snacktivity Ideas

▪ **Language Arts/Poetry Lessons**

1. Adventures Around the Farm Student Reading
2. A Day Without Agriculture
3. Agriculture - It's More Than You Think
4. Between the Slices
5. Farmer Grows a Rainbow
6. Illinois Agriculture in Primary Colors
7. Grain...A Farm Hazard
8. Barnyard Bingo
9. Farm Symphony poem activities
10. Poetry
11. Vocabulary Cloze Activity and Answer Key

▪ **Math Lessons**

1. Adventures Around the Farm Glyph
2. Farm Logic Puzzle
3. Agriculture Counts
4. Corners
5. Introductory Lesson (Edible Numbers)
6. Have You the Time of Day?
7. Farmer's Share
8. My Little Farm: Money, Place Value and Mapping

▪ **Science Lessons**

1. What is a Farm? The Farm Charm
2. How Many Hats Does a Farmer Wear
3. Butter Making
4. Farm Equipment
5. Mighty Machines
6. Now You Have It, Now You Don't
7. Where does food come from?

▪ **Social Studies Lessons**

1. My Farm Web
2. Source Search
3. Agriculture in Your Life
4. Illinois Lunchables
5. Career Bingo
6. From Tassel to Table Chain
7. Growing with Technology
8. Where Does It Come From
9. Back to the Farm

Reproducibles

1. Ag Mag Jr. and Teacher's Guide
2. Can You Have a Day Without Agriculture?
3. Facts About Farms Pretest/Posttest
4. Farm Animals Pretest/Posttest
5. Where Did It Come From? Work Sheet
6. Beef Writing Page
7. Complete the Sentence With "M"
8. Making Connections -- With Words
9. Farm Scramble Sentences
10. Agricultural Word Search & Answer Key
11. Farm Animals coloring page
12. Could we live without any farmers? writing page
13. Down on the Farm booklet
14. 10 Days of Farming booklet/song
15. My Visit to the 4-H Fair booklet
16. Farm Animal Book for Early Readers
17. Life On a Farm Shape Book
18. Mr. Bens Farm
19. Graphing the Farm
20. Taking the Dog for a Walk
21. Farm Animal Families
22. Farm City Venn Diagram
23. Farm Verbal Analogies
24. Which Picture Does Not Belong?
25. Lamb Maze
26. Farm Animal Report
27. Life of a Farm Report

▪ More

1. Agricultural Web Sites
2. Dates to Celebrate Agriculture
3. Learning Centers/Stations Ideas
4. Year 'Round Farming Ideas
5. How Does Your Farm Grow? Unit
6. Family Farm thematic Ideas
7. Mini Farm Picture Ideas
8. Agricultural Information Sheets for Parent Letters
9. Suggested Additional Resources

▪ Additional Items on CD

1. If It Weren't for Farmers booklet
2. If It Weren't for Farmers powerpoint
3. Agriculture is a Big Word Project music files
4. Farm, Food and Fun Project music files

Adventures Around the Farm

Kit Objectives

1. To promote the incorporation of agricultural concepts into the classroom curriculum.
2. To provide an easy-to-use collection of valuable resource materials in order to help pre-kindergarten through 3rd grade teachers create or enhance an agricultural unit on a topic or theme such farming or farm animals.
3. To provide a selection of activities and necessary supplies to teach about the chosen topic or theme while addressing Illinois Learning Standards across all subject areas.

Some Notes on Using the Kits:

Kit Contents - The kits are intended to be “resource materials” kits. Due to the number of activities included in the various books and guides only a limited number of hands on supplies are provided.

Illinois Learning Standards – Illinois Learning Standards have been identified and are listed in each subject area.

Web sites - To further assist teachers and students seeking information on agricultural topics, a list of related web site addresses has been provided in each kit in the More section of the notebook.

Teacher Input - Please feel free to add your own favorite activities that relate to this kit to the **More** section of this binder.

Each Kit also includes:

- **Cover Page for each discipline addressing Illinois Learning Standards**
- **Prices and Inventory Page of the kit and materials**
- **Student reading page in Language Arts/Poetry**
- **Vocabulary Cloze Activity in Language Arts/Poetry**
- **Logic Puzzles in Math**
- **Glyphs in Math** - *What is a glyph?* According to the 1992 Webster's College Dictionary a glyph is a pictograph or hieroglyph; any symbol bearing information non-verbally such as a handicap accessible symbol in the restroom. *Why use glyphs?* Glyphs allow students to collect, display, and interpret data about themselves and other meaningful topics. This activity will also allow the student to practice using a legend in the creation of the glyph.

Adventures Around the Farm Inventory

Books

All Around the Farm by Heather Alexander
Where Does Food Come From? by Shelley Rotner & Gary Goss
Petting Farm board book & DVD set by Scholastic
Barnyard Games and Puzzles by Storey Publishing
A Day in the Life of a Farmer by Heather Adamson

Posters

The Petting Farm Poster Book by Storey Publishing

Videos/DVDs

Agriculture is Everyday
Petting Farm board book & DVD set by Scholastic
Show & Tell Series DVD - Milk & Cookies, Bats & Balls, News & Comics
Tractors, Combines & Things on the Grow
Tractors, Cotton-Pickers & the Stuff Kids Wear

Other Resources

My Little Farm - Money, Place Value and Mapping
Professor Noggin's Life on the Farm card game
Fun on the Farm, Fun with Animals, Fun with Plants
Fun on the Farm Activity Booklet from Illinois Farm Service Agency
grain samples (corn, soybeans, wheat)
farm stamps - set of 14
farm stencils - set of 12

Adventures Around the Farm Kit Inventory

Quantity	Item	Source	Price	Other Notes
1	All Around the Farm by Heather Alexander	DK Publishing	\$12.99	ISBN 0-7566-2977-2
1	The Petting Farm Poster Book	Storey Publishing www.storey.com	\$9.95	ISBN 1-58017-597-X
1	Where Does Food Come From? by Shelley Rotner & Gary Goss	Lerner Publishing	\$22.60	ISBN 0-7613-2935-8
1	Petting Farm board book & DVD set by Scholastic	Scholastic, Inc. Eileen Parsons, Midwest Region Sales Rep. (800)387-1437ext 315	\$12.99	ISBN 0439885582
1	A Day in the Life of a Farmer by Heather Adamson	Capstone Press (800)747-4992	\$15.95	ISBN 0-7368-2283-6
1	Agriculture is Everyday video by Illinois Farm Bureau	(available from you county agricultural literacy coordinator)	? \$4	IAITC may reissue possibly at cost \$4? - if so DVD preferred
1	Show & Tell Series DVD which includes: Milk & Cookies, Bats & Balls, News & Comics)	Library Video Company www.libraryvideo.com (800)843-3620	\$14.95	Item V1129
1	Tractors, Combines & Things on the Grow	Just Our Size Videos	\$19.95	
1	Tractors, Cotton-Pickers & the Stuff Kids Wear	Just Our Size Videos	\$19.95	
1	My Little Farm - Money, Place Value and Mapping	The Math Learning Center (800)575-8130 mathlearningcenter.org	\$25.00	Item #:BOLF

1	Professor Noggin's Life on the Farm card game	Outset Media (877)592-7374	\$9.99	
1	Barnyard Games & Puzzles	Storey Publishing www.storey.com	\$9.95	ISBN 1-58017-597-X
1 set	Fun on the Farm, Fun with Animals, Fun with Plants	Illinois Agriculture in the Classroom	free	
1 set	grain samples (corn, soybeans, wheat)	Bunselmeyer farms	free	In large jewelry bags
30	Fun on the Farm book	Illinois Farm Service Agency	free	
1 set	farm stamps (14 assorted designs 3")	Discount School Supplies http://www.discountschoolsapply.com/Product/ProductDetail.aspx?product=1509	\$9.49	Item #: 8WWEGFS
1 set	farm stencils (12 assorted designs 5")	Oriental Trading (800)875-8480 www.orientaltrading.com	\$4.95	Item IN-56/6043
			\$192.71	

****Note:** These prices and sources are current at time of assembly only. Prices and availability are subject to change.

Adventures Around the Farm Vocabulary List

acre - a unit of land measurement equal to 43,560 square feet (about the size of a football field)

agriculture - the science of growing crops and raising livestock to produce food, clothing, and other products useful and necessary to mankind

barn - a building used to protect animals and store farm supplies and equipment

combine - a machine that harvests crops by cutting the plants and taking out the seeds while moving over a field

crops - plants that are grown and harvested to become food and other products for people and animals

farm - a place where people grow crops and/or raise livestock

farmer - a person who earns a living by growing crops and/or raising livestock

fiber - material such as cotton or wool that can be spun into yarn to make clothing and other products

field - an area of land put to special use, such as planting crops

harvest - to pick or gather crops

livestock - animals kept or raised on farms such as cattle, pigs, sheep, and horses

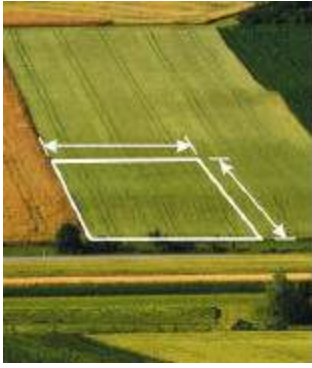
machine - a device that does work

machine shed - a building used to store tractors, combines, and other farm machines

tillage - using machines to make fields ready for planting

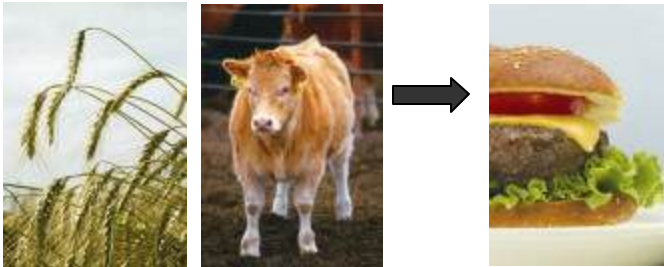
tractor - a machine used to push and/or pull other machines

acre



a unit of land measurement equal to 43,560 square feet (about the size of a football field)

agriculture



the science of growing crops and raising livestock to produce food, clothing, and other products useful and necessary to mankind

barn



a building used to protect animals and store farm supplies and equipment

combine



a machine that harvests crops by cutting the plants and taking out the seeds while moving over a field

crop



plants that are grown and harvested to become food and other products for people and animals

farm



a place where people grow crops and/or raise livestock

farmer



a person who earns a living by growing crops and/or raising livestock

fiber



material such as cotton or wool that can be spun into yarn to make clothing and other products

field



an area of land put to special use such as planting crops

harvest



to pick or gather crops

livestock



animals kept or raised on farms such as cattle, pigs, sheep and horses

machine



a device that does work

machine shed



a building used to store tractors, combines, and other farm machines

tillage



using machines to make fields ready for planting

tractor



a machine used to push and/or pull other machines

Adventures Around the Farm Cloze Activity

Name: _____

Use the word bank to complete each sentence.

Word Bank

acre

farmer

machine shed

barn

fibers

tillage

combine

livestock

tractors

1. The first grade students saw dairy cows and a corn field when they visited the Jones Dairy _____.
2. When our family went to the fair, we walked through the _____ barns full of farm animals.
3. The farmer went to the _____ to check on the animals.
4. Some _____ have 4 wheels and no cab while others are much larger with 6 wheels and a cab to sit in. They can be almost any color of the rainbow.
5. The wool _____ in my sweater help keep me warm on cold winter days
6. In the Spring, we see farmers using _____ equipment before they plant the seeds.
7. In the fall of the year, people driving by the fields may see a _____ harvesting the corn and soybeans.
8. When we drove by the Smith Family Farm, we saw them working on a tractor inside their _____.
9. We watched the farmer harvest a 20 _____ field of wheat by our house.
10. One _____ produces enough food to feed 140 people.

Adventures Around the Farm Cloze Activity Answer Key

Name: _____

Use the word bank to complete each sentence.

Word Bank

acre	farmer	machine shed
barn	fibers	tillage
combine	livestock	tractors

1. The first grade students saw dairy cows and a corn field when they visited the Jones Dairy Farm.
2. When our family went to the fair, we walked through the livestock barns full of farm animals.
3. The farmer went to the barn to check on the animals.
4. Some tractors have 4 wheels and no cab while others are much larger with 6 wheels and a cab to sit in. They can be almost any color of the rainbow.
5. The wool fibers in my sweater help keep me warm on cold winter days.
6. In the Spring, we see farmers using tillage equipment before they plant the seeds.
7. In the fall of the year, people driving by the fields may see a combine harvesting the corn and soybeans.
8. When we drove by the Smith Family Farm, we saw them working on a tractor inside their machine shed.
9. We watched the farmer harvest a 20 acre field of wheat by our house.
10. One farmer produces enough food to feed 140 people.

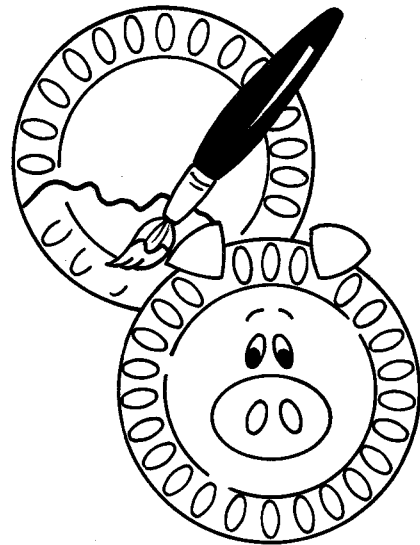
ARTS AND CRAFTS

Paper Plate Pig

Skills: Gluing, Coloring or Painting, Creativity

Activity:

Cut different sizes and styles of pig eyes, noses and ears from pink construction paper. Give each student a paper plate and allow him or her to color or paint the paper plate pink. Allow each student to choose two eyes, two ears and a nose from the selection. Give the students glue or paste and allow them to attach the face parts to their pink plates.

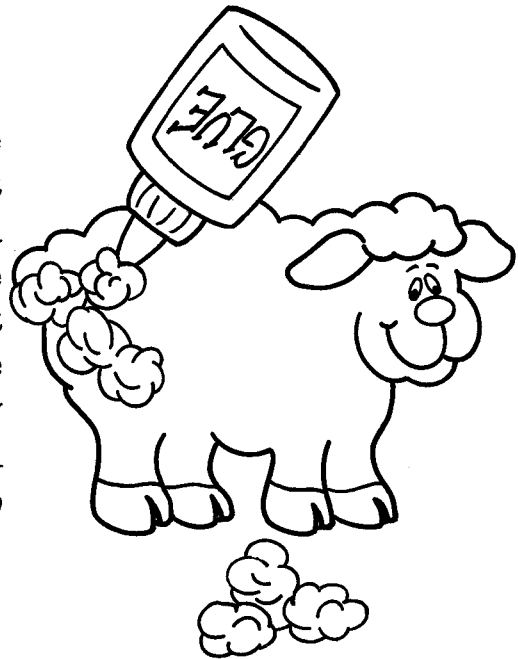


Wooly Sheep

Skills: Creativity, Drawing, Tearing

Activity:

Copy and cut out one sheep pattern from page 40 for each student, glue to tagboard, and cut around the shape. Pass out black, brown, and gray crayons and allow each student to choose a color to color the sheep's features. Set out cotton balls and allow students to glue or paste them onto their sheep. If you wish, you may make a class display by tacking up a barn and fence and allowing students to put their sheep inside the fence.



Hand Print Animals

Skills: Drawing, Cognitive Skills

Activity:

Paint each student's palm the color of any of the following animals: rabbit, turkey, pig, cat, pony, cow, or horse. Have the student press his palm on a piece of construction paper. When dry, allow the child to use crayons, markers, paint or construction-paper shapes to add the animal's face, tail, markings, etc. Encourage the student to draw a background showing the animal's environment (where it sleeps, what it eats, etc.).

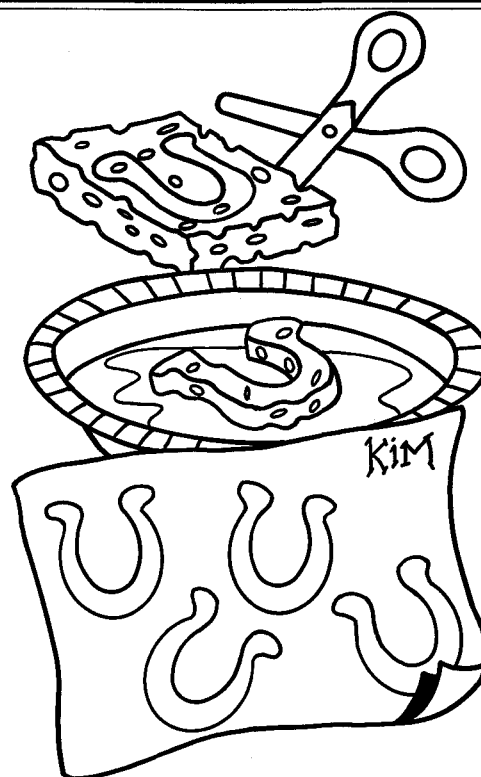
Arts and Crafts

Horseshoe Sponge Printing

Skills: Printmaking, Shape Identification

Activity:

Cut horseshoe shapes from sponges. Allow the students to dip sponges in the colors of paint they choose. Encourage students to print the horseshoes several times to make patterns or designs. Discuss horseshoes and good luck. Explain that the horseshoe is hung in the direction of a "U" over doorways so that the "luck doesn't run out." Encourage students to repeat the tale to their parents and hang the horseshoe designs over a door at home.

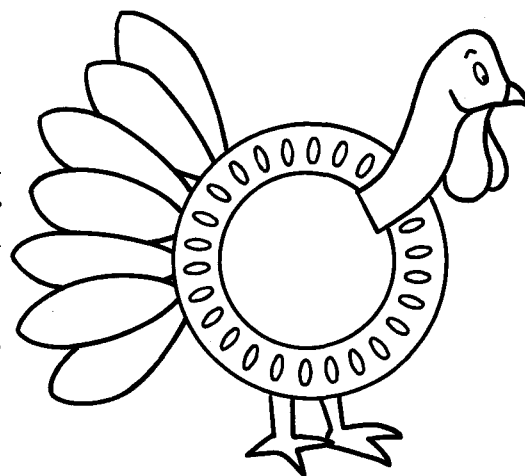


Paper Plate Turkey

Skills: Decision Making, Creativity, Gluing

Activity:

Cut turkey feathers, heads, wattles, eyes, beaks, and feet from colorful construction paper. Allow each student to choose parts for his or her turkey from the selection. Allow students to be creative with their choices. Allow the students to glue or paste their parts on paper plates to create turkeys.

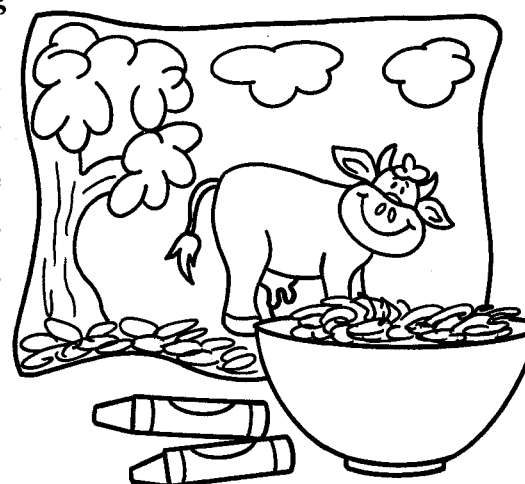


Grazing Cows

Skills: Pre-Writing, Cognitive Ability, Gluing

Activity:

Copy, cut out, and glue cow shapes from page 34 to tagboard. Cut around the shapes. Allow each student to trace a cow shape onto blue construction paper. Encourage the students to decorate their cows and draw a background (barn, trees, clouds, etc.) without grass. Have a bowl of plastic grass available for the students to add to their pictures using glue.



Muddy Pigs

Skills: Pre-Writing, Tactile Ability

Activity:

Give each student a piece of pink construction paper cut in the shape of a pig. Prepare for finger painting. Allow each student to use brown fingerpaint or tempera on the construction paper to simulate mud. For a nice display, use brown bulletin board paper to create a large puddle and allow the students to tape their dry pigs in the puddle.

Stuffed Animal Shapes

Skills: Drawing, Stapling

Activity:

Cut pairs of farm animal shapes from a variety of colors of large construction paper. Allow each student to choose an animal to decorate with crayons or markers. When the students are finished decorating, allow them to choose free play activities so that you may help a few students at a time. Help each student staple around the edges of the shape leaving about four inches unstapled. Show the student how to wad up newspaper and insert into the animal. When the animal shape is full, help the student finish stapling the animal closed. You may wish to hang the shapes from the ceiling to display.



Feather Painting

Skills: Drawing, Decision Making, Painting

Activity:

Copy and cut out turkeys, geese, ducks and chickens from pages 33, 35, 38, and 41. Allow the students to use feathers and paint to decorate their animals.

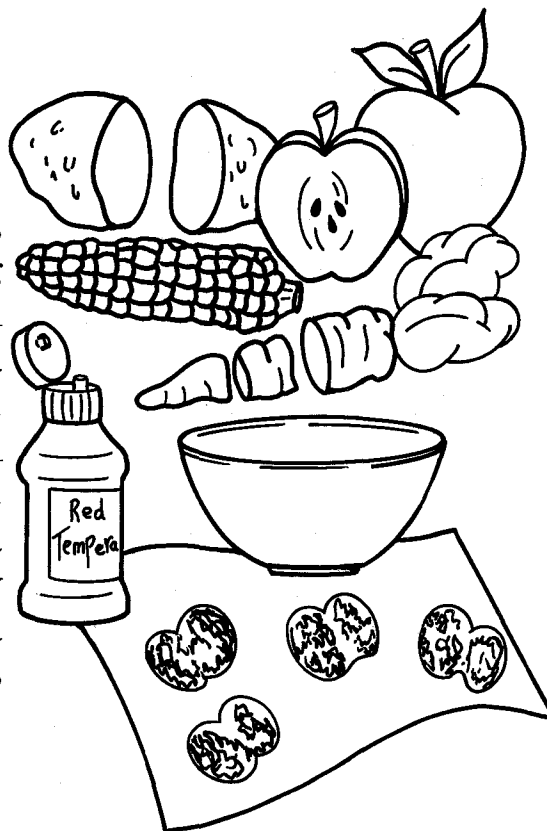
Arts and Crafts

"Pig Food" Prints

Skill: Printmaking

Activity:

Prepare vegetables and fruits such as carrots, potatoes, apples, etc., for printing by cutting into hand-sized pieces. Prepare the room and students for painting. Have small bowls of a variety of colors of tempera paint available. Allow the students to dip the "pig food" in the paint and press onto construction paper. Let them roll corn on the cob in paint on a meat tray and roll on their papers. Display idea: Draw a pig wearing a bib and holding a spoon. Have students tape their pictures around the hungry pig.



Tissue Paper Ducks

Skills: Tearing, Gluing

Activity:

Cut duck shapes from white construction paper. Give each student a sheet of yellow tissue paper. Instruct the students to tear their tissue paper into small pieces. When they are finished tearing the tissue paper, allow them to glue it onto their ducks. If you wish, you may use blue bulletin board paper to create a large duck pond. Allow the students to place their ducks in or around the pond.

Magazine Collage

Skills: Observation, Cutting, Tearing, Gluing

Activity:

Allow the students to look through old magazines such as *Ranger Rick* and *Your Big Backyard* to find pictures of farm animals. Have students cut or tear the animals they see from the magazines. When they have finished gathering animals, instruct them to glue or paste their animals on construction paper. When finished, have each student show the class his picture and name the animals he discovered.

Build a Farm

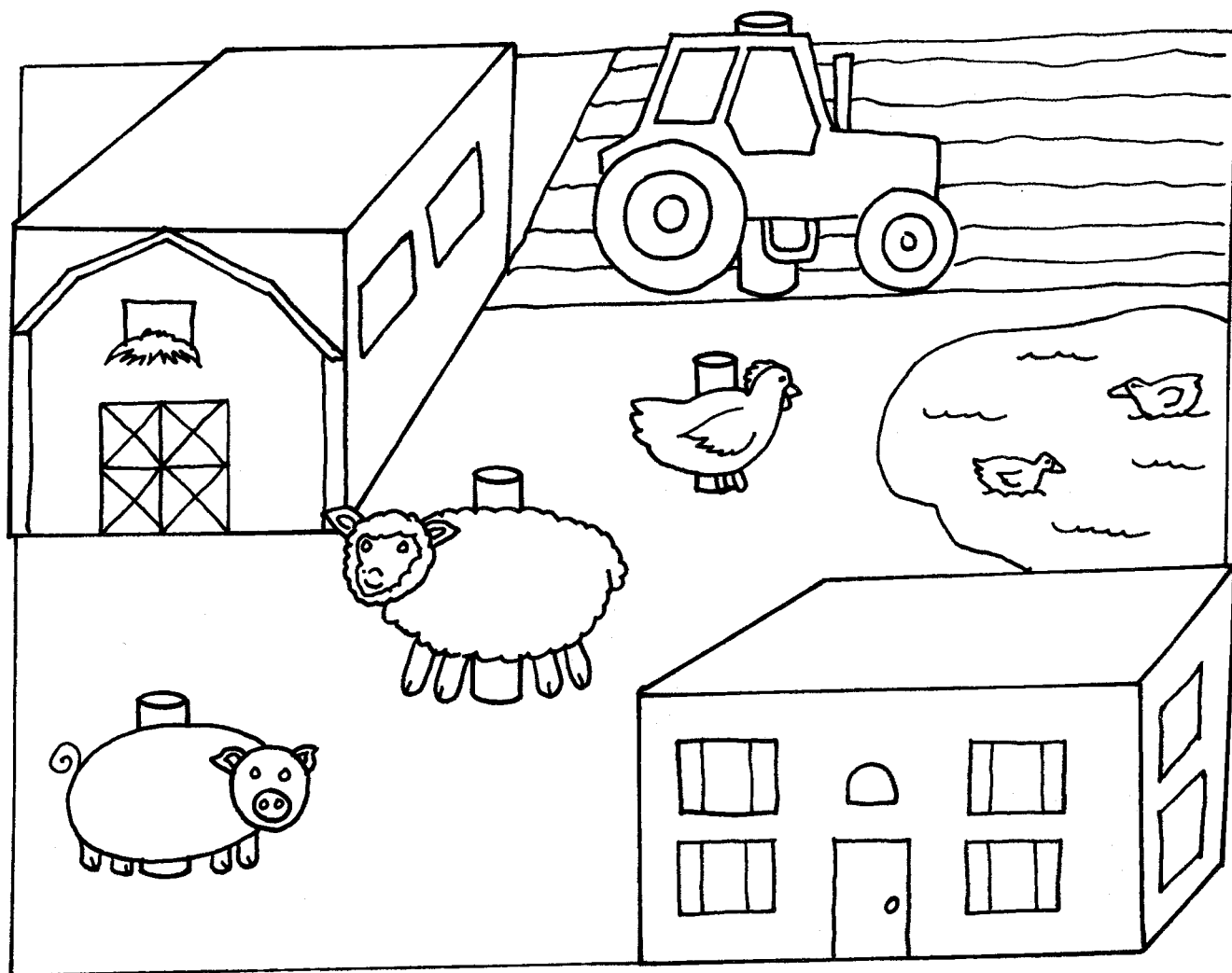
You will need the following:

- lots of cardboard tubes, cut in 3"x 6" lengths (7.5 cm x 15 cm)
- heavy drawing paper
- crayons
- stapler
- scissors

Directions: Your farm may include vegetables, animals, or both.

Children may work in groups to draw assigned pieces. Cut around the pictures and staple them to short lengths of tube so they will be free standing.

To use: This will make a large floor display for a free-time activity center. You may add brown paper for fields and blue paper for a pond. Complete your house and barn made from shoe boxes and a free-standing farmer and tractor. Children may count and categorize the animals and plants in many ways: by color, size, sound, etc. Use the farm for language development and story writing by changing the scenes periodically.



Horse-ing Around With Puppets

Skills

-  Following directions
-  Art: Sock puppet
-  Oral language

Steps:

1. Stuff the sock with newspaper or plastic bags. **Make sure that the foot of the sock is full, so that the head of the horse will be full.**
2. Tie a rubber band around the end to hold the "stuffing" in place.
3. Use a hot glue gun or tacky glue to apply the wiggly eyes and the yarn strips for hair too!
4. Use a marker to add the nose at the toe of the sock.
4. Use brown construction paper to make 2 triangles for ears.
6. Stick the dowel rod into the sock and make sure that it is secure under the rubber band.
7. Take Fritz for a ride! Yee-Haw!

Please Note: For hand puppet version, simply leave out the stuffing and the rubber band.

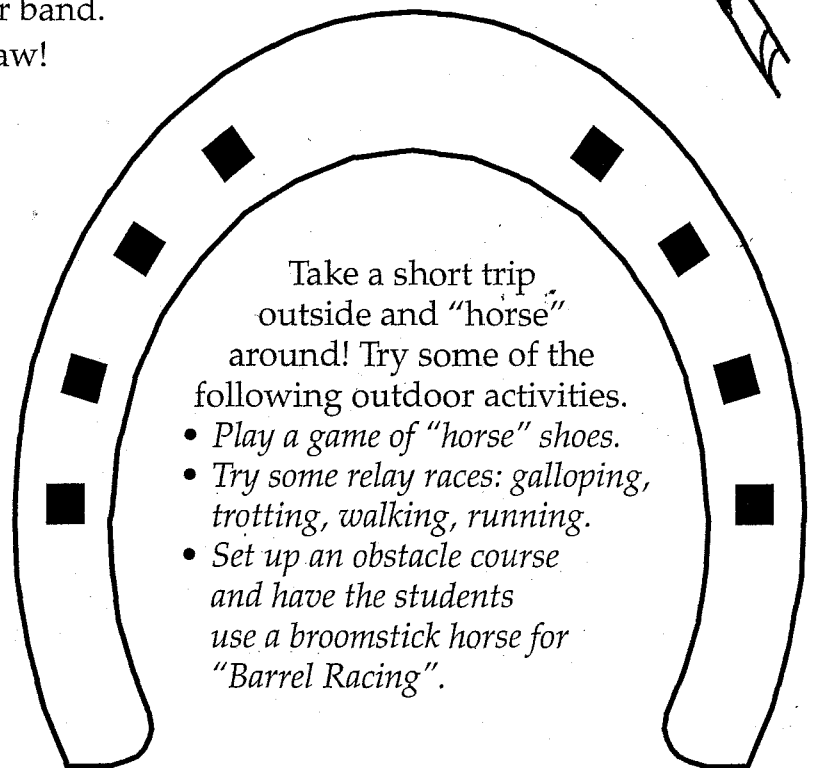
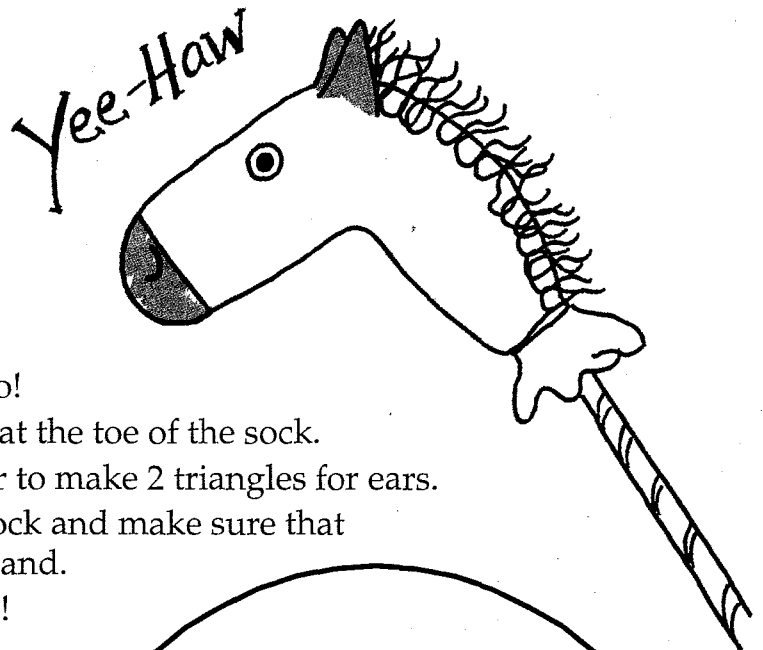
**Now you're
"Rearing" to go!**

Fritz Extension Activity:

At the end of the HORSE section, have a short celebration! Sit on straw bales and nibble on some "horse" food; carrots, apples and lettuce.

Materials Needed: (per student)

▲ 1 long white tube sock	▲ Brown construction paper
▲ 1 8-12" dowel rod	paper
▲ Rubber bands	▲ Wiggly eyes
▲ Newspaper or plastic bags (stuffing)	▲ Marker
▲ Yarn (hair)	▲ Hot glue gun or tacky glue (teacher use)



Take a short trip outside and "horse" around! Try some of the following outdoor activities.

- Play a game of "horse" shoes.
- Try some relay races: galloping, trotting, walking, running.
- Set up an obstacle course and have the students use a broomstick horse for "Barrel Racing".

6 B 9 is for Chicken?

Skills:

-  Higher-level thinking
-  Animal sounds
-  Beginning sounds
-  Creative Writing

Read aloud, Q is for Duck.

Activities:

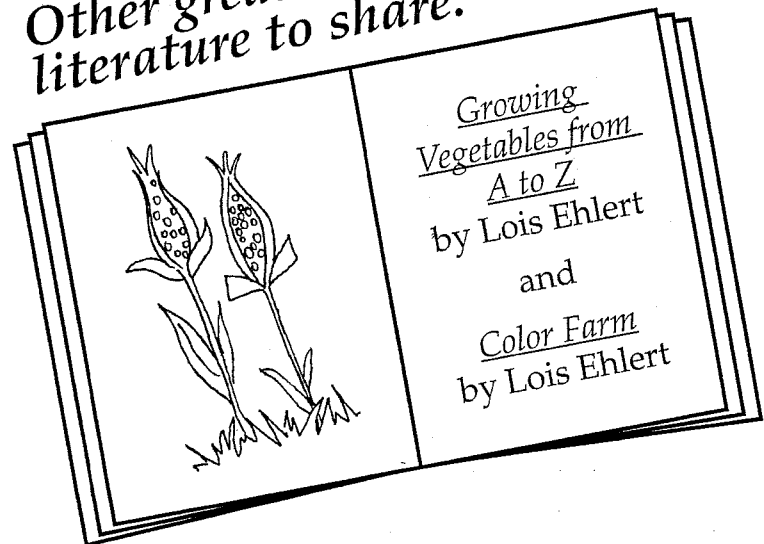
1. Make a class list of farm animals and the sounds that each make.
2. Underline all the **beginning** letters of the animal names and the animal sounds.
3. Using the "riddle" pattern from the book, make a farm book for your class. Pick a title such as, "A is for Farm". Using your title, have the students help write the class story. (Examples: "A is for farm because **animals** live there." "B is for chicken because a chicken says, "Baww".) Each student can then illustrate one page in the book.

Pre-K Activity:

Please Note: An easier version for Pre-K would be a simple A-B-C animal book.



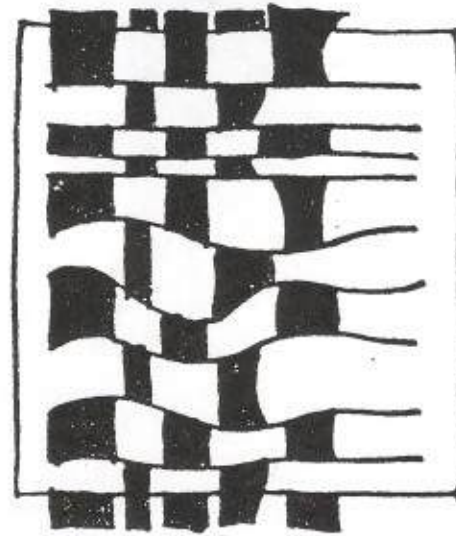
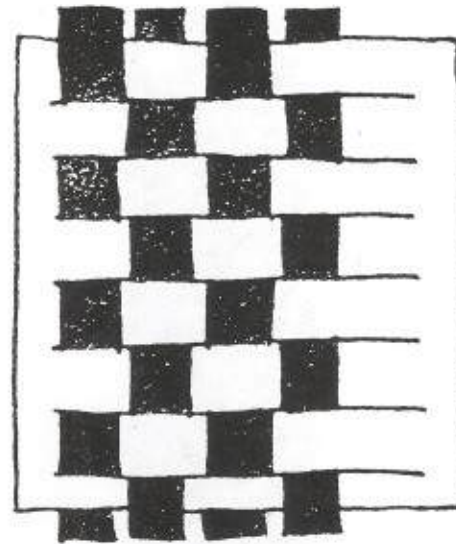
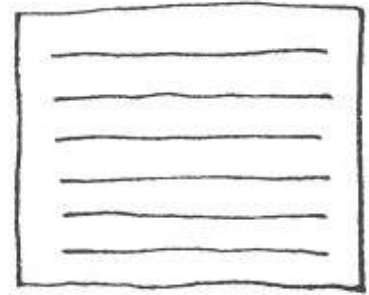
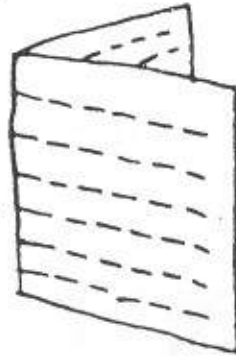
Other great literature to share:



PAPER Weaving

Paper weaving is a good place to start if you've never tried to weave before.

1. Fold a piece of paper in half and make cuts from the fold out to about 1" from the edge. Open the paper. This will be your "warp."
2. From another piece of paper cut long narrow strips to weave in and out of the warp.
3. To make your weaving more interesting you can vary the width of the spaces between your warp cuts, or make your warp cuts wavy. You can also vary the width and shape of the strips you weave in. Use several different colors of paper.
4. To finish, glue or staple the strips in place along the edges.



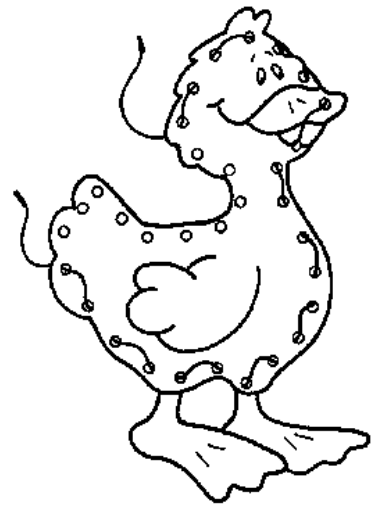
Additional Arts & Craft Ideas

Farm Reading Trackers

Mount small farm pictures on cardstock or index cards and laminate. Glue or Velcro these pictures to craft sticks. Place the craft trackers in a decorated can for the students to choose when reading their books.

Lace Up Cards

Use any pictures or patterns. Make several copies and cut them out. Then glue the pattern to tagboard, and laminate. Use a hole punch to make holes about one inch apart and one-half inch from the edge around the border of the pattern. Have the students lace the patterns with shoelaces. Variation – instead of making several copies of one pattern, use a variety of patterns to use as lace up cards.



Model Farm

My Little Farm: Money, Place Value and Mapping curriculum located in this Adventures Around the Farm kit has students create a model farm. These resources may be used other ways.

Agriculture Is A Big Word

(CHORUS)

Agriculture is a BIG word
Agriculture's hard to say
It's raising plants or animals
For food-- or in other ways

Agriculture is dirt called soil
Agriculture is farms
Let's learn to take care of them
And keep them from any harm

CHORUS

Agriculture feeds the world
Agriculture shares land
Let's try to spread the word
Let's give it a helping hand

CHORUS

(Bridge)

Agri-cul-ture
It's a lot to say
Agri-cul-ture
We're helping it to stay
Agri-cul-ture
It's a lot to say
Agri-cul-ture
We're helping it to stay

(CHORUS)

**Agriculture is a BIG word
Agriculture's hard to say
It's raising plants or animals
For food-- or in other ways**

Agriculture has much to give
Agriculture is great
Ask a farmer questions now
And learn a lot today

Yes, ask a farmer questions now
And learn a lot today

**Agriculture is a BIG word, Agriculture is a BIG word,
Agriculture is a BIG word....**

To listen to all the songs in the "Agriculture is a BIG word!" project, visit the following web site under agricultural education, hands-on learning, and music <http://www.marketplaceforthemind.state.pa.us> The music files are also available on the Adventures Around the Farm CD located in this kit.

Written By KJ Reimensnyder-Wagner, 2005. Music part of "Agriculture is a BIG word!"
Special thanks to the Pennsylvania Department of Agriculture and the
Agriculture Awareness Foundation of Pennsylvania for the grant to produce this project.

Trees, Trees

When I was just a girl, I stayed there all the time
Nestled in as quiet as could be
The leaves would make it cool beneath a setting sun
I knew it was a special place for me.

(CHORUS)

Trees, Trees

What do ya think of trees

Plant some and they give us oxygen to breathe

Trees, Trees

What do ya think of trees

Go out and get a shovel-and-plant some trees, please!

They start with just some roots that work into the ground
The rain and sun together make them grow
They give us tasty fruit and leaves, a pretty green
Oh so many things that you should know

CHORUS

They give me lots of shade, hide me from the wind
Keep the noise away to help me sleep
They keep the precious soil from eroding there below
There are many, many kinds of awesome trees.

(Bridge)

*You can make a great canoe, or build a ladder high
Create a pretty house that you can live in
You can make a rocking chair for Granddad when he's old
All of this is from the wood the tree's been.*

CHORUS

Trees, Trees

What do ya think of trees

Plant some and they give us oxygen to breathe

Trees, Trees

What do ya think of trees

Go out and get a shovel-and-plant some trees, please!

(Kids can whistle along with the melody)

Every year or so I'll look out on the lawn

And celebrate the passing of the time

I've planted many trees for very special days

My yard so filled with trees of every kind

CHORUS

Spruce, Oak, Willow and Pine

I love these trees; Can they be mine?

Maple, Ash, Aspen, Beech

Oh, I love Pennsylvania's trees!

CHORUS to end song

To listen to all the songs in the "Agriculture is a BIG word!" project, visit the following web site under agricultural education, hands-on learning, and music <http://www.marketplaceforthemind.state.pa.us> The music files are also available on the Adventures Around the Farm CD located in this kit.

Written By KJ Reimensnyder-Wagner, 2005. Music part of "Agriculture is a BIG word!"
Special thanks to the Pennsylvania Department of Agriculture and the
Agriculture Awareness Foundation of Pennsylvania for the grant to produce this project.

Mr. Farmer

Mr. Farmer....Where's your cow?

Mr. Farmer...Is he in the mow?

Can we hear him...nice and loud?

MOOOOOOOOOOOOOOOOOOOOOOO! (child imitates animal)

Mr. Farmer...Where's your horse?

Mr. Farmer...He's here, of course

Can we hear him...with such force!

NEYYYYYYYYYYYYYYYYYYYYYY! (child imitates animal)

Mr. Farmer...Where's your pig?

Mr. Farmer...Does he wear a wig?

Can we hear her...does she do a jig?

OINKKKKKKKKKKKKKKKKKKK! (child imitates animal)

Mr. Farmer...Where's your duck?

Mr. Farmer...With any luck

Can we hear him...with his honker stuck?

QUACKKKKKKKKKKKKKKKKKKK! (child imitates animal)

Mr. Farmer...Where's your dog?

Mr. Farmer...Are her ears so long?

Can we hear her...through the fog?

WOFFFFFFFFFFFFFFFFFFFFFFFF! (child imitates animal)

Mr. Farmer...Where's your cat?

Mr. Farmer...Where's he at?

Can we hear him...Is his belly fat?

MEOWWWWWWWWWWWWWWW! (child imitates animal)

Mr. Farmer...Where's your goat?

Mr. Farmer...Does she wear a coat?

Can we hear her...does she have a boat?

EHHHHHHHHHHHHHHHHHHHHHHHHHHHHHH! (child imitates animal)

Mr. Farmer...Where's your plow

Mama told me to GET HOME NOW!

Can you take me... and in a hurry how!

VROOOOOOOOOOOOOOOOOOOOO! (child imitates tractor/plow)

To listen to all the songs in the "Agriculture is a BIG word!" project, visit the following web site under agricultural education, hands-on learning, and music <http://www.marketplaceforthemind.state.pa.us> The music files are also available on the Adventures Around the Farm CD located in this kit.

Written By KJ Reimensnyder-Wagner, 2005. Music part of "Agriculture is a BIG word!"
Special thanks to the Pennsylvania Department of Agriculture and the
Agriculture Awareness Foundation of Pennsylvania for the grant to produce this project.

B-I-N-G-O

Teachers can use this song to work on vocabulary. Have children find words to accompany each letter. This song works for so many age groups. If you want, you can ask for specific things like... "Can you give me names of colors beginning with 'B'?" Also insert claps where appropriate.

There was a farmer, had a dog
And BINGO was his name-o

B-I-N-G-O

B-I-N-G-O

B-I-N-G-O

And Bingo was his name-o

To listen to all the songs in the "Agriculture is a BIG word!" project, visit the following web site under agricultural education, hands-on learning, and music <http://www.marketplaceforthemind.state.pa.us> The music files are also available on the Adventures Around the Farm CD located in this kit.

B-I-N-G-O is public domain. Music part of "Agriculture is a BIG word!"
Special thanks to the Pennsylvania Department of Agriculture and the
Agriculture Awareness Foundation of Pennsylvania for the grant to produce this project.

From The Farmer To The Store

My farmer friend grows beans; He plants them and they grow
His combine picks them clean: He feeds us all I know

(CHORUS)

From the farmer to the store, (clap clap)
Who could ask for more (stomp stomp)
Healthy food for sure (clap clap)
From the farmer to the store (stomp stomp)

My farmer friend grows wheat; It's in the bread we buy
We know we get a treat since he's our farmer guy

CHORUS

My farmer friend has bees cuz honey's what they make
I love the taste so sweet; We use it in our cake.

CHORUS

My farmer friend grows corn; The stalks get nice and high
They seem to grow each morn; We eat it in July

CHORUS

My farmer friend grows fruit; Apples he likes best
He wears his old green boots and rarely takes a rest

CHORUS

My farmer friend grows meat: The trucks haul it along
He processes the beef so we grow big and strong

CHORUS

From the farmer to the store, (clap clap)

Who could ask for more (stomp stomp)

Healthy food for sure (clap clap)

From the farmer to the store (stomp stomp)

Listen just some more-- oh listen, Little Dude,
Next time you're at the store, thank a farmer for his food.

CHORUS

To listen to all the songs in the "Agriculture is a BIG word!" project, visit the following web site under agricultural education, hands-on learning, and music <http://www.marketplaceforthemind.state.pa.us> The music files are also available on the Adventures Around the Farm CD located in this kit.

Written By KJ Reimensnyder-Wagner, 2005. Music part of "Agriculture is a BIG word!"
Special thanks to the Pennsylvania Department of Agriculture and the
Agriculture Awareness Foundation of Pennsylvania for the grant to produce this project.

Song About Cows

(CHORUS)

This is a song about cows; This is a song about cows
There are so many colors; no one like the other
Yes, this is a song about cows

Holsteins are black and white; And Jerseys are brown, they said
Guernseys are fawn and white and Ayreshires are white and red
Belgians can look red or blue; And Angus cows are black
There are lots more kinds of cows to name but let me take you
back

CHORUS

Now a young female is a Heifer; And a male cow's name is a Bull
A baby cow is a Calf; But none give any wool!
Cows can walk right on up the stairs; but have no knees to come
down
A cow can live 25 years; And has four stomachs round!

CHORUS

A cow's milk can make butter; A cow's milk makes cheese
The milk comes from an utter that hangs between the "feet"
But the feet are really hooves and on each they have two toes
Don't get close enough to see or she'll push you, I suppose.

CHORUS

Some cows are raised for beef and others are milkers born
At birth they weigh some 80 pounds; Full grown, 1,000 or more!
But the best thing about cows, I've heard some farmers say
You can tell a secret to a cow and it keeps it safe away!

CHORUS

**This is a song about cows; This is a song about cows
There are so many colors; no one like the other
Yes, this is a song about cows
Yes, this is a song about cows**

To listen to all the songs in the "Agriculture is a BIG word!" project, visit the following web site under agricultural education, hands-on learning, and music <http://www.marketplaceforthemind.state.pa.us> The music files are also available on the Adventures Around the Farm CD located in this kit.

**Written By KJ Reimensnyder-Wagner, 2005. Music part of "Agriculture is a BIG word!"
Special thanks to the Pennsylvania Department of Agriculture and the
Agriculture Awareness Foundation of Pennsylvania for the grant to produce this project.**

I'm Gonna Count To Ten (With All My Farming Friends)

(CHORUS)

I'm gonna count to ten

With all my farming friends

I'm gonna count to ten

With all my farming friends

(2x)

1. One horse stands --and whinnies up her nose

One horse stands --she shuffles as she goes

CHORUS

2. Two cows moo-- they're standing in the barn

Two cows moo-- they're safe from any harm

CHORUS

3. Three chickens lay - their eggs are near the floor

Three chickens lay—oh can they lay some more

CHORUS

4. Four fish jump-- they're swimming in the pond

Four fish jump-- The spring will soon be gone

CHORUS

5. Five frogs croak-- they hop from stone to stone

Five frogs croak-- they know they're not alone

CHORUS

6. Six pigs Oink - they look to find the sun
Six pigs Oink - I know they'll have some fun

(CHORUS)

I'm gonna count to ten
With all my farming friends
I'm gonna count to ten
With all my farming friends
(2x)

7. Seven dogs bark - they're howling at the moon
Seven dogs bark - we'll have to feed them soon
CHORUS

8. Eight sheep Bah - their wool is much too hot
Eight sheep Bah - let's find the shade we've got
CHORUS

9. Nine goats chomp - they've found the greener grass
Nine goats chomp - Let's hide the laundry fast
CHORUS

10. Ten birds tweet - they know so many songs
Ten birds tweet - why don't you sing along?
(Now backtrack numbers to end with CHORUS)

To listen to all the songs in the "Agriculture is a BIG word!" project, visit the following web site under agricultural education, hands-on learning, and music <http://www.marketplaceforthemind.state.pa.us> The music files are also available on the Adventures Around the Farm CD located in this kit.

Written By KJ Reimensnyder-Wagner, 2005. Music part of "Agriculture is a BIG word!"
Special thanks to the Pennsylvania Department of Agriculture and the
Agriculture Awareness Foundation of Pennsylvania for the grant to produce this project.

F-A-R-M-I-N-G

I wanna learn about farming
There's so much to know
I wanna to learn about farming
Everywhere I go

F-A-R-M-I-N-G - that's the job I want for me
F-A-R-M-I-N-G...that's farming.

I wanna learn about farming
There's a piece of land
I wanna learn about farming
Teach me what you can

F-A-R-M-I-N-G Raise some animals or trees
F-A-R-M-I-N-G...that's farming

(Bridge)
Farming....there's lots of things to do
Farming.... I know you'll like it, too
Farming.... we can join the crew
F-A-R-M-I-N-G, that's Farming...

I want to learn about farming
I love to be outside
I want to learn about farming
I'll drive a big combine!

F-A-R-M-I-N-G - that's the job I want for me
F-A-R-M-I-N-G...that's farming.

F-A-R-M-I-N-G - that's the job I want for me
F-A-R-M-I-N-G...that's farming.
Yep, that's farming

To listen to all the songs in the "Agriculture is a BIG word!" project, visit the following web site under agricultural education, hands-on learning, and music <http://www.marketplaceforthemind.state.pa.us> The music files are also available on the Adventures Around the Farm CD located in this kit.

Written By KJ Reimensnyder-Wagner, 2005. Music part of "Agriculture is a BIG word!"
Special thanks to the Pennsylvania Department of Agriculture and the
Agriculture Awareness Foundation of Pennsylvania for the grant to produce this project.

Where Is My Little Lamb

Where is my little lamb, under skies of blue?
Where is my little lamb, under skies of blue?
She's with her mother, The one we call the Ewe.

Where is my little lamb, standing in the sand?
Where is my little lamb, standing in the sand?
She's with her father, the one we call the Ram.

(CHORUS)

**A baby lamb --grows up to be a sheep
Like you and me... We'll grow into our feet!**

Where is my little lamb, her fleece is white as snow
Where is my little lamb, her fleece is white as snow
She's eating all the grass so dad won't need to mow!

Where is my little lamb, she's growing all the time
Where is my little lamb, she's growing all the time
Someday my little lamb will show me how to climb

(CHORUS)

**A baby lamb --grows up to be a sheep
Like you and me... We'll grow into our feet!**

Where is my little lamb, she's now a lady sheep
Where is my little lamb, she's now a lady sheep
I wonder if I'm dreaming ...cuz I am fast asleep

Yes, I wonder if I'm dreaming...cuz I am fast asleep

Bah, Bah, Black Sheep have you any wool
Yes Sir, Yes Sir... You can see I'm full!

To listen to all the songs in the "Agriculture is a BIG word!" project, visit the following web site under agricultural education, hands-on learning, and music <http://www.marketplaceforthemind.state.pa.us> The music files are also available on the Adventures Around the Farm CD located in this kit.

**Written By KJ Reimensnyder-Wagner, 2005. Music part of "Agriculture is a BIG word!"
Special thanks to the Pennsylvania Department of Agriculture and the
Agriculture Awareness Foundation of Pennsylvania for the grant to produce this project.**

I'm Gonna Plant A Garden

I'm gonna plant a garden
Out back where there's some dirt
I'm gonna plant a garden
And get stuff on my shirt
I'm gonna plant a garden
My fingers feel the ground
And I know some things will grow all around

I'm gonna plant some seeds
So radishes will come
I'm gonna plant some seeds
They need water and some sun
I'm gonna plant some seeds
My fingers feel the ground
And I know some things will grow all around

I'm gonna plant tomatoes
They lean into a stick
I'm gonna plant tomatoes
Be sure they don't get sick
I'm gonna plant tomatoes
My fingers feel the ground
And I know some things will grow all around

(more on next page)

I'm gonna plant some corn there
The stalks will get so high
I'm gonna plant some corn there
A scarecrow's watching by
I'm gonna plant some corn there
My fingers feel the ground
And I know some things will grow all around

I'm gonna plant a garden
Enough to feed my friends
I'm gonna plant a garden
So big it never ends
I'm gonna plant a garden
My fingers feel this ground
And I know some things will grow all around
Some things already grow all around!

To listen to all the songs in the "Agriculture is a BIG word!" project, visit the following web site under agricultural education, hands-on learning, and music <http://www.marketplaceforthemind.state.pa.us> The music files are also available on the Adventures Around the Farm CD located in this kit.

Written By KJ Reimensnyder-Wagner, 2005. Music part of "Agriculture is a BIG word!"
Special thanks to the Pennsylvania Department of Agriculture and the
Agriculture Awareness Foundation of Pennsylvania for the grant to produce this project.

A Little Bit of Time

CHORUS:

What do you get with a little bit
What do you get in a bit -with a little bit
What do you get with a little bit
What do you get...with a little bit

I am from the city
I love the sights, the sounds
Lots of big tall buildings
And cement on the ground
There's taxis and there's buses
And people all around....

CHORUS

I'll go down to the market
Buy food to nourish me
Here I get my vegetables
And food for my pantry
I'd also like some peaches
Plums and kiwi, too...

CHORUS

My friend, he is a farmer
He lives in the country
(He said) Mozy down, get out of town
And come and visit me
There's lots of sounds and sights around
Great fun I'll guarantee....

CHORUS

What do you get with a little bit
What do you get in a bit -with a little bit
What do you get with a little bit
What do you get...with a little bit

I got there in the morning
My friend could not be found
He left a note, said "I'm at work"
My goat will show you 'round (*He what?*)
There's lots of space on my home base
For rompin' on the ground...

CHORUS

We walked out on the front porch
I started looking 'round
All I saw were fields
And dirt upon the ground
Here there are no sidewalks
Tall buildings can't be found...

CHORUS

I looked across the fields
And there was Farmer Brown
The farmer and his animals
Were out there dancing 'round
It looked like they were putting
Tiny seeds down in the ground...

CHORUS

What do ya get with a little bit
What do ya get in a bit with a little bit
What do ya get with a little bit
What do ya get...with a little bit (of time....)

I asked him "What do seeds do?"
He said, "*Just look around*"
All these pretty flowers
We grow food up from the ground
With all the sun and so much fun
We're off to market bound"...

CHORUS

There's carrots and potatoes
and peaches I have found
Apple trees and blueberries
and flowers all around
I guess I never knew
that they came up from the ground ...so...

CHORUS (2x)

To listen to all the songs in the "Agriculture is a BIG word!" project, visit the following web site under agricultural education, hands-on learning, and music <http://www.marketplaceforthemind.state.pa.us> The music files are also available on the Adventures Around the Farm CD located in this kit.

Written By Joe Gaughan, 2005. Music part of "Agriculture is a BIG word!"
Special thanks to the Pennsylvania Department of Agriculture and the
Agriculture Awareness Foundation of Pennsylvania for the grant to produce this project.

Milk (Yeah, I Like Milk) Rap

MILK! MILK! YEAH>>>>>>> I LIKE MILK!
MILK! MILK! GIMME, GIMME, GIMME SOME MILK!

When I was a little girl --my momma told me I could change this world

All it takes is sleep at night-- and making sure I eat all right.

I started out with breakfast food --some fruit and grains and dairy, too

It gave me what I needed - **YO!**-- The fuel to run I needed most

MILK! MILK! YEAH>>>>>>> I LIKE MILK! (Uh huh)
MILK! MILK! GIMME, GIMME SOME MILK!

I worked real hard in school those days -- by eating right you'd be amazed

At lunchtime salads were the best --to give me vegetables with zest

I ran around the playground there-- at recess time we got fresh air

When school was out I did my chores --and then went out to play some more.

MILK! MILK! YEAH>>>>>>> I LIKE MILK!
MILK! MILK! YEAH, GIMME, GIMME SOME MILK!

At suppertime my momma made-- meat and vegetables to graze
With fruits and dairy mixed all in-- it kept our bodies fit and trim

At times we had a sweet tooth come-- it's OK to eat some junk
But just a bit cuz your body's like-- a car that YOU fill up just
right

MILK! MILK! YEAH>>>>>>> I LIKE MILK! (Uh huh)
MILK! MILK! GIMME, GIMME, GIMME SOME MILK!

So this is what I say right here-- put this all to use and have no
fear
Fill your body up, put good things in-- get exercise so you'll stay
thin

Remember all I've said today-- just make a change you'll be OK
And teach the world to better use-- our bodies and good attitude!

MILK! MILK! YEAH>>>>>>> I LIKE MILK! (Uh huh)
MILK! MILK! GIMME, GIMME SOME MILK!
MILK! MILK! YEAH>>>>>>> I LIKE MILK!
MILK! MILK! GIMME, GIMME, GIMME SOME MILK!

To listen to all the songs in the "Agriculture is a BIG word!" project, visit the
following web site under agricultural education, hands-on learning, and music
<http://www.marketplaceforthemind.state.pa.us> The music files are also available
on the Adventures Around the Farm CD located in this kit.

Written By KJ Reimensnyder-Wagner, 2005. Music part of "Agriculture is a BIG word!"
Special thanks to the Pennsylvania Department of Agriculture and the
Agriculture Awareness Foundation of Pennsylvania for the grant to produce this project.

All Kinds of Farmers

(CHORUS)

There are all kinds of farmers (All kinds of farmers)
There are all kinds of farmers living in this world.
There are all kinds of farmers (All kinds of farmers)
There are all kinds of farmers living in this world.

Some who grow crops in fields
Some who raise meat that's sealed
Some who worry 'bout their yield

CHORUS

Some who grow fruits and veggies
Some who raise trees and hedges
Some who make sure wine is ready

Bridge:

*Farmers are --women or men
Boys or girls, your best friend
Black or white or tan or red
They all work hard, fall into bed*

CHORUS

Some who gather eggs that lay
Some who stack the bales of hay
Some who celebrate each day

Bridge:

Farmers are --young or old

Newly taught or hands of gold

In the heat and in the cold

They all have stories needing told

CHORUS

There are all kinds of farmers (All kinds of farmers)

There are all kinds of farmers living in this world.

There are all kinds of farmers (All kinds of farmers)

There are all kinds of farmers living in this world.

Farmers are those with faith

Out in snow or sun or rain

Hope their work's not done in vain

Protect environmental ways ...

Yes, There are all kinds of farmers living in this world....

Living in this world...

To listen to all the songs in the "Agriculture is a BIG word!" project, visit the following web site under agricultural education, hands-on learning, and music <http://www.marketplaceforthemind.state.pa.us> The music files are also available on the Adventures Around the Farm CD located in this kit.

Written By KJ Reimensnyder-Wagner, music co-written with Kim Reichley, 2005.

Music part of "Agriculture is a BIG word!"

**Special thanks to the Pennsylvania Department of Agriculture and the
Agriculture Awareness Foundation of Pennsylvania for the grant to produce this project.**

Going On A Farm Tour

By KJ/Kimbo

**Goin' on a farm tour ...Goin' on a farm tour
Lots of things for us to see
Goin' on a farm tour...Goin' on a farm tour
Lots of fun for you and me**

Meet the farmers, Meet the farmers
They come out to meet the bus
To the barn, to the barn
See the critters welcome us

**Goin' on a farm tour...Goin' on a farm tour
Lots of things for us to see
Goin' on a farm tour...Goin' on a farm tour
Lots of fun for you and me**

See the chickens, See the chickens
Scatter all around us here
See the pigs, see the pigs
See them at the fair this year

**Goin' on a farm tour...Goin' on a farm tour
Lots of things for us to see
Goin' on a farm tour...Goin' on a farm tour
Lots of fun for you and me**

Watch the horses, watch the horses
Giddy-up and then they're gone
Watch the goats, watch the goats
They eat the grass we're standing on

**Goin' on a farm tour,...Goin' on a farm tour
Lots of things for us to see
Goin' on a farm tour...Goin' on a farm tour
Lots of fun for you and me**

This is so much fun
Out here in the sun
Seeing how it's done
Meeting everyone

(whistle)

Find the sheep, find the sheep
Their wool is soft and yet it's strong
Find the cow, find the cow
It's time for milking, come along

Been on a farm tour...Been on a farm tour
More to see some other day
Been on a farm tour...Been on a farm tour
Thank you, now we're on our way

To listen to all the songs in the "Farms, Food & FUN!" project, visit the following web site under agricultural education, hands-on learning, and music
<http://www.marketplaceforthemind.state.pa.us> The music files are also available on the Adventures Around the Farm CD located in this kit.

Music part of "Farms, Food & FUN!" 2007 - KJ & Friends
Special thanks to the PA Dept. of Agriculture and PA Farm Bureau's Friends of Ag
Foundation for the grant to produce this project.

What Color

By KJ/Joe

Pumpkins are orange, tomatoes are red
So what color are blueberries?
Blueberries, blueberries
If I were to guess their color at all
What color are blueberries? (They're BLUE!)

Onions are white or yellow sometimes
What color are green beans?
Green beans, green beans
If I were to guess their color at all
What color are green beans? (They're GREEN!)

Sometimes you tell the color of things
By what they're really called
And other times it makes no sense
Makes no sense at all
But I like things that SHOUT
Their color like a horn
Things like oranges
Or yellow corn

(Instrumental)

Radishes are red, cucumbers are green
How can you expect me to know the color scheme?
I try my best to learn
Sometimes it's like a game
So what color is sunshine?
What color is rain?

Squash is yellow and melons are green
But what color are blackberries?
Blackberries, blackberries
If I were to guess their color at all
What color are blackberries? (They're BLACK!)
--What color are green beans, they're GREEN!
--what color are blueberries, they're BLUE!

To listen to all the songs in the "Farms, Food & FUN!" project, visit the following web site under agricultural education, hands-on learning, and music
<http://www.marketplaceforthemind.state.pa.us> The music files are also available on the Adventures Around the Farm CD located in this kit.

Music part of "Farms, Food & FUN!" 2007 - KJ & Friends
Special thanks to the PA Dept. of Agriculture and PA Farm Bureau's Friends of Ag Foundation for the grant to produce this project.

Let's Ride The Bus To The Apple Orchard

By KJ

**Let's ride the bus to the Apple Orchard
Where the apples are grown
Let's ride the bus to the Apple Orchard
Just on the outside of town.**

Ask Mr. Way how the land is planted
How many seeds in the ground?
So many choices with so many apples
They're all so delicious and round

**Let's ride the bus to the Apple Orchard
Where the apples are grown
Let's ride the bus to the Apple Orchard
Just on the outside of town.**

Ask Mr. Way what is irrigation
Is water important to trees?
What about bugs who try to move in
How do we handle the bees?

**Let's ride the bus to the Apple Orchard
Where the apples are grown
Let's ride the bus to the Apple Orchard
Just on the outside of town.**

Instrumental Verse/Chorus

BRIDGE:

Ask Mrs. Way when the fruit is picked
When is the best time to sell?
How many things can you make with fruit?
Pies or muffins or jellies...

**Let's ride the bus to the Apple Orchard
Where the apples are grown
Let's ride the bus to the Apple Orchard
Just on the outside of town.**

There's Golden Delicious and Ginger Gold
Cortland and McIntosh, too
Granny Smith and so many more
Perfect for me and for you!

Instrumental Chorus/Verse

**Yes, Let's ride the bus to the Apple Orchard
Where all the apples are grown
Let's ride the bus to the Apple Orchard
Just on the outside of town.**

**Let's ride the bus to the Apple Orchard
Where all the apples are grown
Let's ride the bus to the Apple Orchard
Just on the outside of town.**

**Let's ride the bus to the apple orchard...
Let's ride the bus to the apple orchard...
Let's ride the bus to the apple orchard...**

To listen to all the songs in the "Farms, Food & FUN!" project, visit the following web site under agricultural education, hands-on learning, and music
<http://www.marketplaceforthemind.state.pa.us> The music files are also available on the Adventures Around the Farm CD located in this kit.

**Music part of "Farms, Food & FUN!" 2007 - KJ & Friends
Special thanks to the PA Dept. of Agriculture and PA Farm Bureau's Friends of Ag
Foundation for the grant to produce this project.**

I'm A Little Mushroom

By KJ

I'm a little mushroom
Growing in the dark
I've got a cap
I've got a stalk

And in between
Are gills and spores
Just hold on tight
I'll tell you more

CHORUS:

**Yes, I'm a little mushroom
I like shade
Don't like the sun
And hide from rain
But I like warm humidity...
It's then I grow up free**

There are three main phases
In my life
Composting's
My first advice.

Manure smells
But sure is great
Mixed with straw
There's a process date

CHORUS:

**Yes, I'm a little mushroom
I like shade
Don't like the sun
And hide from rain
I like the warm humidity
It's then I grow up free**

The second phase
I get to sleep
A wooden bed
Makes seeds to peep

And as I spawn
Pins push up through
Peat moss mixed
With Limestone “brew”

CHORUS:

**Yes, I’m a little mushroom
I like shade
Don’t like the sun
And hide from rain
I like the warm humidity
It’s then I grow up free**

The last step
In a mushroom’s life
Is cropping which
Brings bloom or life

A flush can last
Up to five whole days
It repeats itself
I’m so amazed!

CHORUS:

**Yes, I’m a little mushroom
I like shade
Don’t like the sun
And hide from rain
I like the warm humidity
It’s then I grow up free**

Bridge:

The first phase lasts some 15 days

And mostly does the second stage

The last phase can be 25

Days of growth to harvest live.

I'm a little mushroom, I like shade...

I'm a little mushroom, I like shade...

Then lastly

We're all picked by hand

And packaged, sent

Across this land

We're proud to be

Fresh and new

We're thrilled that

We go home with you!

CHORUS:

Yes, I'm a little mushroom

I like shade

Don't like the sun

And hide from rain

I like the warm humidity...

It's then I grow up free

--Now please notice me!

To listen to all the songs in the "Farms, Food & FUN!" project, visit the following web site under agricultural education, hands-on learning, and music <http://www.marketplaceforthemind.state.pa.us> The music files are also available on the Adventures Around the Farm CD located in this kit.

Music part of "Farms, Food & FUN!" 2007 - KJ & Friends
Special thanks to the PA Dept. of Agriculture and PA Farm Bureau's Friends of Ag Foundation for the grant to produce this project.

The Fruit March

By KJ/Joe

When I grow up
I truly want to be
A healthy member of our society
And so each day, I do my best
By eating good things
And getting lots of rest

I start each day
With a piece of fruit
I have some toast and yogurt to suit
It gives my body lots of energy
To start my day, yeah ...in a healthy way

**Give me an apple or a peach
The kind of thing I like to eat
At school when I want a snack
I want some thing that's sweet...
Yes, Give me an apple or a peach
Fruit's the perfect fit to eat
Toss the core and very slimy pits
Toss the core and very slimy pits
Fruit for me!**

I leave my house
I pack to go
I bring more fruit -- for friends I know
And when we go to recess for awhile
We'll play a little harder
At games that make us smile

They tell me to
Get vegetables and meat
And fruit and bread, the combo can't be beat
If we have all this
Throughout each day we're told
We'll have good bodies to last us 'til we're old

**Give me an apple or a peach
The kind of thing I like to eat
At school when I want a snack
I want some thing that's sweet...
Give me an apple or a peach
Fruit's the perfect fit
At school, when we have a break
Just toss the core and pits (ZING)**

To listen to all the songs in the "Farms, Food & FUN!" project, visit the following web site under agricultural education, hands-on learning, and music
<http://www.marketplaceforthemind.state.pa.us> The music files are also available on the Adventures Around the Farm CD located in this kit.

**Music part of "Farms, Food & FUN!" 2007 - KJ & Friends
Special thanks to the PA Dept. of Agriculture and PA Farm Bureau's Friends of Ag
Foundation for the grant to produce this project.**

Healthy Farms, Healthy Schools

By KJ/Kimbo

Workin' on a farm
Makes your arms big and strong
Makes you wanna go a long, long way
Workin' in the yard
Yes, it's mighty mighty hard
But then you get out and play

Working in the barn
Doesn't do the body harm
You're tired but you feel so good
Shovelin' out the stalls
Before the sun falls
Is part of farming, it's understood

Chorus:

**Workin' on a farm
You start to realize
With all this work and play
You get lots of exercise**

Instrumental verse and chorus--

Workin' in the garden
Muscles will harden
Don't forget to get those beets
Gathering tomatoes, dig those potatoes
Lotsa good stuff to eat

Got chores to do
Won't stop until we're thru
Got chased by a mother goose
Diggin' holes is intense but we gotta mend the fence
So the cows don't ever get loose

Chorus:

**Workin' on a farm
You start to realize
With all this work and play
You get lots of exercise**

Now take this to school
You won't break any rule
Lift your books like we do with hay
Now drop 'em back down
Load em up, turn around
With your backpack, you're on your way

Bridge:

**Healthy farms, healthy schools
Makes a healthy world...for me and for you...**

When you go to gym
It's for her and for him
Climb the rope up to the sun
Softball, volleyball
Any kind of game at all
Hey! It's so much fun!

Each time you move around
Gonna burn some pounds
Makes you feel as good as new
Now, run around the track
Each time you come back
Take another lap or two

(Instrumental)

Listen to my story
It's not filled with glory
Everything I say is true
When you work and you play
You'll get better everyday
It's SO good for you!

Bridge:

Healthy farms, healthy schools

Makes a healthy world...for me and for you...

To listen to all the songs in the "Farms, Food & FUN!" project, visit the following web site under agricultural education, hands-on learning, and music <http://www.marketplaceforthemind.state.pa.us> The music files are also available on the Adventures Around the Farm CD located in this kit.

Music part of "Farms, Food & FUN!" 2007 - KJ & Friends
Special thanks to the PA Dept. of Agriculture and PA Farm Bureau's Friends of Ag Foundation for the grant to produce this project.

My New Pyramid

By KJ/Kimbo

**Check out my new Pyramid
I want to be a healthy kid
Meat and beans, milk and fruit
Vegetables and grains to boot
Check out my new Food Pyramid**

Get some grains, it's what you need
Breads, pasta, or rice to feed
Eat some colored vegetables
Green and orange make you full
And beans will add to what you need

**Check out my new Pyramid
I want to be a healthy kid
Meat and beans, milk and fruit
Vegetables and grains to boot
Check out my new Food Pyramid**

Bake it, broil, grill it, too
Lean meat's good for me and you
Don't forget to balance in
Peas and nuts and fish within
Everyday, it's what you do

**Check out my new Pyramid
I want to be a healthy kid
Meat and beans, milk and fruit
Vegetables and grains to boot
Check out my new Food Pyramid**

Bridge:

So keep a healthy diet

And exercise, just try it!

Make you fit, makes you strong

Keeps you living oh so long...

Check out my new Pyramid

I want to be a healthy kid

Meat and beans, milk and fruit

Vegetables and grains to boot

Check out my new Food Pyramid

Know your limits

Know the facts

Still enjoy those flavored snacks

Water's great

Milk is cool!

Check it out there in your school

Breathe in deep...and relax... (breathe deeply)

Check out my new Pyramid

I want to be a healthy kid

Meat and beans, milk and fruit

Vegetables and grains to boot

Check out my new Food Pyramid

Check out my new Pyramid

I want to be a healthy kid

Meat and beans, milk and fruit

Vegetables and grains to boot

Check out my new Food Pyramid

--Check out my new Food Pyramid

--Check out my new Food Pyramid

To listen to all the songs in the "Farms, Food & FUN!" project, visit the following web site under agricultural education, hands-on learning, and music
<http://www.marketplaceforthemind.state.pa.us> The music files are also available on the Adventures Around the Farm CD located in this kit.

Music part of "Farms, Food & FUN!" 2007 - KJ & Friends
Special thanks to the PA Dept. of Agriculture and PA Farm Bureau's Friends of Ag Foundation for the grant to produce this project.

Mean Dean, The Vending Machine

By KJ/Kimbo

The other night I had a dream
Standing by a vending machine
The school was dark, except this place
Where food was stored inside this space

Mean Dean, I'm the vending machine
I'm filled with junk food that you need
Stuff your face with chips and pies
Get too big to play outside
Mean Dean, I'm the vending machine

Now Mean Dean, that vending machine
He stocked more food than you've ever seen
I shoved my quarters in its slots
Candy bars and squishy Dots

Mean Dean, I'm an awesome machine
You can pass on those salad greens
I got gooey sugar here
No need to go to gym this year
Mean Dean, I'm an awesome machine

Now Mean Dean, an addictive machine
He got me hooked so I had to lean
I got more change to get my fix
Of donuts and some licorice

Mean Dean, I'm a fat-filled machine
My pants are busting at the seams
At recess I just hide...
Got too big to play outside
Mean Dean, I'm your fat-filled machine

Now Green Eileen, a new vending machine
Was brought in by a loving Queen
A principal who longed to save... Her kids
so they'd return to play

So Green Eileen this healthy machine
Was filled with fruit and nuts so keen
And kids who ate there energized
And got fit and to a smaller size
Green Eileen, the healthy machine

(WOW>>>>>>>>>>)

*There was confrontation in the hall
Overnight I heard it all
Mean Dean and Green Eileen
Were wrestling for the space on the scene*

But Mean Dean, that vending machine
He got creamed by Green Eileen
Since Eileen was more fit by far
For stocking those nutrition bars
Mean Dean got creamed by Green Eileen

I'm Mean Dean that vending machine
I'm heading south – to work out lean
I got some food from the healthy rack
To get my stomach muscles back

Yes Green Eileen – she’s lookin’ Keen!
In this hallway she’s the Queen
Now the school is filled with pride
We have lots of strength to play outside
Green Eileen, our favorite vending machine

*Now she helped to change Mean Dean
Don't worry; it's just a dream....
Mean Dean...and Green Eileen!*

Watch for Green Eileen...coming to your school...soon

To listen to all the songs in the "Farms, Food & FUN!" project, visit the following web site under agricultural education, hands-on learning, and music <http://www.marketplaceforthemind.state.pa.us> The music files are also available on the Adventures Around the Farm CD located in this kit.

**Music part of "Farms, Food & FUN!" 2007 - KJ & Friends
Special thanks to the PA Dept. of Agriculture and PA Farm Bureau's Friends of Ag
Foundation for the grant to produce this project.**

Family Farm

By KJ/Kimbo

It's 3:00 the school bell rings, take the bus back home
Down that old country road --I dream when I'm alone
Get my homework done, got chores to do
And head out to the barn
Oh, I love living on the family farm.

Early in the morning, I got work to do
Cows to milk, chickens to feed --Put away my tools
Get cleaned up, catch the bus
Got school books in my arms
How I love working on the family farm

*My friends that come from town
Don't know what I do
Someday I'll take them home with me
To show them a thing or two
I know we'll have a good time
On the rope swing by the pond
Oh, I love playing on the family farm*

(Instrumental)

*We raise goats and cows and chickens
Grow lots of wheat and corn
And good things in our garden
Up early every morn
(But we) still can find some good times
On that swing out by the pond
Working and playing on the family farm.*

My teacher, Mrs. Johnson, said we could take a tour
Take my friends to my family's farm
So they could learn some more
About this country living ... You know, country life's a charm
Oh, I love living on a family farm...

Living and loving and sharing my family's farm
Working and living and loving on the family farm.

To listen to all the songs in the "Farms, Food & FUN!" project, visit the following web site under agricultural education, hands-on learning, and music <http://www.marketplaceforthemind.state.pa.us> The music files are also available on the Adventures Around the Farm CD located in this kit.

Music part of "Farms, Food & FUN!" 2007 - KJ & Friends
Special thanks to the PA Dept. of Agriculture and PA Farm Bureau's Friends of Ag Foundation for the grant to produce this project.

Don't Frown, Slow Down

By KJ/Dena/Kimbo

**Don't frown, slow down
Give 'em a brake, yeah, slow down
Don't frown, slow down
Let's be patient and slow down**

Farm tractors on the road
Pulling wagons – full load
Kids on a bus to school they go
Full of ideas and a need to know

**So, Don't frown, slow down
Give 'em a brake, yeah, slow down
Don't frown, slow down
Let's be patient, and slow down**

Everybody's in a hurry to get nowhere
They think they got no time to spare
There's a tractor or a school bus on the road
Both carrying a precious load

**Oh, Don't frown, slow down
Give 'em a brake, yeah, slow down
Don't frown, slow down
Let's be patient and slow down**

*Bridge:
Look to the future...
For both we care...
Pay attention and please be aware...*

**Don't frown, slow down
Give 'em a brake, yeah, slow down
Don't frown, slow down
Let's be patient and slow down**

(Instrumental verse and chorus)

Watch those tractors it's a must,
Watch those flashers on the bus
Take care and share the road
Our future rides on every load

**So, Don't frown, slow down
Give 'em a brake, yeah, slow down
Don't frown, slow down
Let's be patient and slow down**

**Don't frown, slow down
Give 'em a brake, yeah, slow down
Don't frown, slow down
Let's be patient, slow down**

**Don't frown, slow down
Give 'em a brake, yeah, slow down
Don't frown, slow down
Let's be patient, slow down**

To listen to all the songs in the "Farms, Food & FUN!" project, visit the following web site under agricultural education, hands-on learning, and music
<http://www.marketplaceforthemind.state.pa.us> The music files are also available on the Adventures Around the Farm CD located in this kit.

**Music part of "Farms, Food & FUN!" 2007 - KJ & Friends
Special thanks to the PA Dept. of Agriculture and PA Farm Bureau's Friends of Ag
Foundation for the grant to produce this project.**

Buy Local

By KJ/Kimbo

**Buy Local, when you can
That farmer is your neighbor and your friend
Workin' hard 'til the sun goes down
To bring you the freshest food around
Buy Local, when you can!**

I got friends, Sally and Bill
They grow their blueberries up on the hill
Taste so good, so fresh and sweet
Bring it to market for us to eat

**Buy Local, when you can
That farmer is your neighbor and your friend
Workin' hard 'til the sun goes down
To bring you the freshest food around
Buy Local, when you can!**

Met some farmers, Jon and Lucy
Who grow tomatoes big and juicy
They take 'em to the local cannery
Spaghetti Sauce for you and me (mmm....)

**Buy Local, when you can
That farmer is your neighbor and your friend
Workin' hard 'til the sun goes down
To bring you the freshest food around
Buy Local, when you can!**

*Bridge:
It ain't magic, like Houdini
To grow a really great zucchini
Just hard work and some tender loving care
A little sunshine, water and fresh clean air...*

Eating honey from local bees
Helps you fight those allergies
See the bees in the hives
Get up close to watch them LIVE

**Buy Local, when you can
That farmer is your neighbor and your friend
Workin' hard 'til the sun goes down
To bring you the freshest food around
Buy Local, when you can!**

Next time that you want all that
Close to home is where it's at
Enjoy the fruits of their labor
That farmer is your friend and neighbor

**Buy Local, when you can
That farmer is your neighbor and your friend
Workin' hard 'til the sun goes down
To bring you the freshest food around
Buy Local, when you can!**

To listen to all the songs in the "Farms, Food & FUN!" project, visit the following web site under agricultural education, hands-on learning, and music
<http://www.marketplaceforthemind.state.pa.us> The music files are also available on the Adventures Around the Farm CD located in this kit.

**Music part of "Farms, Food & FUN!" 2007 - KJ & Friends
Special thanks to the PA Dept. of Agriculture and PA Farm Bureau's Friends of Ag
Foundation for the grant to produce this project.**

Traveling Home

By KJ

**Traveling home, traveling home
On the bus, I'm traveling home
Passed the horses, passed the fields
I am traveling home**

Autumn is the time of year
When summer turns to gold
And as I ride the school bus home
I think of being old

**Traveling home, traveling home
On the bus, I'm traveling home
Passed the horses, passed the fields
I am traveling home**

I see myself in years to come
When I own a pretty farm
And as I tend to horses there
I look out through the barn

**I'm traveling home, traveling home
On the bus, I'm traveling home
Passed the horses, passed the fields
I am traveling home**

(Bridge)

In the pasture wheat is grown
I can see it through the glass
And as I see the farmer there
He waves when we go passed

**Traveling home, traveling home
On the bus, I'm traveling home
Passed the horses, passed the fields
I am traveling home**

Bridge 2:

*I was born inside the city where I used to live
The buildings close in all around and don't allow much give
I wonder if I'll ever see the day when dreams come true
When I am walking through those fields...
beneath a sky of blue...*

Instrumental verse

Passing by the farms of gold,
Passing barns of red
I think that if I plan it right,
I'll be there instead

**I'm traveling home, traveling home
On the bus, I'm traveling home
Passed the horses, passed the fields
I am traveling home
Passed the horses, passed the fields
I am traveling home**

To listen to all the songs in the "Farms, Food & FUN!" project, visit the following web site under agricultural education, hands-on learning, and music
<http://www.marketplaceforthemind.state.pa.us> The music files are also available on the Adventures Around the Farm CD located in this kit.

**Music part of "Farms, Food & FUN!" 2007 - KJ & Friends
Special thanks to the PA Dept. of Agriculture and PA Farm Bureau's Friends of Ag
Foundation for the grant to produce this project.**

Adventures Around the Farm Songs

Farmer

First the farmer sows his seeds.
 (Imitate planting seeds.)
Then he stands and takes his ease.
 (Stand with hands on hips.)
He stamps his foot.
 (Stamp foot.)
He claps his hands.
 (Clap hands.)
And turns around to view his lands.
 (Turn around with hand across eyebrows, looking.)

Farm Sounds

[Sung to: "Wheels on the bus"]

The cow in barn goes moo, moo, moo,
Moo, moo, moo. Moo, moo, moo,
repeat
All around the farm.
The pig in the pen goes oink, oink, oink,.....
The hens in the coop go cluck.....
The lambs on the hill go baa,.....
The ducks on the pond go quack.....
The geese on the farm go honk.....
The turkeys in the pen go gobble.....

Take Me Out to the Barnyard

[Sung to: "Take Me Out To The Ball Game"]

Take me out to the barnyard
Take me out there right now
Show me the cows, pigs and horses too.
I hear an oink and a neigh and a moo
There are chickens laying their eggs
If they don't lay , it's a shame
Oh, it's one, two, three eggs today,
And I'm glad I came.

Farm Chores

[Sung to: "This is the way we wash our clothes"]

Sing the following song while vigorously acting out jobs one might need to do while working on a farm:

This is the way we _____

This is the way we _____

So early in the morning.

Some possible chores to perform might include mowing the hay, feeding the chicks, sow the seeds, pull the weeds, hoe the field, etc

Farm Chores 2

[Sung to: "Five Little Pumpkins"]

Five little farmers woke up with the sun. (hold up hand)

It was early morning and the chores must be done.

The first little farmer went out to milk the cow. (hold up thumb)

The second little farmer thought he'd better plow. (hold up index finger)

The third little farmer cultivated weeds. (hold up middle finger)

The fourth little farmer planted more seed. (hold up fourth finger)

The fifth little farmer drove his tractor round. (hold up last finger)

Five little farmers, the best that can be found. (hold up hand)

On a Farm

[Sung to: "London Bridge is Falling Down"]

Animals live on a farm, on a farm, on a farm

Animals live on a farm, with a farmer

Cows and pigs live on a farm, on a farm, on a farm

Cows and pigs live on a farm, with the farmer

Goats and sheep live on a farm, on a farm, on a farm

Goats and sheep live on a farm, with the farmer

Hens and chicks live on a farm, on a farm, on a farm

Hens and chicks live on a farm, with the farmer

Tractors, Tractors

[Sung to: "Daisy, Daisy"]

Tractors, tractors, tractors help farmers work.

They pull plows that break up the clumps of dirt.

The farmer can work much faster

Because he has a tractor.

There's lots to do the whole year through.

Tractors help farmers do the work.

Tractor Song

[Sung To: "Wheels on the Bus"]

The wheels on the tractor go
round and round
round and round
round and round
The wheels on the tractor go
round and round
All around the farm.

The tractor in the field goes
back and forth
back and forth
back and forth
The tractor in the field goes
back and forth
All around the farm

The tractor in the field
works all day
works all day
works all day
The tractor in the field
works all day
All around the farm

Don't Fence Me In

Oh, give me land, lots of land, under starry skies above.
Don't fence me in.
Let me ride through the wide open country that I love.
Don't fence me in.
Let me be by myself in the evenin' breeze
Listen to the murmur of the cottonwood trees.
Send me off forever, but I ask you, please, Don't fence me in.
Just turn me loose, let me straddle my old saddle
Underneath the western skies.
On my Cayuse, let me wander over yonder
Till I see the mountains rise.
Chorus: I want to ride to the ridge where the west commences
And gaze at the moon till I lose my senses.
I can't look at hovels and I can't stand fences.
Don't fence me in.
—Cole Porter

The Farmer in the Dell

The farmer in the dell,
The farmer in the dell,
Heigh-ho, the derry-o,
The farmer in the dell.
The farmer takes a wife,
The farmer takes a wife,
Heigh-ho, the derry-o,
The farmer takes a wife.
The wife takes a child, . . .
The child takes a nurse, . . .
The nurse takes a dog, . . .
The dog takes a cat, . . .
The cat takes a rat, . . .
The rat takes the cheese, . . .
The cheese stands alone . . .

Five Friendly Farmers

Five friendly farmers
Wake up with the sun,
For it is early morning
And the chores must be done.
The first friendly farmer
Goes to milk the cow.
The second friendly farmer
Thought he'd better plow.
The third friendly farmer
Feeds the hungry hens.
The fourth friendly farmer
Puts the piggies in their pens.
The fifth friendly farmer
Picks the ripe corn.
And waves to the neighbor
When he blows his horn.
When the work is finished
And the evening sky is red
Five tired farmers
Tumble into bed!

Mary Had a Little Lamb

Mary had a little lamb,
Little lamb, little lamb.
Mary had a little lamb,
Its fleece was white as snow.
And ev'rywhere that Mary went,
Mary went, Mary went
Ev'rywhere that Mary went
The lamb was sure to go.
It followed her to school one day,
School one day, school one day.
It followed her to school one day,
which was against the rules.
It made the children laugh and play,
Laugh and play, laugh and play.
It made the children laugh and play,
to see a lamb at school.
And so the teacher turned it out,
Turned it out, turned it out.
And so the teacher turned it out
But still it lingered near.
And waited patiently about,
Patiently, patiently
And waited patiently about,
'Till Mary did appear.
"Why does the lamb love Mary so?"
Mary so, Mary so.
"Why does the lamb love Mary so?"
The eager children cry.
"Why, Mary loves the lamb, you know!"
Lamb you know, lamb you know.
"Why, Mary loves the lamb, you know!"
The teacher did reply.

I Love Dirt

[Sung To: "Three Blind Mice:"]

I love dirt. I love dirt.
It can't hurt
On my shirt.
I love to squirt it with my hose.
I love to squeeze it between my toes.
The fun we have just grows and grows.
Oh, I love dirt. I love dirt.

Bread and Cereals

Breads and cereals start from seeds
Of grasses farmers grow;
They're all ground up and mixed with eggs
And other flavors for dough.
The crust of pies and dinner rolls,
And noodles of chicken soup,
Doughnuts, spaghetti, and Cream of Wheat
Are in the bread and cereals group.

Dairy Products

Dairy products are food from the farm
That came from pasture and co-op;
Milk from cows and eggs from hens
Are part of the dairy group.
We eat our eggs cooked soft or hard,
Scrambled, poached, or steamed;
From milk we make our cottage cheese,
Our yogurt, and ice cream.

Picking Apples

[Sung To: "Frère Jacques"]

Picking apples, picking apples,
'Til we're done, 'til we're done,
Picking all the apples,
Picking all the apples,
Til we're done, 'til we're done.
Climb a ladder, climb a ladder,
In a tree, in a tree
Hello, everybody;
Hello, everybody,
Look at me, look at me.
Making applesauce, making applesauce
Swish, swish, swish, swish, swish, swish
Pouring the applesauce,
Pouring the applesauce
In a dish, in a dish.
Eating applesauce, eating applesauce,
Yum, yum, yum; yum, yum, yum.
Eating all the applesauce,
Eating all the applesauce.
Now we're done, now we're done.

Squirming Worms

There are lots of worms under the ground
Lots of worms wiggling around
I know they're way down there digging around
Way under, way under the ground
If you hear a sound from under a mound
A funny sound way down in the ground
You know it's squirmy worms just squirming around
Way under, way under the ground
There are lots of worms under the ground
Lots of worms wiggling around
I know they're way down there digging around
Way under, way under the ground
So dig a hole into the ground
Reach down there and feel around
You'll find great big worms, by the pound
Way under, way under the ground
There are lots of worms under the ground
Lots of worms wiggling around
I know they're way down there digging around
Way under, way under the ground
There are lots of worms under the ground
Lots of worms wiggling around
I know they're way down there digging around
Way under, way under the ground.

Peanut Butter and Jelly

First you take the peanuts
And you crunch 'em,
You crunch 'em
First you take the peanuts
And you crunch 'em,
You crunch 'em
For your peanut, peanut butter
And jelly
Peanut, peanut butter
And jelly
Then you take the grapes
And you squish 'em,
You squish 'em
Then you take the grapes
And you squish 'em,
You squish 'em

For your peanut, peanut butter
And jelly
Peanut, peanut butter
And jelly
Then you take the bread
And you spread it,
You spread it
Then you take the bread
And you spread it,
You spread it
For your peanut, peanut butter
And jelly
Peanut, peanut butter
And jelly
Then you take your sandwich
And you eat it,
You eat it
Then you take your sandwich
And you eat it,
You eat it
'Cause its good, peanut butter
And jelly
Good, peanut butter
And jelly
First you take the peanuts
And you crunch 'em,
Then you take the grapes
And you squish 'em,
Then you take the bread
And you spread it,
Then you take your sandwich
And you eat it
'Cause its good, peanut butter
And jelly
Good, peanut butter
And jelly!

Farm Babies

Note: This song goes along with Chef Combo Snackivities.

Mama Cow is calling
 Baby, where are you?
Baby calf answers
 Moo, moo, moo.

Mama hen is calling
 Come, it's time to eat.
Baby chick answers
 Peep, peep, peep.

Papa Rooster's calling
 Have a taste of stew.
Baby rooster answers
 Cock-a-doodle-do.

Mama Horse is calling
 Let's go out and play.
Baby colt answers
 Neigh, neigh, neigh.

Mama Duck is calling
 Have a little snack.
Baby duckling answers
 Quack, quack, quack.

Mama Pig is calling
 I baked a chocolate torte.
Baby piglet answers
 Snort, snort, snort.

“On the First Day of Farming”

[sung to the tune of “The 12 Days of Christmas”]

Note: There is a booklet to go along with this song in the reproducible section.

On the first day of farming the farmer gave to me, one sheep that went “baa, baa, baa.”

On the second day of farming the farmer gave to me, ...2 prancing horses, and one sheep that went “baa, baa, baa.”

On the third day of farming the farmer gave to me, ...3 barking dogs, 2 prancing horses, and one sheep that went “baa, baa, baa.”

On the fourth day of farming the farmer gave to me, ...4 red roosters, 3 barking dogs, 2 prancing horses, and one sheep that went “baa, baa, baa.”

On the fifth day of farming the farmer gave to me, ...5 pigs in the mud, 4 red roosters, 3 barking dogs, 2 prancing horses, and one sheep that went “baa, baa, baa.”

On the sixth day of farming the farmer gave to me, ...6 quiet mice, 5 pigs in the mud, 4 red roosters, 3 barking dogs, 2 prancing horses, and one sheep that went “baa, baa, baa.”

On the seventh day of farming the farmer gave to me, ...7 crows a-cawing, 6 quiet mice, 5 pigs in the mud, 4 red roosters, 3 barking dogs, 2 prancing horses, and one sheep that went “baa, baa, baa.”

On the eighth day of farming the farmer gave to me, ...8 spiders spinning, 7 crows a-cawing, 6 quiet mice, 5 pigs in the mud, 4 red roosters, 3 barking dogs, 2 prancing horses, and one sheep that went “baa, baa, baa.”

On the ninth day of farming the farmer gave to me, ...9 chicks a-peeping, 8 spiders spinning, 7 crows a-cawing, 6 quiet mice, 5 pigs in the mud, 4 red roosters, 3 barking dogs, 2 prancing horses, and one sheep that went “baa, baa, baa.”

On the tenth day of farming the farmer gave to me, ...10 slithering snakes, 9 chicks a-peeping, 8 spiders spinning, 7 crows a-cawing, 6 quiet mice, 5 pigs in the mud, 4 red roosters, 3 barking dogs, 2 prancing horses, and one sheep that went “baa, baa, baa.”

Mi Chacra (My Farm)

Note: This song goes along with the Barnyard Bingo language arts lesson.

Spanish:

Vengan a ver mi chacra que es hermosa,
Vengan a ver mi chacra que es hermosa,
El pollito hace así: peep, peep!
El pollito hace así: peep, peep!
O va camarad', O va camarad',
O va, O va, O va!
O va camarad', O va camarad',
O va, O va, O va!

English:

Come and see my farm which is so beautiful,
Come and see my farm which is so beautiful,
Little chicken goes like this: peep, peep!
Little chicken goes like this: peep, peep!
O come my friend, O come my friend,
O come, O come, O come!
O come my friend, O come my friend,
O come, O come, O come!

Other verses:

El patito (the duckling) hace así: quack, quack!
El caballo (the horse) hace así: neigh, neigh!
Lechoncito (piglet) hace así: oink, oink!
Y el burro (and the donkey) hace así: hee-haw!
El osito (the little bear) hace así: grr, grr!
El gatito (the kitten) hace así: meow, meow!
Lechucito (owlet) hace así: Whoo, whoo!
Y el toro (and the bull) hace así: snort, snort!

**NOTE: Additional songs may be found in
My Little Farm: Money, Place Value and Mapping
curriculum in this Adventures Around the Farm kit.**

“The Farmer Grows a Rainbow” Song

(Sung to the tune of “Following the Leader” From Peter Pan)

The farmer grows a rainbow, a rainbow, a rainbow,
The farmer grows a rainbow
For me to eat each day!

A bright and healthy rainbow, a rainbow, a rainbow,
A bright and healthy rainbow
To fuel my work and play!

The farmer grows the grassy grains, the grassy grains, the grassy grains,
The farmer grows the grassy grains
To give me energy!

The farmer grows the vegetables, the vegetables, the vegetables,
The farmer grows the vegetables
With vitamins, you see!

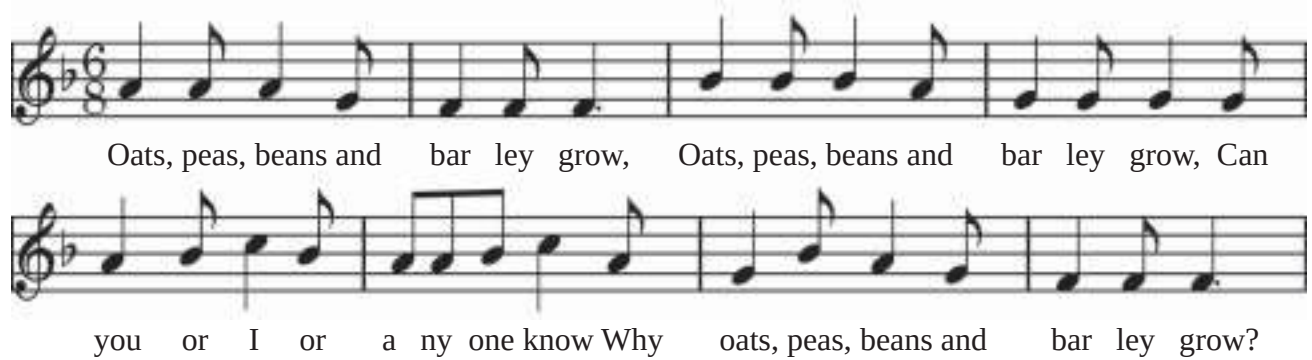
The farmer grows the fresh fruits, the fresh fruits, the fresh fruits,
The farmer grows the fresh fruits
To keep away disease!

The farmer cares for dairy cows, for dairy cows, for dairy cows,
The farmer cares for dairy cows
To give me milk and cheese!

The farmer raises beef cows, and swine for pork, and poultry,
The farmer raises catfish
For protein so I'll grow.

I want to thank the farmer, the farmer, the farmer,
I want to thank the farmer
For growing my rainbow!

Oats, Peas, Beans and Barley Grow



(do the motions while singing)

Oats, peas beans and barley grow,
Oats, peas, beans and barley grow,
Can you or I or anyone know
Why oats, peas, beans and barley grow?

First the farmer sows his seed,
Stands erect and takes his ease,
Stamps his foot and claps his hands,
And turns around to view his lands.

(Repeat First Verse)

Next the farmer waters the seed,
Stands erect and takes his ease,
Stamps his food and claps his hands,
And turns around to view his lands.

(Repeat First Verse)

Next the farmer hoes the weeds,
Stands erect and takes his ease,
Stamps his foot and claps his hands
And turns around to view his land.

(Repeat First Verse)

Last the farmer harvests his seed,
Stands erect and takes his ease,
Stamps his foot and claps his hands
And turns around to view his land.

(Repeat First Verse)

MUSIC AND MOVEMENT

Finger Plays

Skills: Fine Motor Skills, Memory

Activity:

Teach these finger plays during group time. You can use them as time-fillers while waiting for lunch to be served, etc.

This Little Cow

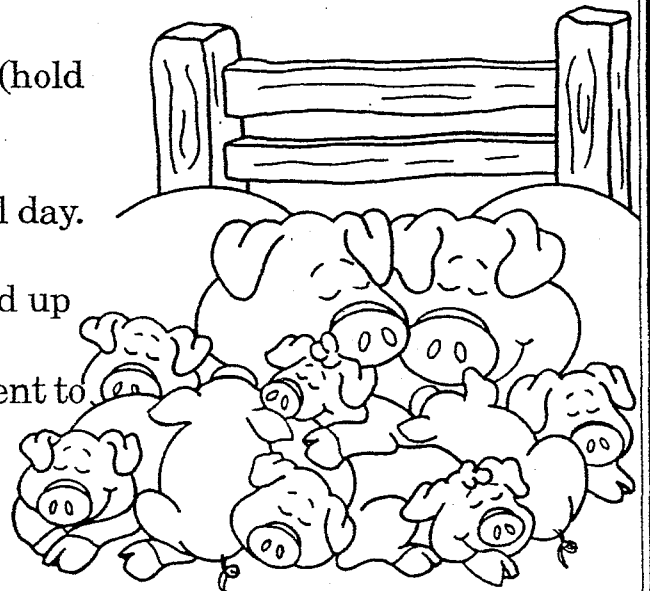
This little cow eats grass, (point to thumb)
This little cow eats hay, (point to index finger)
This little cow drinks water, (point to middle finger)
This little cow runs away, (point to ring finger)
This little cow does nothing, (point to pinky)
Just stands in the sun all day. (place hands under head like pillow)

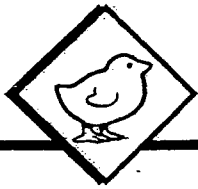
-Author Unknown



Two Mother Pigs

Two mother pigs lived in a pen, (show thumbs)
Each had four babies, and that made ten.
(show fingers and thumbs)
These four babies were black as night, (hold up one hand, thumb in palm)
These four babies were black and white. (hold up other hand, thumb in palm)
But all eight babies loved to play,
And they rolled and rolled in the mud all day.
(roll hands over each other)
At night, with their mothers, they curled up in a heap. (make fists, palms up)
And squealed and squealed until they went to sleep.





Physical Education

Barneyard Hoedown

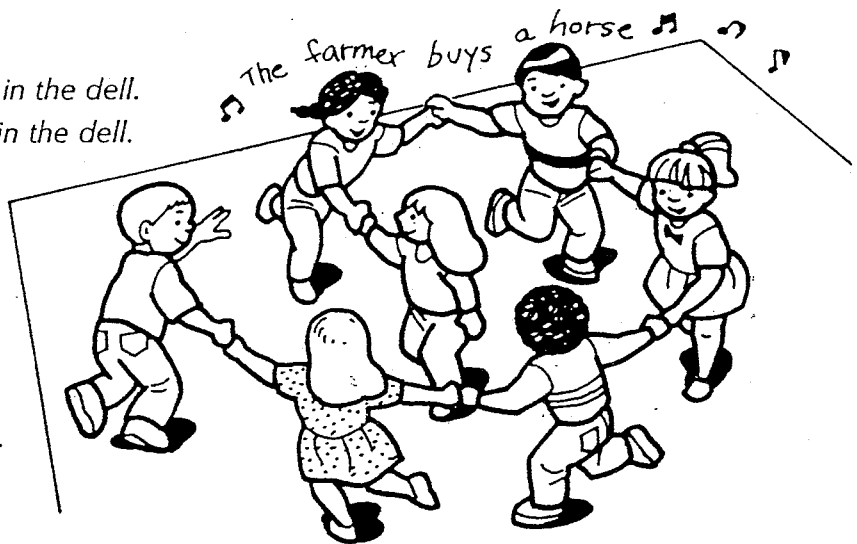
Revise the popular song "The Farmer in the Dell" to include the names of favorite farm animals. Have the class hold hands and skip in a circle as they sing the tune. Choose a "farmer" to stand in the center of the circle and select the first "animal" when that part of the song is sung. Ask students to continue the selection process as described in the verses. For extra fun, invite the chosen students to make the corresponding animal noises and movements as they stand in the circle.

(Verse 1)

*The farmer in the dell, the farmer in the dell.
Heigh-o the derry oh, the farmer in the dell.*

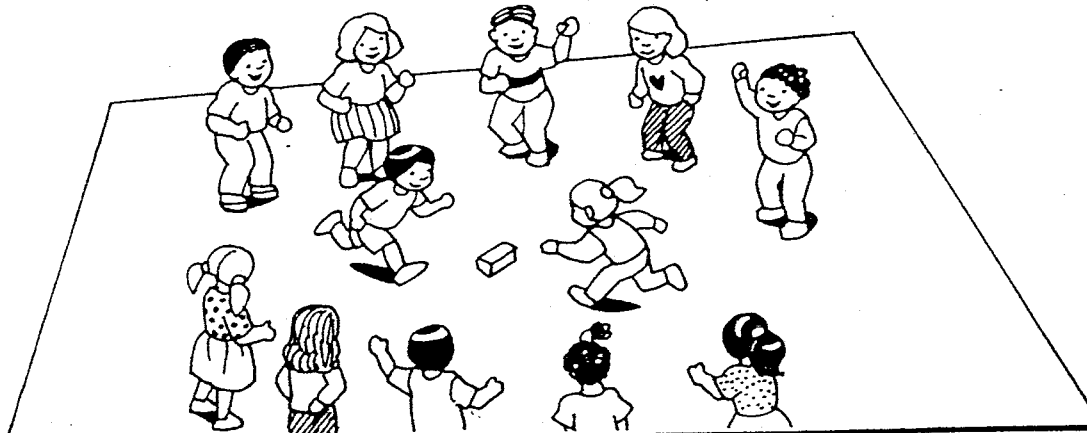
(Additional verses)

1. *The farmer buys a horse, ...*
2. *The horse meets a pig, ...*
3. *The pig meets a cow, ...*
4. *The cow meets a chicken, ...*
5. *The chicken meets a sheep, ...*
6. *The sheep meets a duck, ...*



Back to the Barn

Take students to a large playfield and have them stand in a circle. Assign each child one of four animal names (e.g., horse, cow, rabbit, chicken) and then place an eraser in the center of the circle. Call out one of the animal names. Students assigned that name run around the outside of the circle, back through their own spots, and into the center of the circle to claim the eraser. The student who reaches the eraser first gets to call out the animal name for the next round of the game. For extra fun, have students move like the animal as they race back to their spots.

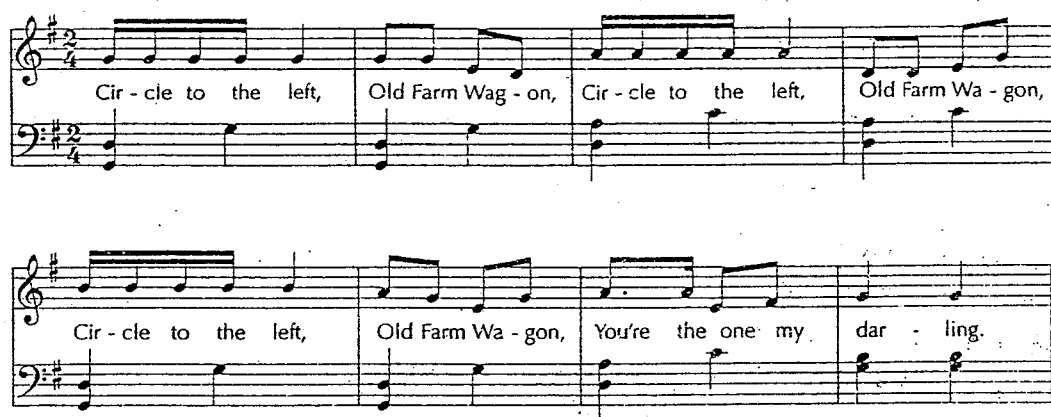


Old Farm Wagon

Use the following revised version of "Old Farm Wagon" to introduce square dancing to students. Start the dance by having students form a circle, join hands, and move to the left as they sing the first verse. Ask students to perform the additional actions described in parentheses as they sing the remaining verses.



Old Farm Wagon



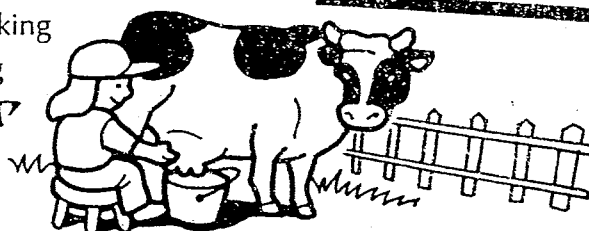
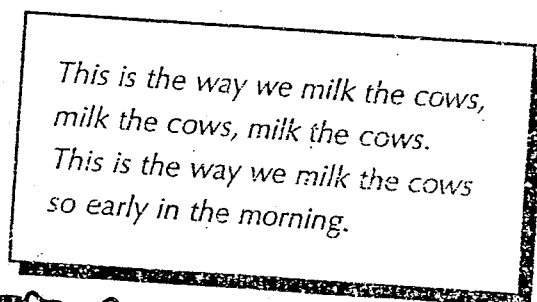
(other verses)

1. *Circle to the right, Old Farm Wagon, ...* (Whole class holds hands in a circle and moves to the right.)
2. *Promenade around, Old Farm Wagon, ...* (Partners hold both hands and move with the rest of the class, circling to the left.)
3. *Swing your partner, Old Farm Wagon, ...* (Partners link elbows and circle in place.)
4. *Promenade home, Old Farm Wagon, ...* (Partners hold hands and move with the rest of the class, circling to the right.)



This Is the Way We Milk the Cows

Compose a farm version of the song "Here We Go 'Round the Mulberry Bush." Brainstorm with students barnyard activities (e.g., milking the cows, gathering the eggs, feeding the pigs, riding a horse) to include with each repetition of the song.



Additional Physical Education Activities/Games

Animal Relays

As students race, have them gallop like a horse, waddle like a duck, strut like a rooster, walk like a cow, etc.

A Farmer's Relay

Divide students into two teams. Have a box of dress up items and objects to carry, (boots, hat, steering wheel, bucket, calculator, gloves, etc.). Each child runs to the box, gets dressed, and then returns to the line to undress. The next player does the same until all students have dressed like a farmer.

Guess Who Is Gone?

Pick a student to be a "shepherd." (A shepherd is a person who watches over the sheep.) Have everyone close their eyes. Quietly choose someone to step out into the hall. Then, everyone may open their eyes. Ask the shepherd to count the sheep. One is missing – who is it?

Put All the Eggs in the Carton

Number plastic eggs from 1-12 and place in a basket. Set the timer for 10 seconds. Students may work individually or with a partner to put the eggs back in the egg carton before the time goes off. If more than one set is available, the activity could be done as a race.

Alphabet Eggs

Write each letter of the alphabet on a plastic egg using a permanent marker. Write the capital letters on the top halves of the eggs and the lower case letters on the bottom halves of the eggs. Mix the separated tops and bottoms and place them in a basket. Place 3 egg cartons near the basket. Set a timer for 1 minute. Have students take turns matching the upper case letters with the lower case letters to fill the egg cartons before the timer goes off.

Another variation involving more time could include arranging the eggs in alphabetical order after matching them up.

Animal Charades

Choose a student to be the actor. Ask the student to pick a farm animal and whisper it in your ear. Then, the student should act like the animal without making noises while the rest of the class tries to guess. As a last resort clue, have the student actor make the animal noise. Ask class members to raise their hands to take turns guessing. When a class member guesses correctly, that student becomes the next actor.

Simon Says Farm Animal Style

Explain the rules to Simon Says. For younger students, you may have them sit out only one turn instead of the whole game if they miss a direction. Give all of Simon's directions in reference to farm animals: moo like a cow, waddle like a duck, gallop like a horse, honk like a goose, peck like a chicken, oink like a pig, baa like a sheep, crow like a rooster, munch like a goat, ruffle feathers like a turkey, etc. Allow each student to be a Simon once.

Chicken, Chicken, Who's Got Your Egg?

Select one student to be the chicken. Have the student chicken sit with his/her back to the class with the plastic egg behind him/her. Tell the rest of the students that the person you tap on the shoulder is to quietly sneak up behind the chicken and take the egg, return to his/her seat and hide the egg in his/her lap. Encourage all the students to hide their hands as if they have the egg. Once the students are all ready, the class asks, "Chicken, chicken, who's got your egg?" The chicken then turns around, looks over the class and guesses who has the egg. Give the chicken three guesses. If the chicken does not guess correctly, the student with the egg becomes the next chicken. If the chicken guesses correctly, he/she gets another turn.

The banner features a cartoon farmer in a yellow hat and green shirt holding a red bowl of fruit. A large rainbow arches over a field. In the foreground, a large rainbow pyramid is shown with a child climbing it. Various food items like bread, carrots, tomatoes, bananas, milk, and chicken are scattered at the bottom. A central menu box lists resources: Introduction (PDF, Movie), Main Course (PDF, Movie), Materials (Movie), Rainbow Song (Lyrics, Voice, Instrumental), and Pre-K-5th (Lesson Plans & Movies). A text box at the bottom right explains the site's purpose for nutrition education.

The Farmer Grows A RAINBOW

Introduction	PDF ▪ Movie
Main Course	PDF ▪ Movie
Materials	Movie
Rainbow Song	Lyrics ▪ Voice ▪ Instrumental
Pre-K—5th	Lesson Plans & Movies

This site provides teachers with classroom-ready resources to improve nutrition education among Pre-K-5 students. Begin with the introductory information on this page and then move onto the grade specific resources.

Each lesson has a physical education activity which is ☐ explained and demonstrated at the web site listed below.

Oklahoma Ag in the Classroom



OAITC Lessons With Physical Activities

Games

In order to download these lessons, you will need to use Adobe Acrobat Reader. If you do not have a copy of Acrobat reader, [click here](#).

Lesson Title	PreK-2	3-5	6-8	Motor/ Activity	Health Enhancing	Personal/ Social
Ag in My Community	X			X		
Ag in the Outfield	X	X	X	X	X	X
Ag in the Playing Fields		X		X	X	X
Agriculture is a Cycle (Circles)	X	X		X	X	X
Agriculture: Oklahoma's Legacy	X	X		X	X	X
Barnyard Bingo	X			X	X	
Bee Dance	X	X	X	X		X
Clucking Chickens	X	X		X	X	X
Don't Fence Me In		X		X		
Egg Toss	X			X	X	X
Fantastic Flower	X	X		X	X	X
A Field of Beans	X	X		X	X	X
Fleece as White as Snow		X		X		

Fresh From the Farm	X			X	X	X
Garden Grid	X			X	X	X
Garden Guard	X	X		X	X	X
How to Pick the Best	X	X	X	X		
Mr. Goldman's Good Idea		X		X		
No Foot, No Horse	X	X		X	X	X
Pumpkins by the Pound	X	X		X	X	X
Soak it Up	X	X	X	X	X	X
Sock Walk	X	X		X	X	X
Stick Horse Rodeo	X	X		X	X	X
Territorial Children	X	X		X	X	X
These Roots Run Deep		X	X	X	X	X
Working Watermelon		X	X	X	X	X

[Back to Academic Subject Index](#)

[Back to Lessons Index](#)

[Oklahoma Ag in the Classroom](#)



Chef Combo Suggests Fantastic Adventures for FARM THEMES

OVERVIEW OF ACTIVITIES



Farm Babies

Students participate in a flannel board activity and match farm animals with their sounds.



Farming in a Bag

In small groups, students grow sprouts.



Making Sprouts Pockets

Students use the sprouts they grew in **Farming in a Bag** to make pita sandwiches.



Five Dairy Cows and Their Dairy Treats

Students make finger puppets and participate in a finger play.



A Dairy Treat Day

Students taste several dairy foods.

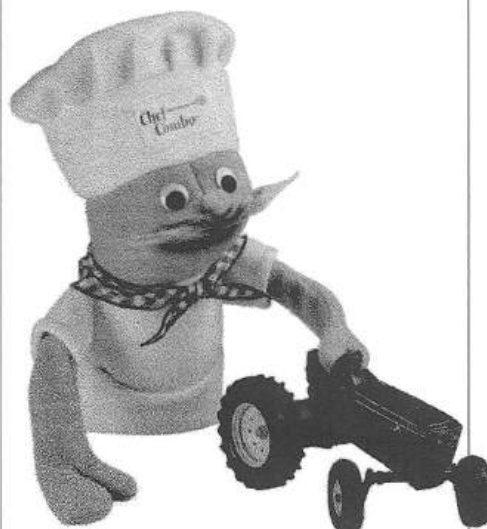
NUTRITION OBJECTIVES

The students will:

- Understand that some nutritious foods grow from seeds.
- Understand that milk gives children strong bones and teeth.
- Taste a variety of nutritious dairy foods.

GETTING READY TO VISIT THE FARM

- Review all the activities.
- Select the activities you will use to incorporate nutrition into your Farm unit.
- Decide which activity you will use to take a Magic Carpet ride.
- If you want, add something to Chef Combo's costume to connect him with this Fantastic Adventure. Possibilities include:
 - a toy rake
 - a package of seeds in his pocket
- Decide after which activity you will send home the **Food Matters Family Newsletter**.



RELATED LITERATURE



Aliki. *Milk From Cow To Carton*. New York: Harper Collins, 1992. Describes the steps in making milk with clear pictures and text.

Farm Animals. New York: Aladdin Books, 1991. Photos of adult and baby farm animals accompany text describing what these animals eat.

Fowler, Allan. *Thanks to Cows*. Chicago: Childrens Press, 1992. A simple description of how a cow produces milk and how milk is processed.

Hausher, Rosmarie. *What Food Is This?* New York: Scholastic, Inc., 1994. Beautiful photos of 18 foods are provided with information on where food comes from.

Jackson, Ellen. *Brown Cow, Green Grass, Yellow Mellow Sun*. New York: Hyperion, 1995. The story tells how the sun helps the grass grow, so the cow can eat it, so the boy can milk the cow.

Kunhardt, Edith. *I Want to Be a Farmer*. New York: Grosset and Dunlap, 1989. Nathan wants to be a farmer when he grows up. Using photos, this book tells how Nathan now helps on his family farm.

Lember, Barbara Hirsch. *A Book of Fruit*. New York: Ticknor & Fields Books for Young Readers, 1994. While most children recognize fruit in a bowl or in a supermarket, some have never seen fruit growing on a tree or a bush. This well-photographed book makes the connection between the fruit and where and how it grows before it arrives at the supermarket. Photos of single servings of fruit appear on pages opposite photos of where the fruit grows.

Sánchez, Isidro and Carme Peris. *The Farm*. New York: Barron's, 1991. Explains how vegetables are grown.

Farm Babies



A Nutrition Activity

ACTIVITY SYNOPSIS

Students participate in a flannel board activity and match farm animals with their sounds.

FOOD FACT

- The first food of any farm baby that is a mammal (such as cow, horse, pig, lamb) is its mother's milk.

MATERIALS

- Chef Combo
- Flannel board figures for cow, calf, hen, chick, rooster, baby rooster, horse, colt, duck, duckling, pig, piglet
- Flannel board

ADVANCE PREPARATION

- Locate or create flannel board figures for all the animals listed above.

Farm Babies

Mama Cow is calling
Baby, where are you?
Baby calf answers
Moo, moo, moo.

Mama Hen is calling
Come, it's time to eat.
Baby chick answers
Peep, peep, peep.

Papa Rooster's calling
Have a taste of stew.
Baby rooster answers
Cock-a-doodle-do.

Mama Horse is calling
Let's go out and play.
Baby colt answers
Neigh, neigh, neigh.

Mama Duck is calling
Have a little snack.
Baby duckling answers
Quack, quack, quack.

Mama Pig is calling
I baked a
chocolate torte.
Baby piglet answers
Snort, snort, snort.

WHAT TO DO

1. Have Chef Combo ask the children if they've ever been on a farm. Discuss. Then have the Chef ask the children to name the animals that live on a farm.
2. Let the Chef say:
 - Baby animals must eat nutritious foods to grow, just like you.
 - I'm going to read a poem about the animals who live on the farm.
 - You're going to pretend to be the baby animals.
3. As the Chef reads the "Farm Babies" poem, place the appropriate figure on the flannel board. Ask students to respond with the appropriate animal sound.
4. Pass out the flannel board figures to different students. Have the Chef read the poem again. Have the students place the figures on the flannel board when they are named in the poem. Again, invite the rest of the class to respond with the appropriate animal sound as the poem is read.

Farming in a Bag



A Nutrition Activity

ACTIVITY SYNOPSIS

In small groups, students grow sprouts.

FOOD FACTS

- Nutritious foods, such as sprouts, grow from seeds.
- Seeds need water to grow.

MATERIALS

- Chef Combo
- Sprouting seeds like alfalfa, wheat berry, or mung bean
- Resealable plastic sandwich bags (one for each group of 3–4 children)
- Needle or safety pin
- Tablespoons
- Plastic tub
- Warm water
- Dish drainer
- Magnifying glass
- Optional: **Food Matters Family Newsletter** (one for each student)

ADVANCE PREPARATION

- Prepare each bag for sprouting seeds by punching tiny holes in the bottom with a needle or safety pin. Be sure to punch some holes in the bottom seam so that water will drain well from the bag. (The seeds must be drained or they will rot.)
- Review **Making Sprouts Pockets** (page 48). To coordinate these two activities, schedule **Making Sprouts Pockets** soon after this activity.
- Optional: Photocopy the **Food Matters Family Newsletter** (pages 56 and 56A).

WHAT TO DO

1. Have Chef Combo tell the children they're going to be farmers and grow crops. Let the Chef show the children the seeds they are going to grow. Also have Chef Combo mention that plants grow from seeds and need water to grow.
2. Form teams of 3–4 children. Distribute the sandwich bags. Write the names of the team members on their bag. Have the "farmers" put 2 tablespoons of seeds in their bags, seal the bags, and place them in a tub of warm water. Let the seeds soak overnight.
3. The next day, explain the procedure for growing sprouts. For the next three days students must:
 - Rinse the bags of seeds three times a day.
 - Drain the seeds by leaving them on a dish drainer for 20 minutes.
 - Store the bags in a warm closet or cupboard between rinsings.
4. Each time students rinse and drain their sprouts, have them observe the changes.
5. In about three days, when the seeds have sprouted leaves, have the students place the bags in the light. When the leaves turn green, use the magnifying glass to observe the sprouts. Allow children to take a little taste. Then store the rest of the sprouts in the refrigerator until you are ready to make the **Sprouts Pockets**.
6. Optional: Send home a copy of the **Food Matters Family Newsletter** with each child.

Making Sprouts Pockets



A Make-It-Myself Recipe Activity

ACTIVITY SYNOPSIS

Students use the sprouts they grew in **Farming in a Bag** to make pita sandwiches.

FOOD FACTS

- Pita bread is a flat, unleavened bread popular in Northern Africa and the Middle East.
- Bread provides the body with energy.

MATERIALS

- Chef Combo
- 3 trays
- Recipe Cards
- Ingredients for **Sprouts Pockets**
- Plates (one for each student)
- Bowls
- Serving spoon
- Napkins (one for each student)
- Tasting Passports
- Chef Combo Rubber Stamp
- Tasting Chart
- Optional: **Food Matters Family Newsletter** (one for each student)

ADVANCE PREPARATION

- Prepare the Recipe Cards (pages 52–53).
- Review **How to Prepare the Recipe Cards, How to Set Up for a Make-It-Myself Recipe Activity**, and **How to Use a Make-It-Myself Recipe Activity in Your Classroom** (page 21).
- Cut pita bread into quarters.
- Arrange each Recipe Card and its supplies on a separate tray.

SPROUTS POCKETS



Yield
4 per pita pocket

Ingredients

- Pita bread
- Sprouts grown in class
- Shredded cheese

Directions

1. Put $\frac{1}{4}$ of a pita pocket on a plate.
2. Place 2 spoonfuls of cheese in the pita pocket.
3. Top with sprouts.

- Set up the trays from left to right.
- Review steps 7 and 8 on page 31 for information on how to take a tasting survey and how to use the Tasting Chart.
- Optional: Photocopy the **Food Matters Family Newsletter** (pages 56 and 56A).

WHAT TO DO

1. Have Chef Combo tell the children that the best thing about farming is tasting your delicious crops. Have the children wash their hands. Give each team a bowl. Have them turn their bag inside out into the bowl. Label the bowls.
2. Have the first team go to the Cooking Corner with their bowl of sprouts. Demonstrate the left-to-right sequence by making a **Sprouts Pocket**. Let each student make one.
3. Repeat the demonstration for each team. When all children have made a **Sprouts Pocket** bring Chef Combo out. Have him “taste” the **Sprouts Pocket** and say how delicious it is. Role model “trying a new food” by tasting the **Sprouts Pocket** in front of your students.
4. Stamp the Tasting Passports of everyone (including Chef Combo) who takes a taste, even if they don’t eat the whole sandwich.
5. Add **Sprouts Pockets** to the Tasting Chart. Take a tasting survey. Have the children help count the results. Record the results on the Tasting Chart.
6. Have the children help clean up.
7. Optional: Send home a copy of the **Food Matters Family Newsletter** with each child.

Five Dairy Cows and Their Dairy Treats



A Nutrition Activity

ACTIVITY SYNOPSIS

Students make finger puppets and participate in a finger play.

FOOD FACTS

- Foods from the Milk Group include all types of milk, cheese, yogurt, pudding, ice cream, and frozen yogurt.
- Foods from the Milk Group help build strong bones and teeth.

MATERIALS

- Markers or crayons
- Glue or tape
- Finger puppet patterns: cow, cheese, pudding, cottage cheese/butter/whipping cream, yogurt, ice cream cone
- Chef Combo

ADVANCE PREPARATION

- Prepare a full set of the finger puppets for yourself using the patterns on pages 54–55. One hand will have five cows. The other hand will have cheese, pudding, cottage cheese/butter/whipping cream, yogurt, and ice cream.
- Photocopy enough copies of the finger puppets so that each student has one cow finger puppet and one of the dairy food finger puppets. Make sure that different students have different foods.
- Review the “Five Dairy Cows” finger play.

WHAT TO DO

1. Have Chef Combo tell the students:
 - They’re going to meet five of his special friends.
 - His special friends love boys and girls very much and they want them to grow up to be strong and healthy.

Have him explain that you will introduce his friends. Put the Chef away and place the puppets on your fingers. Do the “Five Dairy Cows” finger play.

2. Give each child two finger puppet patterns to color and cut. Help students identify their dairy product puppet. When they are done, help the students assemble the finger puppets.
3. Repeat the finger play. Have students “pop up” their finger puppets at the appropriate time.
4. Collect the finger puppets for use with the next activity—**A Dairy Treat Day.**

FIVE DAIRY COWS FINGER PLAY



*Five friendly dairy cows
Were eating ice cream cones,
Trying to think of how to give
All kids strong teeth and bones.*

*So the five friendly dairy cows
On a bright and sunny day,
Planned a list of dairy treats
To make without delay.*

*The first cow said, "With my milk
I'll make a tray of cheeses."*

*The second cow said, "With my milk
I'll make pudding! It always pleases."*

*"My milk," said the third cow, "will make
Cottage cheese, butter, and cream."*

*"My milk," said the fourth cow, "will make
Yogurt that's like a dream."*

*The fifth cow thought, and thought, and thought,
And then she thought some more,
Finally she said, "With my milk,
I'll make ice cream treats galore.
I'll make vanilla, peach, and chocolate
And of course some coconut,
Strawberry and butter pecan,
And finally some pistachio nut."*

*The dairy cows went to sleep
And had dreams that were so sweet,
Of boys and girls throughout the land
With very strong bones and teeth!*

Pop up all five dairy cows.
Curl fingers toward each other and nod the heads,
so it looks like the cows are talking
with each other.

Put the cows back down.

Pop up the thumb cow.
Pop up the cheese.

Pop up the pointer finger cow.
Pop up the pudding.

Pop up the middle finger cow.
Pop up the cottage cheese, butter, whipping cream.

Pop up the fourth finger cow.
Pop up the yogurt.

Pop up the baby finger cow.

Pop up the ice cream cone.

Put the dairy products down.

Have the cows stretch.

Put the cows down.

A Dairy Treat Day



A Take-A-Taste Activity

ACTIVITY SYNOPSIS

Students taste several dairy foods.

FOOD FACT

- All dairy foods are made with milk.

MATERIALS

- "Five Dairy Cows" finger play
- Finger puppets (from **Five Dairy Cows and Their Dairy Treats**)
- Chef Combo's™ Musical Adventures 🎵 audiocassette
- Audiocassette player
- Chef Combo
- Plates (one for each student)
- Spoons (one for each student)

- Napkins (one for each student)
- Cheese (½ ounce for each student)
- Pudding (a spoonful for each student)
- Cottage cheese (a spoonful for each student)
- Yogurt (a spoonful for each student)
- Unusual flavor of ice cream (a spoonful for each student)
- 4 serving spoons
- Tasting Passports
- Chef Combo Rubber Stamp
- Tasting Chart
- Optional: **Food Matters Family Newsletter** (one for each student)

ADVANCE PREPARATION

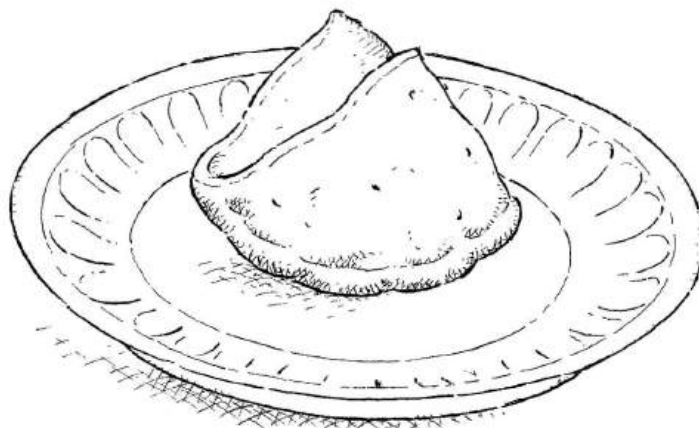
- Cut the cheese into ½ ounce servings.
- Review the "Five Dairy Cows" finger play (page 50).
- Review steps 7 and 8 on page 31 for information on how to take a tasting survey and how to use the Tasting Chart.
- Practice singing the song "A Dairy Treat Day." This is song #4 on the Chef Combo's™ Musical Adventures 🎵 audiocassette. The words and music for this song are also on page 8 of the Music Section.
- Optional: Photocopy the **Food Matters Family Newsletter** (pages 56 and 56A).

WHAT TO DO

1. Pass out the finger puppets. Lead the students in the "Five Dairy Cows" finger play.

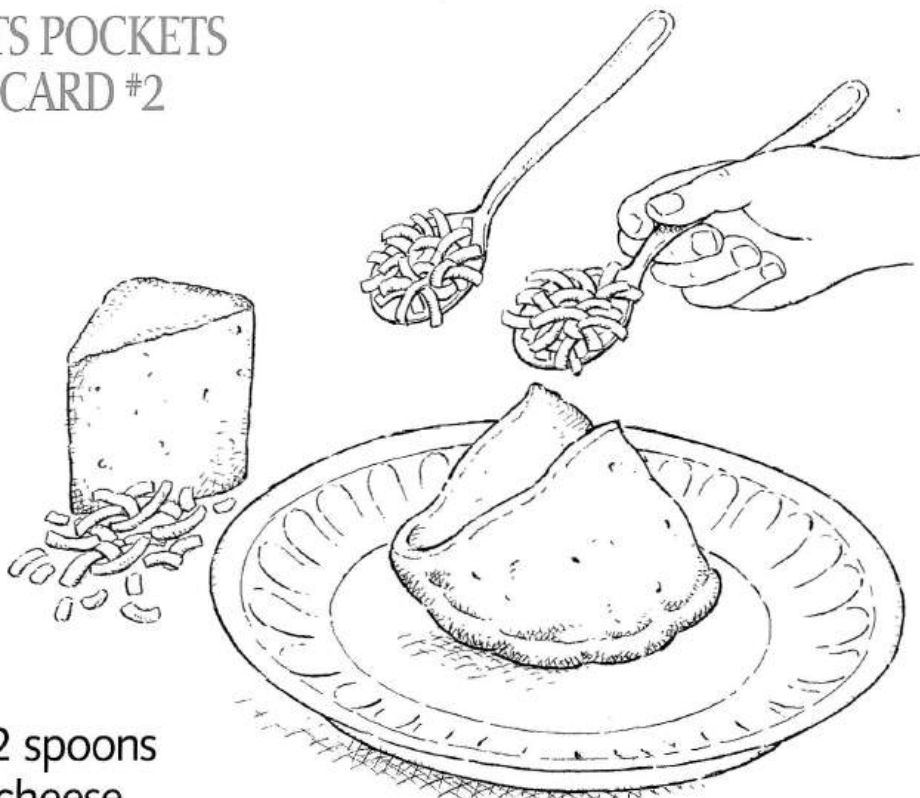
2. Play the song "A Dairy Treat Day."
3. Have Chef Combo invite the students to taste the dairy treats.
4. After the students have washed their hands, have the first cow introduce her cheese. First have Chef Combo "taste" the cheese and say how much he likes it. Then role model "trying a new food" by tasting it in front of your students. After students taste the cheese, discuss its color, smell, taste, and texture.
5. Add "cheese" to the Tasting Chart. Have the Chef take a tasting survey and tally the results on the Tasting Chart.
6. Repeat the procedure for pudding, cottage cheese, yogurt, and ice cream.
 - Have a cow introduce the food.
 - Have Chef Combo "taste" and give his reaction to the food.
 - Role model "trying a new food" by tasting it in front of your students.
 - Offer a taste to all children who would like to try the food.
 - Discuss the color, smell, taste, and texture of the food.
 - Take a tasting survey.
7. Stamp each student's (and Chef Combo's) Tasting Passport for each food they tasted. Have Chef Combo remind the students that the dairy foods they just tasted help build strong bones and teeth.
8. Play "A Dairy Treat Day" again and invite students to sing along.
9. Optional: Send home a copy of the **Food Matters Family Newsletter** with each child.

SPROUTS POCKETS RECIPE CARD #1



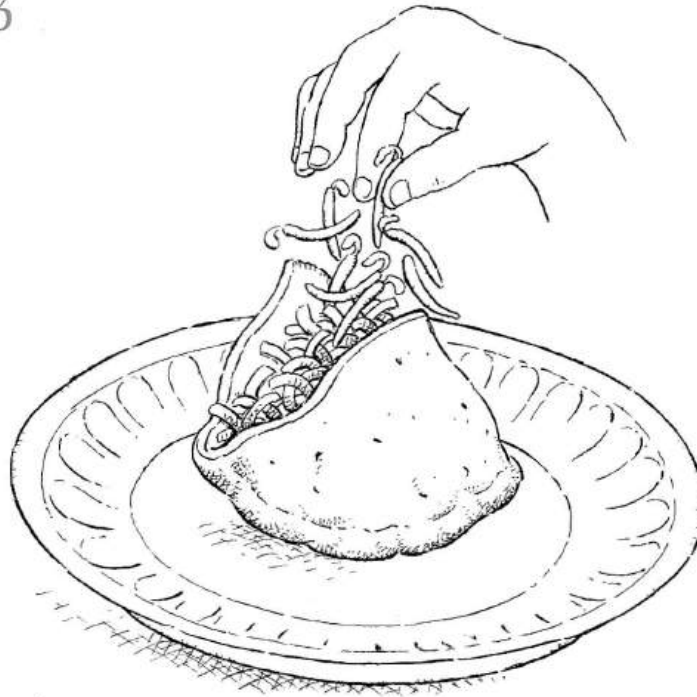
- 1** Put the pita pocket on a plate.

SPROUTS POCKETS RECIPE CARD #2



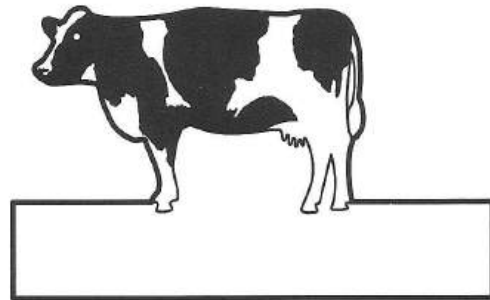
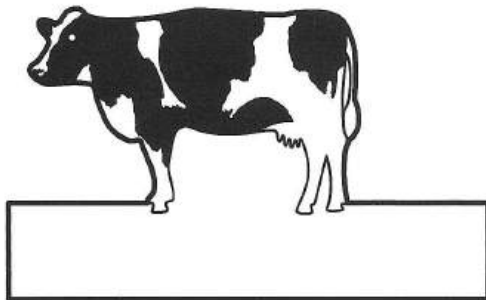
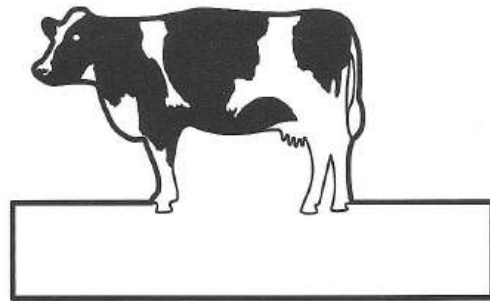
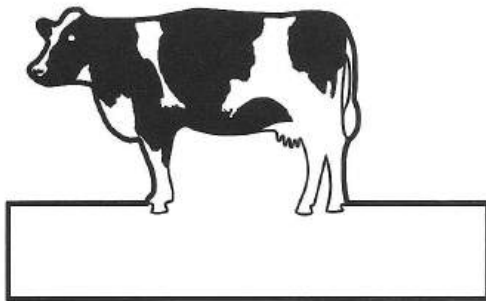
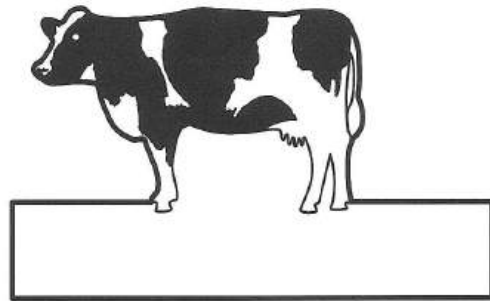
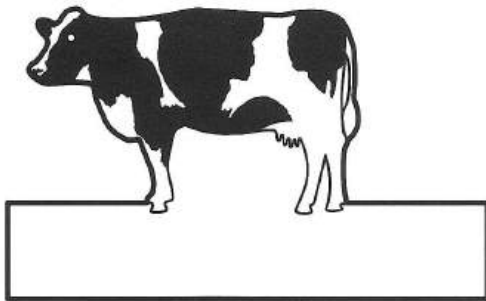
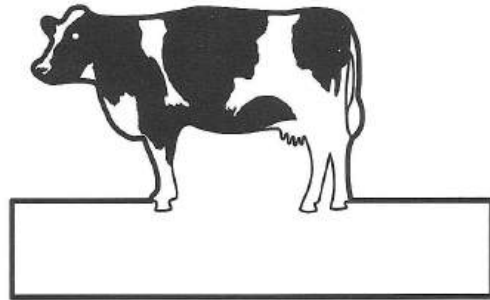
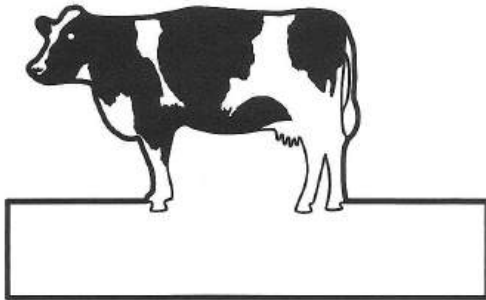
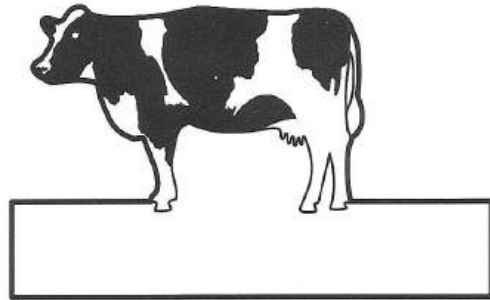
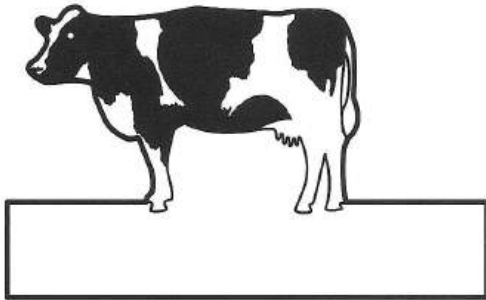
- 2** Add 2 spoons of cheese.

SPROUTS POCKETS RECIPE CARD #3

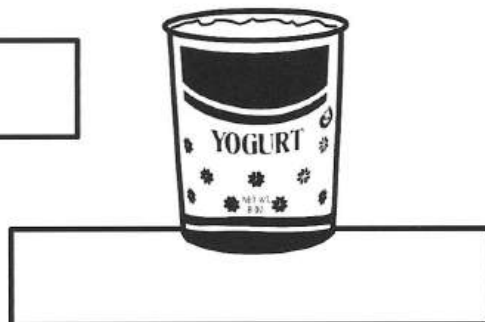
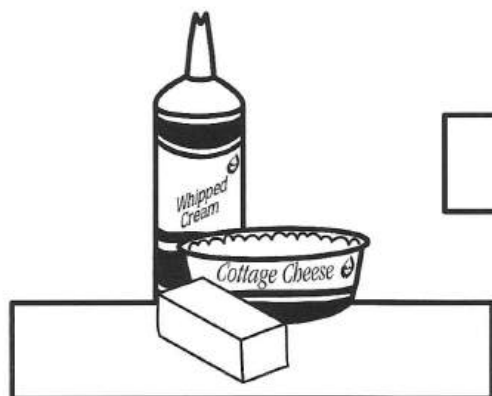
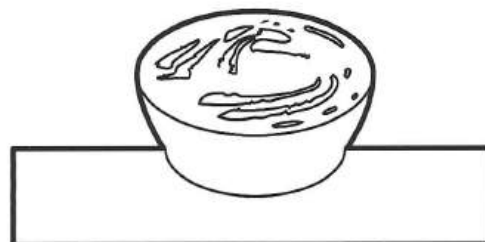
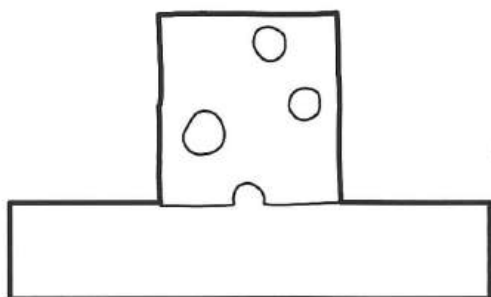
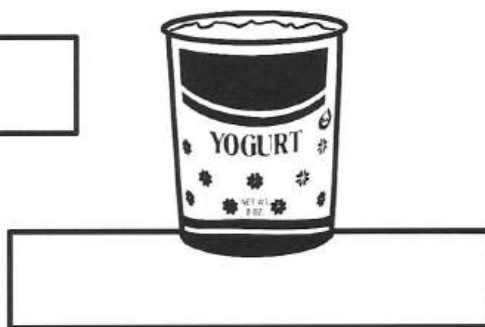
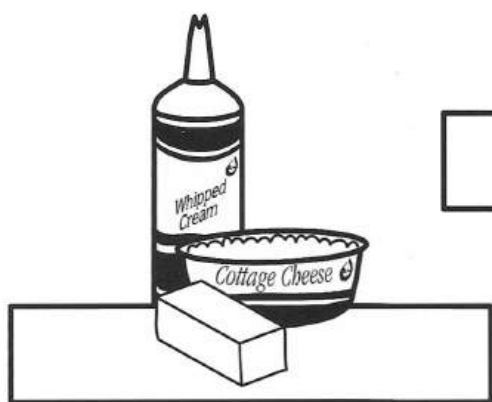
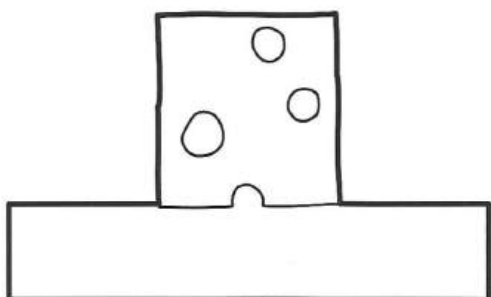


3 Top with sprouts.

FINGER PUPPET PATTERNS



FINGER PUPPET PATTERNS





Food Matters



Family Newsletter

CHEF COMBO VISITS THE FARM

With the help of Chef Combo, your child learned that many healthy foods grow on farms. Unfortunately, some children would like healthy foods to stay on farms.

They're hesitant to try new foods, especially when their parents seem a bit too excited about them. This newsletter will provide tips on how to get your child to try new foods. After all, eating a variety of foods is the key to a healthy diet.

FEATURED RECIPE

Pita is a round, flat bread that opens into a pocket. It can be filled with veggies, cheese, or meat. So it's a great way to use leftovers!

Pick-A-Pita-Pocket Sandwiches

2 pita rounds

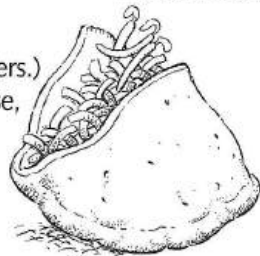
Your choice of filling(s):

Veggies: chopped lettuce, celery, carrots, sprouts

Cheese: shredded mozzarella or cheddar

Meats: cut-up cooked meats, luncheon meats, or tuna

Cut each pita round in half. (For 4- and 5-year-olds, cut into quarters.) Fill the pocket with veggies, cheese, and/or meats. Let your child stuff his or her own. Makes 4 pita halves or 8 pita quarters.



ASK CHEF COMBO

Question:

A total of six foods cross the lips of my 5-year-old son. No amount of pleading, promising, or punishing changes these six foods. What can I do to get him to eat something different?

Answer:

*Eating variety really is best
And parents can help without
being pests.*

*Trying new foods shouldn't
end up a fight*

*Start with small servings
'till they want a bite.*

Don't plead or reward.

Put punishment to rest.

*But don't give up on your
"new food" quest.*

*Six months from now,
you'll fall on your knees
When your 5-year-old says,
"More broccoli, please."*

FASCINATING FOOD FACT

It takes 8-10 exposures to an unfamiliar food before a child is willing to try it. Best approach? Don't give up if your child turns his or her nose up at a food half-a-dozen times. Continue to offer—not force—new foods. Zucchini anyone?

NIFTY NUTRITION NUGGETS: HOW TO GET YOUR CHILD TO TRY NEW FOODS!

- Offer a small serving of a new food along with familiar favorites.
- Children who help prepare a recipe are more willing to eat it later.
- Nix a Mix. Offer new foods alone before mixing with other foods.
- Monkey see, monkey do. Eat a new food and your child may, too.
- Timing is everything. Children are more likely to be open to new foods when they're well-rested, yet hungry.
- The bottom line: It's the parents' responsibility to offer nutritious foods, but it's best for your child's development of healthy eating habits to decide how much, if any, to eat.



Bee Line



A newsletter for Utah's K-6 Educators

This newsletter is **sponsored by the Utah Foundation for Agriculture in the Classroom and Intermountain Farmers Association.** For more information, or to receive a free subscription, contact Agriculture in the Classroom at Utah State University, www.agclassroom.org/ut.

Agriculture, Science, Literature, and Chocolate? Works for this veteran teacher!

Integrating science and agriculture is not a new concept to Patti Seeholzer, a third grade teacher at River Heights Elementary in Cache County, Utah. Along with 22 years of teaching experience, Patti has received numerous teaching awards in science. In 2001, Patti received the Presidential Award for Excellence in Science Teaching. She said, "That was an amazing experience. She also received the Region I Elementary Science Teacher of the year in 2006 from the Utah Science Teachers Association.

Indeed, Patti has been able to pass along her love of science and teaching through agriculture. Mrs. Seeholzer is enrolled in the Food, Land, and People (Agriculture in the Classroom—Utah State University) online course. While in the course Patti has taken many lesson plans and activities written for older grade levels and adapted them to meet the needs of her students. She constantly looks for activities that relate to some of the literature her students are reading and then she helps them make agricultural connections. For example, when teaching a nutrition unit, Patti read the book, *Tops and Bottoms* by Janet Stevens to the class. She said, "Each day that I introduced a food group, I brought in a snack for the students." For vegetables, she prepared "ants on a log" (celery, peanut butter, raisins). When teaching about fruits, she brought in bananas, pineapple, and apples to taste. For grains, she brought in crackers. When discussing meats and protein, she offered bits of ham and turkey. When talking about the benefits of milk, she had her students make butter. She continued, "The students really enjoyed this. I always have a student who doesn't want to try it [butter], but after they do, they really like it!" An additional hands-on activity included making ice cream in a bag after viewing and discussing the video, *Reading Rainbow—Milk Makers*.

In order to help students recognize healthy and nutritious foods, students cut pictures of foods from magazines and glued nutritious meals onto paper plates. She also had the students sort foods according to food groups and create a list of foods that belonged in each food group. She said, "They did this with ease. It is great when the students relate back to something you have already taught."



Mrs. Seeholzer at River Heights Elementary integrates social studies, math, science and language arts.

Mrs. Seeholzer adapted the "Loco for Cocoa" lesson plan (part of the online course) and used the novel, "Chocolate Fever" by Robert Smith. Patti integrated math into this lesson by giving students individual bags of M&M's and then asked them to estimate the number of candies in the bag; they also made a tally chart and a bar graph using their M&M's. She said, "They didn't even realize they were doing math!"

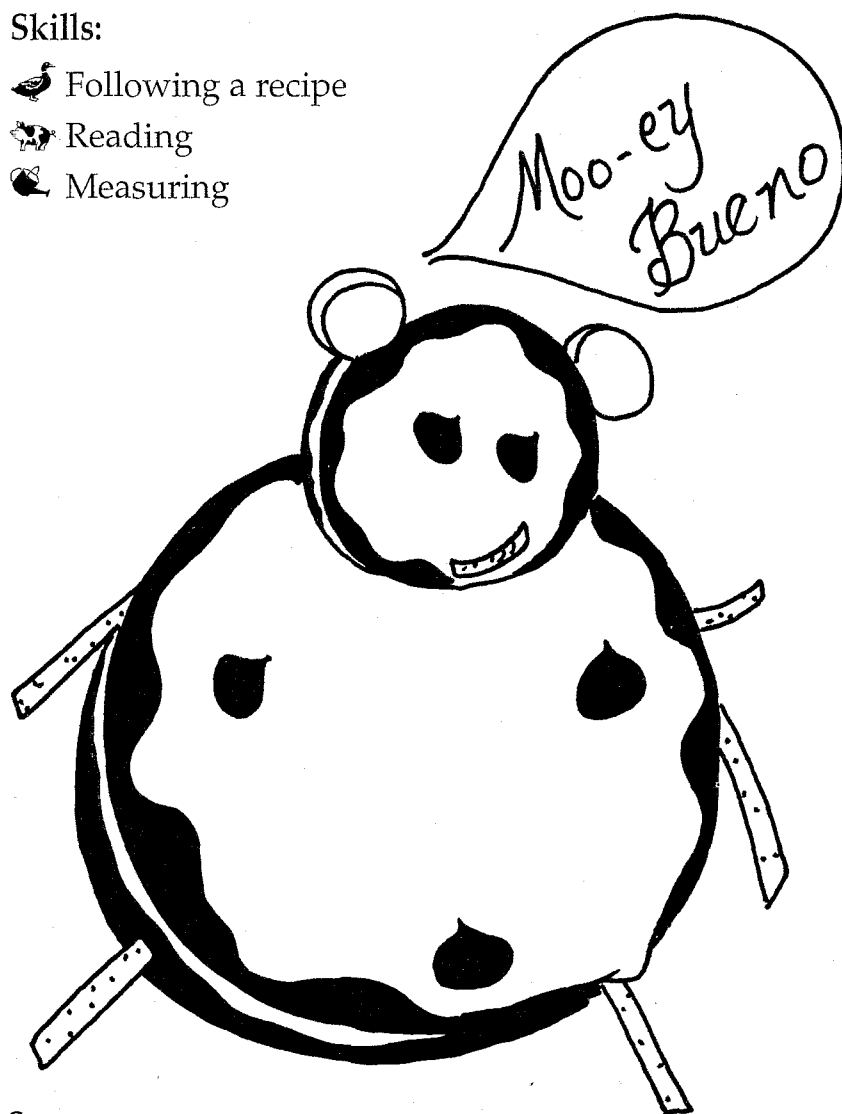
Students then worked in groups of three to create posters that depicted the history of chocolate, this helped with her study of South America (social studies core). Students were further engaged by creating historical timelines of the history of chocolate along with the creation of chocolate cinquain poems. Patti was able to have a student bring in an actual cacao bean so that students were able to see and feel the pod. Mrs. Seeholzer effectively integrated science, social studies, language arts and math into the study of chocolate.

Indeed, Patti continues to pass along her love of learning through the integration of science and agriculture to her third grade students at River Heights Elementary. After 22 years of service to the community, she simply states, "I enjoy teaching, learning new ways to help my students learn, and have fun doing it."

"Udderly" Delicious!

Skills:

-  Following a recipe
-  Reading
-  Measuring



Ingredients Needed: (per student)

- ▲ 1 large Oreo® cookie
- ▲ 1 mini Oreo® cookie
- ▲ 5 chocolate chips
- ▲ 3 pretzel sticks
- ▲ 1 mini marshmallow
- ▲ 1 small licorice strip
(from a pull 'n' peel
licorice)
- ▲ Can of white icing
- ▲ Plastic knives
- ▲ Napkins/or plates

Steps:

1. Place the Oreos® on a plate or napkin.
2. Use the large Oreo® as the cow's body.
3. Attach the mini Oreo® as the cow's head with white icing.
4. Spread the icing on both the large and the small Oreos®.
5. Place two chocolate chips on the head as eyes.
6. Place the other three chocolate chips on the body as spots.
7. Break two of the pretzel sticks in half. This will make four short legs.
8. Use the remaining pretzel stick as the tail.
9. Cut the mini marshmallow in half and attach it with icing to the head as ears.
10. Use one small strip of pull 'n' peel licorice as a mouth.

"MOO"-EY-BIEN!

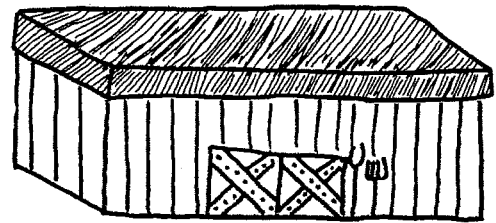
BARN BUILDING

Directions:

1. Paint the entire bottom of the shoe box RED for the barn.
2. Paint the lid of the shoebox BLACK for the roof.
3. Cut a small opening in the bottom of the box for "barn doors".
4. Take the lid or "roof" off and add animal stalls, animals, hay and any other farm-related items (such as toy tractors, cowboy figures, etc.)
5. Set up all the BARNS in your room and have the students give a "tour" to their classmates.

Materials Needed: (per student)

- ▲ 1 shoe box (For a "teacher" version use a bigger box.)
- ▲ Red paint
- ▲ Black paint
- ▲ Scissors
- ▲ Animal stickers, pictures or plastic toy animals



Yummy Barns!

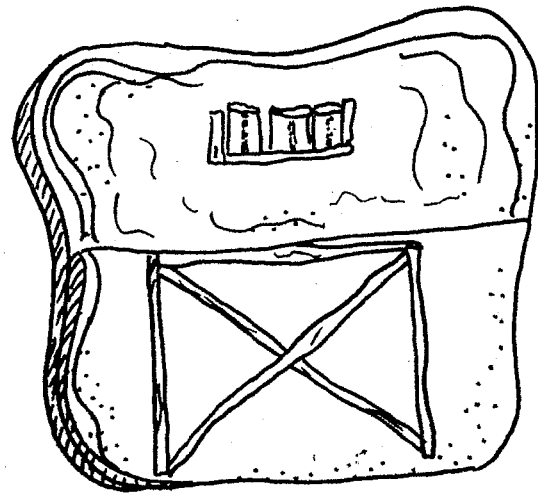
Ingredients Needed: (per student)

- 1½ pieces of toast
- Peanut butter
- 8 pieces of Pull 'n' Peel® licorice
- ½ banana, sliced
- Paper plate

Directions: Follow the steps below for making the Yummy Barns.

Please Note: Make sure that the bread is toasted so that items will stick better.

1. Place the full piece of toast in the center of the plate.
2. Spread peanut butter completely over the full piece of toast.
3. Place the ½ piece of toast on TOP of the full piece. (Peanut butter should attach them.)
4. To make the barn "doors", take 3 pieces of Pull 'n' Peel® licorice and place them on the toast to look like a door.
5. Take 2 more licorice strings to make an "X" on the barn door.
6. Use the last 3 pieces to make a small "loft" right below the roof.
7. Use 2 or 3 banana slices to represent "HAY" in the loft.
8. For added flavor, sprinkle with cinnamon and/or sugar.
9. Enjoy!

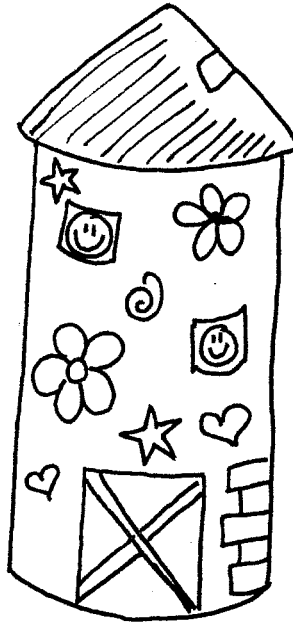


Silly Silos

(A Fine Arts Activity)

Let's Make Silly Silos! Here's How:

1. Cover the oatmeal container with the colored construction paper.
2. Using the black paper, cut a circle. Cut a slit from the outside of the circle to the center.
3. Fold the circle to make a cone and tape together.
4. Decorate the container using the markers to draw a face and other items to make the silo "silly".



Materials Needed: (per student)

- ▲ 1 small oatmeal container or Pringles® can
- ▲ 1 piece of 12x18 construction paper (color of your choice)
- ▲ 1 piece of 6x6 black construction paper
- ▲ Markers
- ▲ Stickers
- ▲ Other decorative items

Please Note: Have the students judge the best, funniest, silliest, etc.

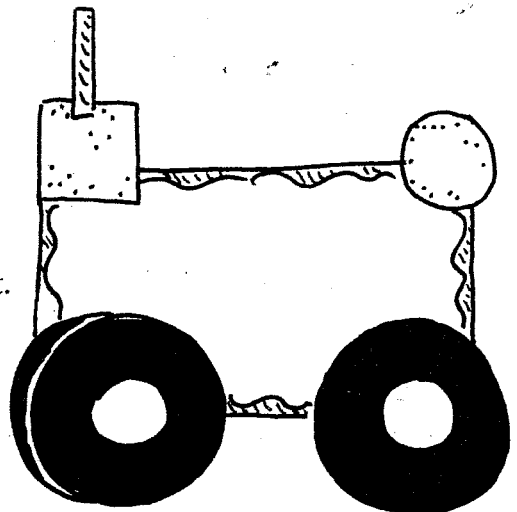
Tractor Treats

Ingredients Needed (per student):

- 1 large graham cracker
- 1 piece of licorice
- Knife
- 2 full size Oreos®
- 1 Large Ritz® cracker
- Cream cheese
- 1 Cheese-It® cracker

Directions:

1. Use the graham cracker as the tractor body.
2. Using a knife, spread the cream cheese over the entire surface of the cracker.
3. Attach the Cheese-it® cracker to the top left.
4. Attach the Ritz® cracker to the top right.
5. Use the two Oreos® as wheels.
6. Stick the licorice stick on the Cheese-it® as a smoke stack.
7. Enjoy!



Farm Fest Ideas

(Discipline Management)

"Corny" Ideas



Vegetable "Crop" Crackers

Ingredients Needed (per student):

- 1 full graham cracker
- Cream cheese (1 package for the whole class)
- Mini carrots and other assorted vegetables (broccoli, cauliflower, celery, radishes, etc.)

Directions:

1. Each child gets a full graham cracker.
2. Spread the cream cheese in "rows" along the cracker. (Use the dots as a guide.)
3. Stick in the "garden" of various veggies by rows. (There are six rows.) Make sure that the same vegetables are in the same rows.
4. Eat and enjoy!

FUN IDEA!

Use various seeds to make a mosaic of a flower. Glue them on a flower pattern for 3-D effect.

A Farmer's Relay

Divide students into two teams. Have a box of farmer-type boots and hats. Each child runs to the box, gets dressed then returns to the line so that he/she can undress. The next player does the same. Continue relay until all have been the farmer.

Happy Hay Stacks

Directions:

1. Mix and melt a package of chocolate chips and a package of butterscotch chips in the microwave.
2. Stir in Chow Mein noodles and spoon into "stacks" on wax paper. Give each student a haystack to eat.

"Hay! This is delicious!"



Have a dance with Country-Western music.



Additional Snacktivity Ideas

- Connect the snack of the day with a story. For instance, read a book about apples and make applesauce.
- Applesauce
- Peanut Butter
- Ice Cream
- Bread
- “Illinois Lunchables” lesson located in the Social Studies section of this binder has a snacktivity.

Adventures Around the Farm

Language Arts/Poetry

Lessons with standard and brief synopsis

1. Adventures Around the Farm Student Reading Page - 1.A, 1.B, 1.C, 2.B.
Students read and discuss general information about the farm.
2. A Day Without Agriculture – 1.A, 1.B, 1.C, 2.B.
Students consider and discuss what agriculture is and ways it affects everyday life.
3. Agriculture - It's More Than You Think – 1.A, 1.B, 2.B, 4.A, 4.B, 5.A.
Students become familiar with agricultural careers.
4. Between the Slices – 3.A, 3.B, 3.C, 4.A, 4.B, 5.A, 5.C.
Students write directions for making sandwiches, discuss the origins of the ingredients, and more.
5. Farmer Grows a Rainbow – 1.A, 1.C, 2.B, 3.A, 3.B, 4.A.
Lesson designed to help students develop awareness that farmers provide the variety and abundance of foods we need to develop and maintain healthy lifestyles.
6. Illinois Agriculture in Primary Colors - 1.B, 4.A.
After finding agriculture words in a word search, students sort, follow directions, and use primary colors.
7. Grain...A Farm Hazard - 5.C.
Students learn about farm hazards, identify rhyming words, and write a song.
8. Barnyard Bingo - 1.A, 1.B, 2.B, 3.A, 4.A, 4.B.
Students will sing a song that introduces farm animal sounds and mark farm animal bingo cards as they recognize the correct sounds. Part of the song is in Spanish and the bingo cards show the farm animal names in English and Spanish.
9. Farm Symphony poem activities - 1.A, 1.B, 1.C, 4.A, 5.A.
Students read poem, identify rhyming words, list the nouns, and more.
10. Poetry - 1.A, 1.B, 4.A, 4.B
A variety of farm related poems and activities are provided.
11. Vocabulary Cloze Activity & Answer Key

*****NOTE: Many of the lessons in other disciplines also align with the Language Arts standards.**

Illinois State Goals

- 1: Read with understanding and fluency.
- 2: Read and understand literature representative of various societies, eras and ideas.
- 3: Write to communicate for a variety of purposes.
- 4: Listen and speak effectively in a variety of situations.
- 5: Use the language arts to acquire, assess and communicate information.

Illinois State Learning Standards

- 1.A. Apply word analysis and vocabulary skills to comprehend selections.
- 1.B. Apply reading strategies to improve understanding and fluency.
- 1.C. Comprehend a broad range of reading materials.
- 2.B. Read and interpret a variety of literary works.
- 3.A. Use correct grammar, spelling, punctuation, capitalization and structure.
- 3.B. Compose well-organized and coherent writing for specific purposes and audiences.
- 3.C. Communicate ideas in writing to accomplish a variety of purposes.
- 4.A. Listen effectively in formal and informal situations.
- 4.B. Speak effectively using language appropriate to the situation and audience.
- 5.A. Use the language arts to acquire, assess and communicate information.
- 5.C. Apply acquired information, concepts and ideas to communicate in a variety of formats.

Adventures Around the Farm

Student Reading



A farm is a place where people grow crops and/or raise livestock. The farm family lives and works on the farm. Some farmers raise livestock such as cows, pigs, sheep, goats, or chickens. These animals give us food like meat, eggs and milk. They also give us wool for sweaters and leather for our clothes. Farmers take care of their animals every day. They feed them, clean their barns, and make sure they are healthy.



Other farmers grow crops such as corn, soybeans, and wheat. These crops become food and other products for people and animals. Farmers take care of their crops. They plant the seeds, watch them as they grow, and harvest the crops. Some farmers take care of both crops and livestock on their farms.



Farmers use many different machines. Some machines break up the soil. A planter puts seeds in the ground. Tractors pull different types of machines. A combine harvests crops by cutting and separating the seeds from the plants.



Farmers do many different jobs. They use machines and fix them when they break. They plan what animals to raise or plants to grow. They care for the animals and plants. They sell their crops or livestock. They use their math skills to keep good records. Their farm is a business. Farmers are so good at their jobs that they supply food, clothes and other products for people around the world.



A Day Without Ag

Skills: Language Arts, Social Studies, Math

Objective: The student will consider and discuss the following questions: “What is *agriculture*?” “What are some of the ways it affects my life every day?”

Background

“Ag” is short for agriculture. When you think of agriculture you probably think of people growing crops or raising cows, pigs, sheep and chickens on a farm. But agriculture means much more than that. The people who work in factories to build tractors and other farm machinery play an important role in agriculture. People in universities who research new agricultural products and new ways to grow food and fiber are involved in agriculture, too.

The grocer must buy agricultural products to fill the grocery shelves. The restaurant owner must buy agricultural products to prepare and serve his or her customers. The clothes you wear and the furniture on which you sit were probably made from agricultural products. You may already know that hamburgers and fried chicken come from agricultural products, but what about fish? In Oklahoma catfish farming has become popular. Fish farming, or aquaculture, is a new kind of agriculture.

One of the fastest growing kinds of agriculture in Oklahoma is growing and selling greenhouse and nursery plants. Forestry is another growing form of agriculture. Tree farmers plant, nurture and harvest trees. Then they sell the trees to companies that make paper products. The people who work in factories where they make paper and the people who sell it in stores are as much a part of agriculture as the farmer who plants the tree.

Think of all the ways in which agriculture touches your life. When you wake up in the morning, you might be lying on cotton sheets. Your pillow could be filled with down feather from a goose. The frame of your bed is probably made of wood. These are all ag products, and you aren’t even out of bed yet. When you do get out of bed, you may put your feet onto a rug made from the wool of a sheep or a linoleum floor made from soybean oil. The soap you use in the shower might contain cottonseed oil or lanolin, a kind of oil from the sheep’s wool. The handle of your hairbrush might be made from the bones and horns of a beef animal, and the bristles might be the bristles, or hair, of a pig. The towel you dry off with and the jeans and T-shirt you put on are made from cotton. Once you get to school you might pick up a crayon made from pig fat or soybeans. You’ve already used dozens of agricultural products, and you haven’t even started eating yet. Just imagine

P.A.S.S.

GRADE 1

Reading—3.1abc; 4.1,2,3,4

Writing—1

Oral Language—1.1;
2.1,2,7; 3.2

Visual Literacy—1

Social Studies—4.1,2; 5.1

GRADE 2

Reading—3.1; 7.1abc

Writing—3.1,5,6

Oral Language—1.1; 2.1;
3.1,2

Math—1.1,2; 2.1b,2abc

GRADE 3

Reading—2.1,4

Writing—2.2

Oral Language—1.1; 2.1

Math—2.1ab

Vocabulary

agriculture—the science or occupation of cultivating the soil, producing crops, and raising live-stock

aquaculture—the cultivation of living things (as fish or shellfish) naturally occurring in water

farm—a piece of land used for growing crops or raising livestock

fiber—a slender and very long natural or synthetic unit of material (as wool, cotton, asbestos, gold, glass, or rayon) usually able to be spun into yarn

grocer—a dealer in food and household supplies product

research—careful study and investigation for the purpose of discovering and explaining new knowledge

tractor—a vehicle that has large rear wheels or moves on tracks and is used especially for pulling farm implements

a day without agriculture. Do you think you could survive?

Language Arts

1. Read and discuss background.
 - Discuss the meaning of the word “agriculture.”
2. Hand out student worksheets, and have students use them to list all the agricultural products that touch their lives in a day. Then have students share their lists.

Social Studies

1. Have students bring agricultural products from home and pile them all in one area.
 - Invite another class, parents or the principal to view the display.
 - Have students explain the importance of agriculture.
2. Discuss the concepts of “want” and “need.”
 - Divide students into groups and have them go through their lists of agricultural products and decide which are needs and which are wants.
 - Have students share their findings during a class discussion.

Math

1. Have students divide the items on their lists into categories (animal products/plant products, things to eat/things to wear). Have them create their own categories.
2. Have younger students sort the pile according to the sound the item starts with.

Oklahoma Ag in the Classroom is a program of the Oklahoma Cooperative Extension Service, 4-H Youth Development, in cooperation with the Oklahoma Department of Agriculture, Food and Forestry and the Oklahoma State Department of Education.

Oklahoma Ag in the Classroom
Oklahoma 4-H Programs
205 4-H Youth Development
Oklahoma State University
Stillwater, OK 74078
405-744-8889 <http://www.agclassroom.org/ok>



<http://www.agclassroom.org/ok>

A Day Without Ag

[illegible]

Name _____

A Day Without Ag

Make a list of everything you can find in your home that has something to do with agriculture.

beans

jeans

soap

chair

rug

bread

shirt

sheets

meat

grass

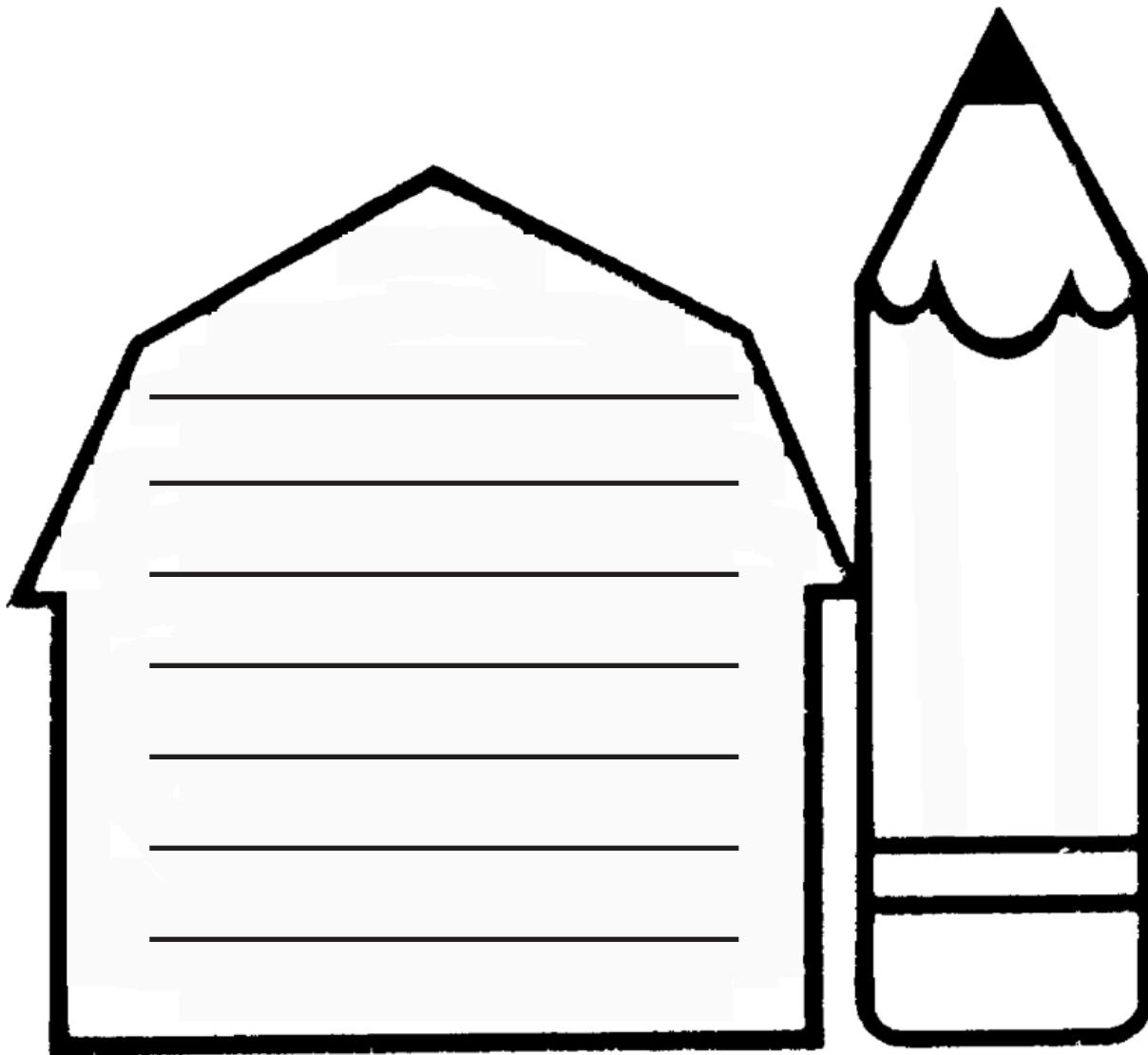
eggs

shoes

bat

gum

bed



A Day Without Ag

Think of all the ways agriculture touches your life. When you wake up in the morning, you are lying on cotton sheets. Your pillow could be filled with down feathers from a goose. The frame of your bed is probably made of wood. These are all ag products, and you aren't even out of bed yet.

When you do get out of bed, you may put your feet onto a rug made from the wool of a sheep or a linoleum floor made from soybean oil. The soap you use in the shower might contain cottonseed oil or lanolin, a kind of oil from the sheep's wool. The handle of your hairbrush might be made from the bones and horns of a beef animal, and the bristles might be the bristles, or hair, of a pig. The towel you dry off with and the jeans and T-shirt you put on are made from cotton. Once you get to school you might pick up a crayon made from pig fat or soybeans. You've already used dozens of agricultural products, and you haven't even started eating. Just imagine a day without agriculture. Do you think you could survive?



Agriculture—It's More Than You Think

Skills: Language Arts, Social Studies

Objective: The student will become familiar with several agricultural careers while developing skills using the suffix “er.”

Background

When you think of agriculture you probably think of people growing crops or raising cows, pigs, sheep and chickens on a farm. But agriculture means much more than that. The people who work in factories building tractors and other farm machinery are involved in agriculture. People in universities who research new agricultural products and new ways to grow food and fiber are involved in agriculture, too.

The grocer must buy agricultural products to fill the grocery shelves. The restaurant owner must buy agricultural products to prepare and serve his or her customers. The clothes you wear and the furniture on which you sit were probably made from agricultural products.

Today only about 2 percent of the people in this country actually live on a farm or ranch. One American farmer can feed about 125 people, both in this country and around the world. For every American farmer there are another seven people involved in American agribusiness. That includes thousands of businesses and millions of people who process, deliver and sell food to people all over the world. It includes people who teach agriculture in our state universities and scientists who research the insects and diseases that affect our food supply. It includes bankers who loan money to farmers and ranchers so they can buy the equipment they need, and it includes the people who build and sell that equipment. Agribusiness includes the truckers who haul the cattle to market, the florist who sells a dozen red roses and even the check-out clerk at the grocery store.

The average person works 2,000 hours a year and 80,000 hours in a lifetime. That means the average person works from the time he or she is 20 until the time he or she is 60, for an average of 40 hours a week, 50 weeks a year. Fortunately, there is an

P.A.S.S.

GRADE 2

Reading—7.1abc,2

Writing—2.1,2; 5.2

Oral Language—1.1; 2.2

Social Studies—5.2

GRADE 3

Reading—2.2,4; 6.1ab,2a

Writing—1.5; 2.1,2,3

Oral Language—1.1; 2.5

Visual Literacy—3

Social Studies—3; 4.4; 5.1

Ag-Related Careers

- restaurant owner
- agricultural journalist
- veterinarian
- caterer
- clothing manufacturer
- dietician
- florist
- agronomist
- banker
- turfgrass specialist
- truck driver
- environmental scientist
- agricultural supplies sales associate
- agricultural engineer
- forestry aide
- game farm manager
- dairy farmer
- golf course groundskeeper
- plant genetics researcher
- county agricultural agent
- vocational agriculture instructor
- agricultural machinery mechanic

Oklahoma Ag in the Classroom is a program of the Oklahoma Cooperative Extension Service, 4-H Youth Development, in cooperation with the Oklahoma Department of Agriculture, Food and Forestry and the Oklahoma State Department of Education.

Oklahoma Ag in the Classroom
Oklahoma 4-H Programs
205 4-H Youth Development
Oklahoma State University
Stillwater, OK 74078
405-744-8889 <http://www.agclassroom.org/ok>



amazing variety of job possibilities, and those possibilities grow and change all the time.

Jobs in agriculture will always be available, because people will always have to eat. Agriculture and related industries provide 22 million jobs. Some of those jobs are listed on page one.

Language Arts/Social Studies

1. Have students draw pictures showing someone with a job in agriculture.
 - Then have students write job descriptions for those shown in their pictures.
 - Ask for volunteers to share drawings and job descriptions.
2. Read and discuss background material.
 - Write some of the vocations from the worksheet on the chalkboard.
 - Discuss the jobs you have listed, and ask students if they know what they are.
 - Discuss the use of the suffix “er.”
 - Have students guess what the jobs are by looking at their roots.
3. Hand out student worksheets.
 - Review the directions.
 - Read through the root words and definitions.
 - Instruct students to add “er” to each root word to create a job title.
 - Provide dictionaries so students can check spellings of the words.

Note: Additional agriculture-related careers, with descriptions, are listed on the website in the “Additional Resources” section.

4. Bring the job section of the classified ads from some newspapers or other publications.
 - Have students try to identify jobs that are related to agriculture.
 - Have students write resumés and “apply” for some of the jobs.
 - Students may take turns acting as prospective employers and employees, or enlist the help of high school students to conduct job interviews.
5. Contact someone in your community who works in one of the career areas discussed, and invite him or her to visit your class and answer questions.
6. Have students draw new pictures of people in jobs related to agriculture and write job descriptions, in light of what they have learned.

<http://www.agclassroom.org/ok>

Extra Reading

Brooks, Walter R., and Kurt Wiese, *Freddy and Mr. Camphor*, Overlook, 2000.
Collins, David, *George Washington Carver*, Watts, 1990.
Granfield, Linda, *Cowboy: An Album*, Ticknor and Fields, 1994.
Johnson, Sylvia, *A Beekeeper's Year*, Little, Brown, 1994
Maze, Stephanie, *I Want to Be a Veterinarian*, Harcourt, 1999.
Merrill, Jean, and Jan Palmer, *The Toothpaste Millionaire*, Houghton Mifflin, 1999.

Vocabulary

agriculture—The science, art, and business of cultivating soil, producing crops, and raising livestock; farming.

research—Close and careful study.

product—Something produced by human or mechanical effort or by a natural process.

fiber—A natural or synthetic filament, as of cotton, wool or nylon, capable of being spun into yarn.

agribusiness—The production, processing and distribution of farm products and the manufacture of farm machinery, equipment and supplies.

Name _____

Agriculture—It's More Than You Think

Many job titles end with the suffix "er." When you see an "er" suffix added to a verb it usually describes someone who performs a specific action. Read the agricultural root words in the box on the right, and add "er" to each to form new words in the space provided. Challenge: One of the root words needs an extra "e" to form an "er" word. See if you can find the word. Match the words to their definitions. Check your words by looking them up in the dictionary.

<u>job title</u>	<u>definition</u>	<u>root words</u>
1. farmer	— A person who owns or operates a ranch.	1. fArm
2. _____	— A person who owns or serves as an officer of a bank.	2. Garden
3. _____	— A person who works in, operates or owns a mill.	3. gatheR
4. _____	— A person who owns or works on a farm.	4. auctIon
5. _____	— A person trained in forestry.	5. produCe
6. _____	— A person who works in a garden.	6. hUnt
7. _____	— A person who conducts an auction.	7. milL
8. _____	— A person who gathers food to eat.	8. foresT
9. _____	— A person who grows or produces goods or services for sale.	9. trUck
10. _____	— A person who shears sheep.	10. bank
11. _____	— A person who bakes.	11. Ranch
12. _____	— A person who hunts for food to eat.	12. shear
13. _____	— A person or machine that harvests a crop.	13. bake
14. _____	— A person who drives a truck.	14. harvEst

Use the upper case letters to complete the sentence below.

The largest industry in the United States today is _ _ _ _ _.



Name _____

Agriculture—It's More Than You Think (answers)

<u>job title</u>	<u>definition</u>	<u>root words</u>
1. farmer	—A person who owns or operates a ranch.	1. f Arm
2. <u>gardener</u>	—A person who owns or serves as an officer of a bank.	2. G arden
3. <u>gatherer</u>	—A person who works in, operates or owns a mill.	3. gathe R
4. <u>auctioneer</u>	—A person who owns or works on a farm .	4. auct Ion
5. <u>producer</u>	—A person trained in forestry.	5. produ Ce
6. <u>hunter</u>	—A person who works in a garden.	6. h Unt
7. <u>mill</u>	—A person who conducts an auction.	7. mil L
8. <u>forester</u>	—A person who gathers food to eat.	8. fores T
9. <u>trucker</u>	—A person who grows or produces goods or services for sale.	9. tr U ck
10. <u>banker</u>	—A person who shears sheep.	10. bank
11. <u>rancher</u>	—A person who bakes.	11. R anch
12. <u>shearer</u>	—A person who hunts for food to eat.	12. shear
13. <u>baker</u>	—A person or machine that harvests a crop.	13. bake
14. <u>harvester</u>	—A person who drives a truck.	14. harv Est

Use the upper case letters to complete the sentence below.

The largest industry in the United States today is A G R I C U L T U R E.



BETWEEN THE SLICES

Teacher Work Sheet

GRADES: Primary or Intermediate

MATERIALS: Materials for completing chart or bulletin board. Various items to make sandwiches (bread or crackers, butter, mayonnaise, egg salad, bologna, peanut butter and jelly, cheese).
-Knives and napkins
-Actual products (peanuts, grapes, cream, wheat)
-Advertisements from stores, coupons

VOCABULARY:	<u>PRIMARY</u>	<u>INTERMEDIATE</u>
	sandwich	agriculture
	ingredients	consumer
	dairy products	producer-production
	produce	food processors
	grain	food manufacturers
	crop	interdependent
	harvest	distributors
	wheat	marketing

BACKGROUND: With the exception of fruits and vegetables most of our daily food supply bears little resemblance to the grain, fiber, and livestock produced by today's farmer. Farmers don't grow bread, butter, bologna, and peanut butter and jelly. Today's farmers make it possible for food processors to use the quality products such as wheat, peanuts, milk, and meat from livestock to produce the foods we eat and enjoy. But it takes more than the farmer to get these products to our tables. Growing and harvesting of crops and raising livestock is only the beginning. It takes thousands of other workers to get agricultural products to our stores or restaurants.¹

PROCEDURE:

1. Display the sandwich makings.
2. Discuss the items on display.
What could be done with these ingredients?
3. Select a graphing activity from Math Activities Section - Do as a class project.

¹Taken from "Where does food come from? National Farm-City Council, Inc. 1991

PROCEDURE: (Continued)

4. Create chart by asking questions concerning the origin of the ingredients on display.
Where did these things come from?
Use information from Between the Slices Kid's Fact page.
Introduce **INTERDEPENDENT** to intermediate age children.
Trace "makings" from the farm to the city.
5. Time permitting select some follow-up questions, discuss advertisements, coupons, sales etc.
6. Select a follow-up activity.
7. Make sandwiches.

=====

FOLLOW-UP DISCUSSION QUESTIONS:

Primary:

How are foods arranged in the supermarket?

Why are some foods placed in the refrigerator?

What happens to food when it is not stored properly? (milk, bread)

Intermediate:

How would a drought affect food production?

What if the truckers went on strike?

What would happen if a bad storm hit the area?

What happens when the prices go up?

=====

ACTIVITIES

Math

All Grades

GRAPHS OR VENN DIAGRAMS--Elicit from the children the various categories before making the graph or diagram (Possible responses follow each question)

What is your favorite kind of bread?

white
whole wheat
rye

What do you like on a bologna sandwich?

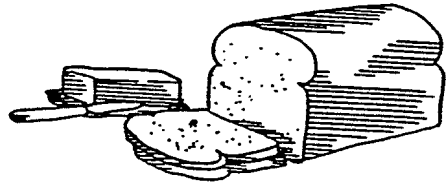
butter
catsup
mayonnaise
lettuce

What kind of jelly do you put on your peanut butter and jelly sandwich?

grape
cherry
strawberry

What do you like to eat with your sandwich?

potato chips
corn chips
pretzels
cottage cheese
fruit
soup



Create word problems using advertisements.

Give each child a peanut. Graph the number of peanuts in each shell.

Language Arts

The following activities do not require any special materials. They may be done independently or as a group assignment. Younger children may need to dictate their story to an adult.

Primary:

Write the directions for making your favorite sandwich.

Create a new sandwich

Peanut Butter and _____

Bologna and _____

Intermediate:

Write a persuasive paragraph-

_____ Sandwich is Better than _____ Sandwich

Research The Earl of Sandwich

Research George Washington Carver

Write to a...

Peanut butter manufacturer, or the National Peanut Council, for information on peanuts and how they are processed - or a

sandwich meat manufacturer

jelly manufacturer

The following activities require additional preparation:

Demonstrate making you favorite sandwich

Study various kinds of advertising techniques

Compare packaging of similar products

Write reports for the following science activities

Science/Cooking:

How is peanut butter made? (1 1/2 cups of peanuts yield 3/4 cup peanut butter. Blend at highest speed. Scrape blender often. Process takes about 5 minutes to start creaming)

How is bread made?

How is jelly made?

How is butter made?

Weigh bread, then completed sandwich

Compare weight of each sandwich

Which sandwich is the heaviest? Why?

Art

Create an ad or poster for your favorite sandwich.

Make animals out of peanut shells.

Make a small wreath using various seeds.

Cut a doughnut size (or larger) piece of tag board for each child.

Dilute Elmer's glue or use a commercial product.

Children glue seeds to tag board.

Can glue doily with center cut out to back and a ribbon bow to front.

Hot glue a paper clip to back of wreath.

=====

EXTENDED ACTIVITIES:

Repeat lesson using taco as food item.

Survey school lunches for one week.

Record grains, dairy products and meats served.

Graph contents of lunches brought from home.

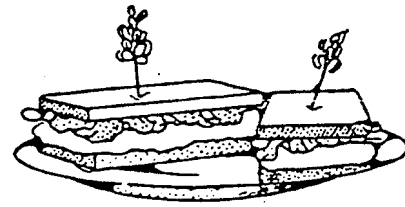
Visit local supermarket -

Younger children-locate different sections of store.

Read labels on cereals-which ones are made from wheat?

Have manager discuss different jobs in store.

Visit food processing plant.



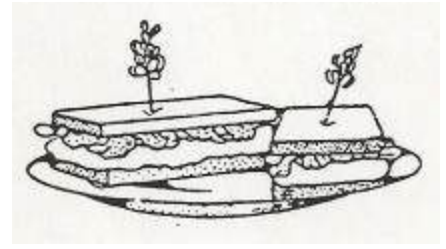
SECRET SANDWICHES

Four classmates, Sara, Sam, Sally, and Steven, enjoyed their favorite sandwich for lunch yesterday. Each child had a different sandwich. Can you match the child with the correct sandwich?

	Peanut Butter and Jelly	Bologna	Egg Salad	Ham & Cheese
Sara				
Sam				
Sally				
Steven				

CLUES:

1. Sam had two different ingredients on his sandwich.
2. Sara sat next to the boy who was eating the Ham and Cheese sandwich.
3. Steven's sandwich was not made with meat.
4. Sally always eats potato chips with her Egg Salad.



SECRET SANDWICHES

Answer Key

Four classmates, Sara, Sam, Sally, and Steven, enjoyed their favorite sandwich for lunch yesterday. Each child had a different sandwich. Can you match the child with the correct sandwich?

	Peanut Butter and Jelly	Bologna	Egg Salad	Ham & Cheese
Sara		X		
Sam				X
Sally			X	
Steven	X			

CLUES

1. Sam had two different ingredients on his sandwich
2. Sara sat next to the boy who was eating the Ham and Cheese sandwich.
3. Steven's sandwich was not made with meat.
4. Sally always eats potato chips with her Egg Salad.

BETWEEN THE SLICES KID'S FACTS

Student Work Sheet

WHEAT -- A GRAIN -- GROWN ON A PLANT

Grains must be processed before people can eat grains. Some grains are fed to livestock after they are harvested. In addition to bread, what else can wheat be made into?

BOLOGNA -- FROM PIGS OR BEEF -- LIVESTOCK

Glue, leather, gelatin, medicines, upholstery, and fertilizer are only a few of the by-products we get from these animals. Can you name some other meat we enjoy that come from these animals?

EGG SALAD--FROM CHICKEN'S EGGS--POULTRY

Chickens can lay approximately 250 eggs each year. Egg whites are used in glue and egg yolks are used in shampoos. We also raise chickens for their meat. In addition to egg salad, how else do we prepare eggs?

CHEESE AND BUTTER--DAIRY PRODUCTS

Milk comes from dairy cattle. It is high in calcium which builds strong bones. Many other products are made from milk. What are some other dairy products?

PEANUT BUTTER--FROM A PLANT--THE SEED

Peanuts grow in a pod under the ground. These types of plants are called legumes. Oil is also extracted from the peanut. Can you name some other seeds that we can eat?

JELLY--FROM A PLANT--THE FRUIT

Jelly is made from different fruits. In addition to jelly and jam, fruit can be dried, made into juice or just enjoyed fresh. Name some flavors of jelly or jam you especially enjoy.

BEEF -- A MEAT FROM CATTLE

Cattle are very useful to people. More than 100 medicines, used by humans, come from cattle. Besides beef what are some other products we get from cattle?

BETWEEN THE SLICES KID'S FACTS

Student Work Sheet Answer Key

WHEAT -- A GRAIN -- GROWN ON A PLANT

Grains must be processed before people can eat grains. Some grains are fed to livestock after they are harvested. In addition to bread, what else can wheat be made into?

spaghetti, pastries, doughnuts, cake mix, flour, pretzels, rolls, malt, pizza dough, cereal, cookies

BOLOGNA -- FROM PIGS OR BEEF -- LIVESTOCK

Glue, leather, gelatin, medicines, upholstery, and fertilizer are only a few of the by-products we get from these animals. Can you name some other meat we enjoy that come from these animals?

spare ribs, bacon, pork chops, roasts, pepperoni, hamburger, steak, liver, hot dogs, ham

EGG SALAD--FROM CHICKEN'S EGGS--POULTRY

Chickens can lay approximately 250 eggs each year. Egg whites are used in glue, and egg yolks are used in shampoos. We also raise chickens for their meat.

In addition to egg salad, how else do we prepare eggs?

scrambled, soft boiled, fried, omelette, poached, hard boiled

CHEESE AND BUTTER--DAIRY PRODUCTS

Milk comes from dairy cattle. It is high in calcium which builds strong bones. Many other products are made from milk. What are some other dairy products?

cream, ice cream, yogurt, cottage cheese, sour cream, milk, butter, buttermilk, cheese

PEANUT BUTTER--FROM A PLANT--THE SEED

Peanuts grow in a pod under the ground. These types of plants are called legumes.

Oil is also extracted from the peanut. Can you name some other seeds that we can eat?

beans, peas, cashews, raspberries, almonds, walnuts, pecans, strawberries

JELLY--FROM A PLANT--THE FRUIT

Jelly is made from different fruits. In addition to jelly and jam, fruit can be dried, made into juice or just enjoyed fresh. Name some flavors of jelly or jam you especially enjoy.

grape, strawberry, cherry, peach, plum, apricot, boysenberry, rhubarb

BEEF -- A MEAT FROM CATTLE

Cattle are very useful to people. More than 100 medicines, used by humans, come from cattle. Besides beef what are some other products we get from cattle?

leathers from the hide, buttons from the horns, glue from the hoofs

The Farmer Grows A Rainbow

Main Course: A General Lesson for All Grades Pre-K through Fifth Grade

Purpose

To help students develop awareness that farmers provide the variety and abundance of foods we need to develop and maintain healthy lifestyles

Desired Outcomes

The learner will develop and apply enabling strategies and skills to read and write.
The learner will learn that foods are divided into food groups.
The learner will learn the colors that represent the various food groups on MyPyramid.
The learner will learn about the importance of physical activity as a part of good health.
The learner will develop an awareness of personal dietary needs.
The learner will apply knowledge and behavior self-management skills to areas of nutrition and physical activity for healthy growth, development, and maintenance.
The learner will exhibit a physically active lifestyle.

Vocabulary

agriculture	beans	commodity	farm	food	fruits
grains	healthy	meat	milk	nutrition	oils
plan	pyramid	vegetables			

Materials Provided

- MyPyramid Class Display
- Food Cards
- “The Farmer Grows a Rainbow” Song
- Sample “MyPyramid Plan”
- “MyPyramid Table Tent”
- “Run the Rainbow Challenge: Random Harvest Relay”

Materials Needed

- Computer(s) with web access to www.mypyramid.gov
- Additional pictures of foods from each group named in MyPyramid. (These can be collected by students from supermarket advertisements, internet clip art, and magazines.)
- “Level 1, Lesson 1: Exploring *MyPyramid for Kids*” located at http://teamnutrition.usda.gov/resources/mpk1_lesson1.pdf
- “Level 1, Lesson 2: Eat Smart with *MyPyramid for Kids*” located at http://teamnutrition.usda.gov/resources/mpk1_lesson2.pdf
- 6 hula hoops, 6 large serving bowls or 6 paper bags of colors that correspond to MyPyramid colors, at least 4 dozen hollow plastic balls or at least 4 dozen sealing disks used in home canning (jar lids), food pictures

Instructional Procedures

Preparation:

- Enlarge and print “MyPyramid Class Display” and mount on heavy weight paper. Laminate “Food Cards” and photos or graphic representations of foods from each food group gathered by students.
 - Locate the website www.mypyramid.gov and the lesson plan introducing students to MyPyramid found at http://teamnutrition.usda.gov/resources/mpk1_lesson1.pdf. Both of these sites will provide good background information for teaching this lesson.
 - Make arrangements for computer station(s) for student use.
 - Make copies of student handouts you choose to use from “Lesson 2: Eat Smart with MyPyramid for Kids.”
 - Make copies of “MyPyramid Table Tent.”
 - Set up play space for “Run the Rainbow Challenge: Random Harvest Relay.”
1. Open the lesson by asking students to name foods which adults say are “good for them” (healthy and nutritious). Discuss why they think certain foods help them grow and stay healthy while other foods should be enjoyed in smaller quantities. Talk with students about nutritious foods vs. non-nutritious foods, making sure they understand that foods that provide vitamins, minerals and energy are better for developing bodies – helping them grow healthy and strong.
 2. Direct students’ attention to a blank bulletin board, magnetic board, or flannel board. Show students the copy of “MyPyramid Class Display” and lead a discussion interpreting MyPyramid and each food group. Note the colors on the pyramid and how each one represents a food group. Information about each food group is available at www.mypyramid.gov.
 3. Allow students to arrange food cut-outs on the display board according to food groups. As each child places an item on the board, the class should name the food and the food group to which it belongs (i.e., an apple belongs in the “fruits” group). As students list foods, have them note the health value of each food.
 4. Challenge students to work as a team to sort foods by MyPyramid food groups and place items on the board to create a “rainbow” of good foods. Note that although each category (i.e., Fruits, Vegetables, Milk) of MyPyramid are identified by a specific color, all food groups contains food items which are composed of a variety of colors. Watch for students using MyPyramid food group colors as guides for sorting foods and direct them toward an understanding that the color of the food does not necessarily correspond with the food group color.
 5. As reinforcement, have students complete activities in “Lesson 2: Eat Smart with MyPyramid for Kids.”
 6. Once students have an understanding of health benefits of various foods, assign an essay using the prompt designed for their grade level:

PreK - Draw or cut out your favorite healthy food. Write its name and the name of the group to which it belongs.

- K - Draw a picture of yourself enjoying a healthy meal. Write about the foods you are eating. Tell why you like them and one reason why each food is good for you.
 - 1st - Write a letter to your dentist. Tell why the baby (primary) teeth you are losing are so healthy. Share with your dentist reasons why your permanent teeth will be healthy for life. Include information about foods you eat, how you care for your teeth and why it is important to visit a dentist regularly. Tell why healthy teeth and gums are important.
 - 2nd - Write about a time when you ate too much or put too much on your plate. Tell some healthy ways to make sure you are eating the right amount of food.
 - 3rd - Write a short report about one of the food groups found on MyPyramid. Tell the name of the food group, the nutrients found in foods in this group or why these foods are good for you. Include examples of foods in the group. Tell why the healthy choices are not “empty calorie” foods (i.e., foods that do not provide nutrition and are high in calories).
 - 4th - Write about a time you enjoyed a meal that included menu items from a culture other than your own. Tell what happened when you ate the new foods.
 - 5th - Soon you will be going to middle school. Currently the middle school has vending machines with candy, chips and soft drinks. Write a letter to your local school board requesting that vending machines offer healthier choices (i.e., juices, pretzels, milk, fruit, water) for sale to students and staff. Include information about the negative health effects of empty calorie foods and the positive effects of healthier foods.
7. Ask students to identify the farmer standing by the pyramid. Make sure they realize he is a farmer. Discuss the concept that all of our food is produced on farms by farmers. Sing the song “The Farmer Grows a Rainbow.” Share with students the fact that they live in the country with the safest, most abundant, varied and most affordable food supply in the world.
 8. Share with the students that the farmer by the “Rainbow” pyramid represents farmers, but the child on the MyPyramid website is a character that represents all children. In both cases, the character represents physical activity. Go to http://www.mypyramid.gov/pyramid/physical_activity.html for more background information as you prepare for this discussion. Discuss the fact that varying amounts of activity will directly affect the amount of food needed to maintain a healthy body. Consider the activity level of farmers and other workers. Many of them are very active in their daily work; therefore, their bodies need more “fuel” than a “desk jockey” (a person whose job requires them to sit at a desk every day). Make comparisons among levels of activity and food intake needed for growth and sustenance. Invite a nutritionist to share information on this topic with your class.
 9. Provide information for accessing the website www.mypyramid.gov. Have each student follow the directions on the website to obtain their personal “MyPyramid Plan.” A sample “Plan” is included in this lesson. Visiting the website can be a class activity or information can be shared with parents to be completed at home.

Individual nutrition needs, along with portion sizes, can be obtained for children and adults at this website.

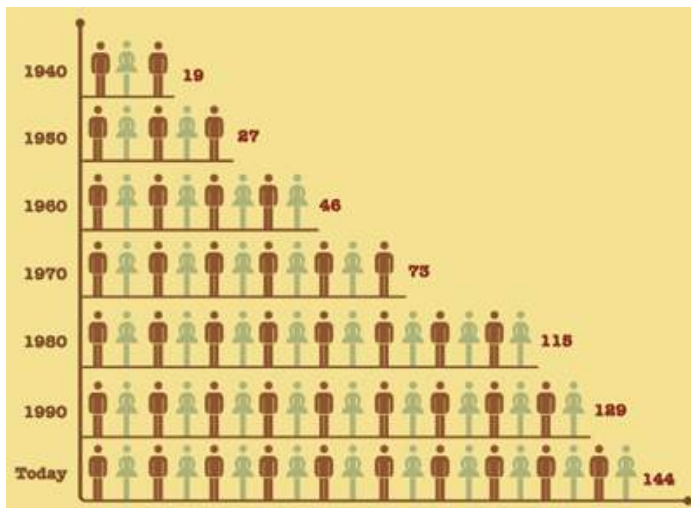
10. To reinforce concepts presented in this lesson, have students make and color a "MyPyramid Table Tent." Encourage students to take their table tents home and share information they learned in this lesson with parents and other family members.
11. For physical activity, have students participate in "Run the Rainbow Challenge: Random Harvest Relay."

Background Information

American Farmers Feed the World

America's farmers are the world's most productive. Today, each U.S. farmer produces food and fiber for 144 people.

Number of People Fed Annually By One Farmer:



Source: American Farm Bureau

Food is Most Affordable in the United States

U.S. consumers spend just 10 percent of their disposable annual income on food.

Here is How Other Countries Stack Up:



Israel	26
South Africa	28
Mexico	33
India	51

American Farm Bureau Federation® Graphic

Sources: United Nations; Economic Research Service - USDA.

For additional information about American agriculture, visit
<http://www.fb.org/index.php?fuseaction=materials.week1>.

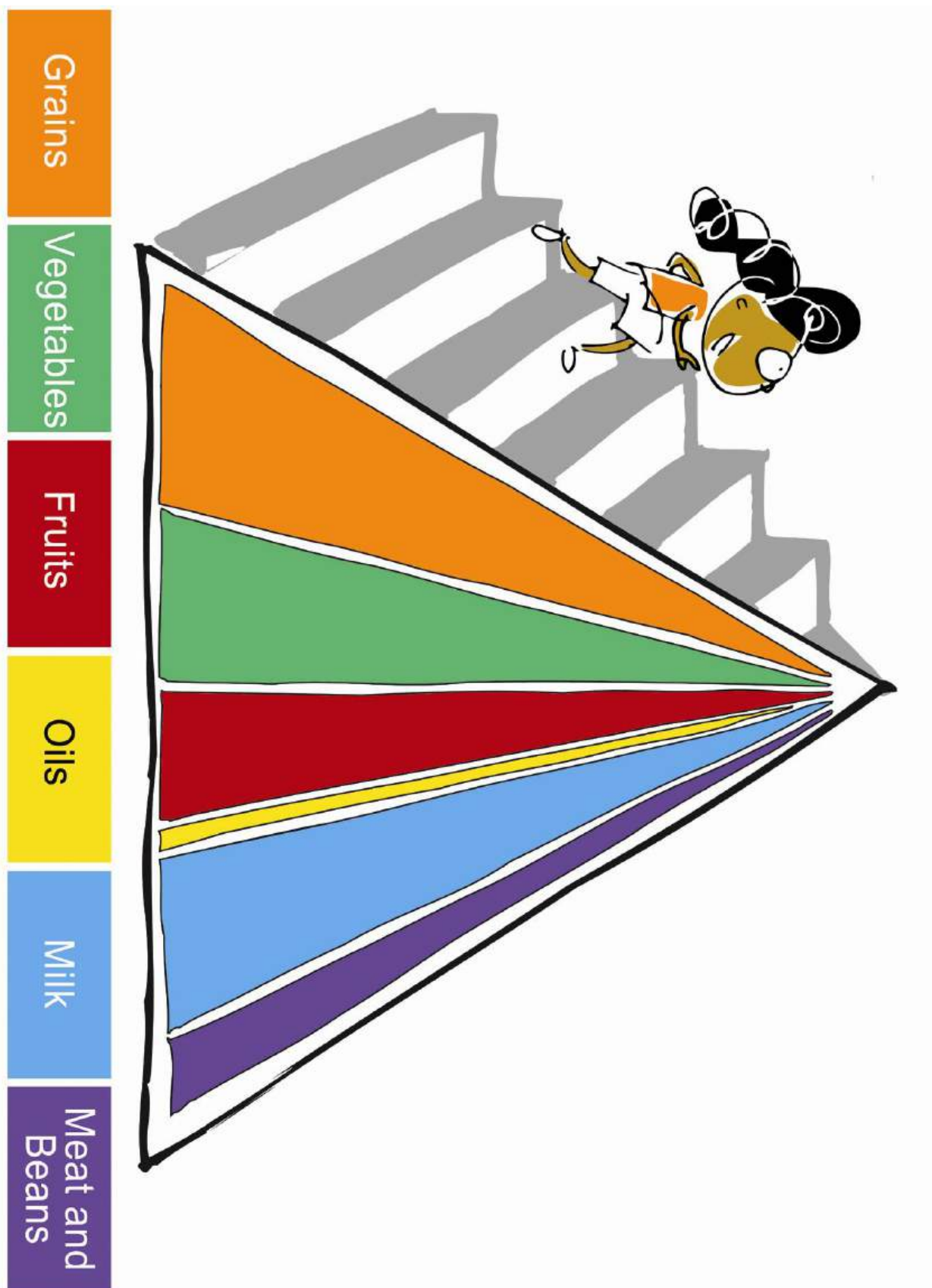
Extension Activities

Ask students to look more closely at the farmer on “MyPyramid Class Display.” Ask them to make observations about the farmer’s clothing. What does he wear to keep himself safe from the sun? (Wide brimmed hat, long sleeved shirt, boots, long pants, gloves) Discuss with students why they should, and ways they can, protect themselves from the sun and stay hydrated while working outdoors.

Additional lessons are available – and highly recommended - at
<http://teamnutrition.usda.gov/resources/mypyramidclassroom.html>.

Have students go to www.mypyramid.gov and enjoy the “My Pyramid Blast-Off” activity. This is an excellent game which strengthens student understanding of foods that are good for their bodies and foods that are not as healthy for their bodies.

MyPyramid Class Display



Food Cards (Page 1 of 5)

Cheese



Yogurt



Milk



Cottage cheese



Butter

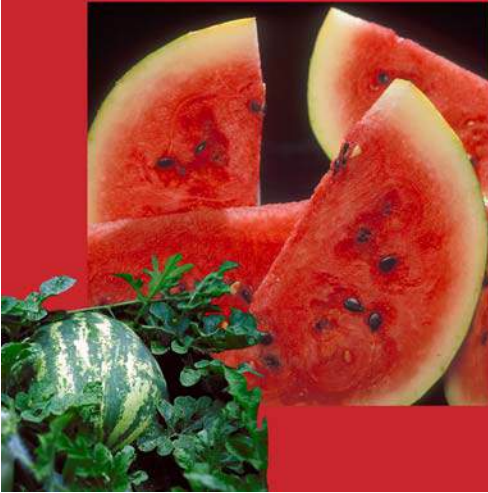


Cooking Oils



Food Cards (Page 2 of 5)

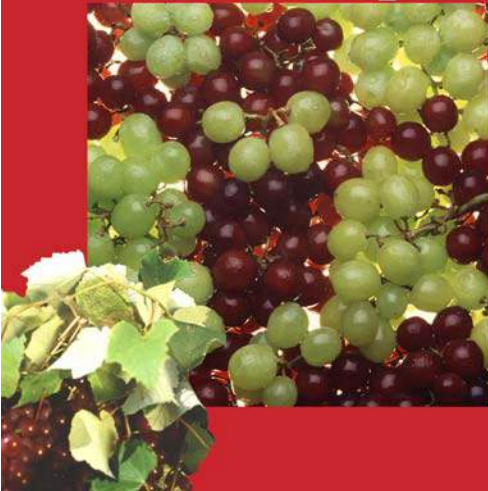
Watermelon



Berries



Grapes



Orange Juice



Peaches



Pears



Food Cards (Page 3 of 5)

Rolls



Bread



Oatmeal



Pasta



Rice



Turkey



Food Cards (Page 4 of 5)

Beans



Beef



Chicken



Ham



Fish



Peanut butter



Food Cards (Page 5 of 5)

Tomatoes



Carrots



Corn



Green Beans



Potatoes



Sweet Potato



“The Farmer Grows a Rainbow” Song

The farmer grows a rainbow, a rainbow, a rainbow,
The farmer grows a rainbow
For me to eat each day!

A bright and healthy rainbow, a rainbow, a rainbow,
A bright and healthy rainbow
To fuel my work and play!

The farmer grows the grassy grains, the grassy grains, the grassy grains,
The farmer grows the grassy grains
To give me energy!

The farmer grows the vegetables, the vegetables, the vegetables,
The farmer grows the vegetables
With vitamins, you see!

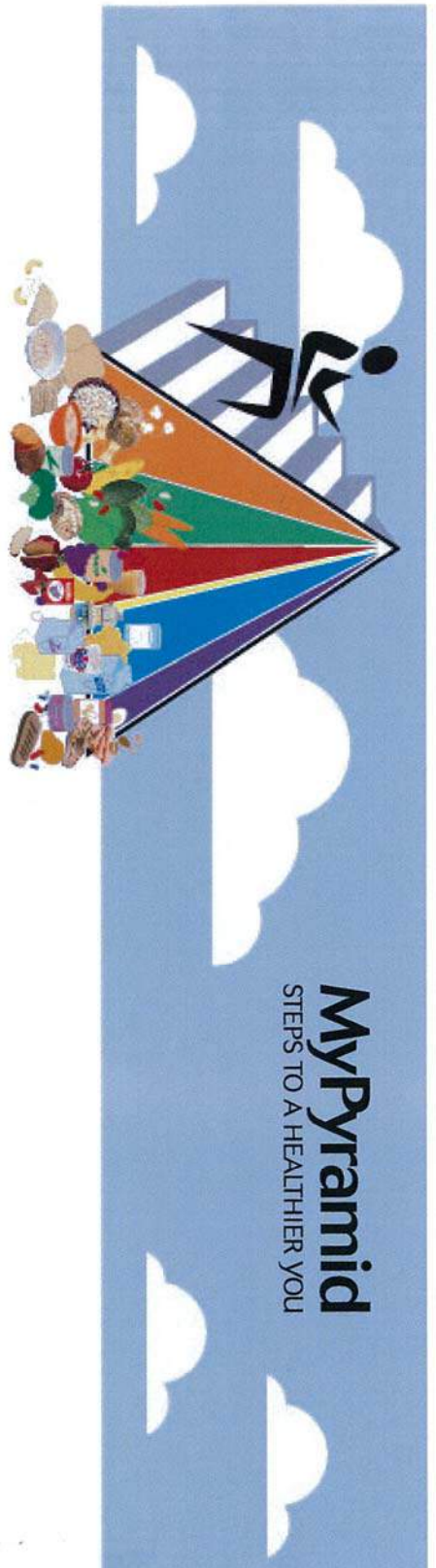
The farmer grows the fresh fruits, the fresh fruits, the fresh fruits,
The farmer grows the fresh fruits
To keep away disease!

The farmer cares for dairy cows, for dairy cows, for dairy cows,
The farmer cares for dairy cows
To give me milk and cheese!

The farmer raises beef cows, and swine for pork, and poultry,
The farmer raises catfish
For protein so I'll grow.

I want to thank the farmer, the farmer, the farmer,
I want to thank the farmer
For growing my rainbow!

Sample “MyPyramid Plan”



Based on the information you provided, this is your daily recommended amount from each food group.

GRAINS 6 ounces Make half your grains whole Aim for at least 3 ounces of whole grains a day	VEGETABLES 2 1/2 cups Vary your veggies Aim for these amounts each week: Dark green veggies = 3 cups Orange veggies = 2 cups Dry beans & peas = 3 cups Starchy veggies = 3 cups Other veggies = 6 1/2 cups	FRUITS 1 1/2 cups Focus on fruits Eat a variety of fruit Go easy on fruit juices	MILK 3 cups Get your calcium-rich foods Go low-fat or fat-free when you choose milk, yogurt, or cheese	MEAT & BEANS 5 ounces Go lean with protein Choose low-fat or lean meats and poultry Vary your protein routine—choose more fish, beans, peas, nuts, and seeds
Find your balance between food and physical activity Be physically active for at least 60 minutes every day, or most days.				
Know your limits on fats, sugars, and sodium Your allowance for oils is 5 teaspoons a day . Limit extras—solid fats and sugars—to 195 calories a day .				

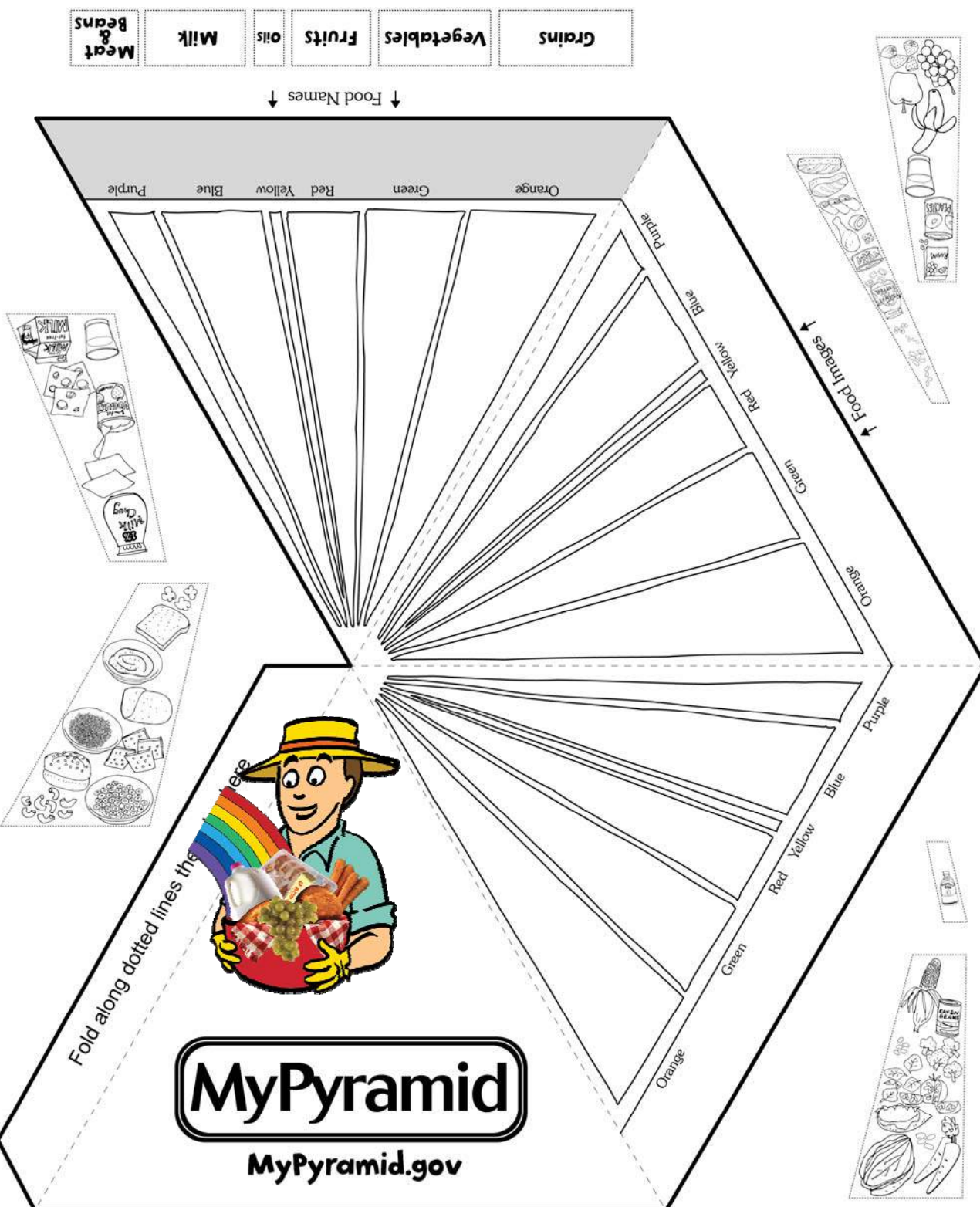
Your results are based on a 1800 calorie pattern.

Name: _____

This calorie level is only an estimate of your needs. Monitor your body weight to see if you need to adjust your calorie intake.

MyPyramid Table Tent

Directions: Color the six triangle shapes on each side of the pyramid. Cut the pyramid figure along the bold line. Cut the food names and food images along the dotted lines. Glue the food names in the gray area on one side of the pyramid, and then glue the food images on another side of the pyramid. Make sure that the bottom of each food image is placed along the bold line (so they will fit). Then fold and glue the pyramid to form your own MyPyramid Table Tent.



Run the Rainbow Challenge: Random Harvest Relay

Build teams while building fit bodies with this radical relay. The large scale version of the activity involves a hula hoop of each color represented in MyPyramid and a large quantity of matching hollow plastic balls. These items should be used when available and when a large space such as a gymnasium floor can be used. If space and materials are limited, use six plastic serving bowls, bags or baskets and small discs the size of a jar lid. On the plastic balls or discs, write the names or affix pictures of foods from each group found on the pyramid. Make sure that the food names/pictures match the color ball/disk on which they are attached. Place hoops or bowls/bags/baskets all around the activity space. Bowls/Bags/Baskets may be placed on table tops if necessary. Scatter plastic balls or discs around the room as well. All class members are seated along a designated starting line. At the signal to start, all class members work as fast as possible to collect all balls/discs and place them inside appropriate hoops/bowls/bags/baskets based on the food group to which each belongs. When all balls/discs are in place, team members, should return to the starting line as quickly as possible and be seated in an upright position. Use a stop watch to time the activity. Competition consists of attempting to beat your class' best time as well as the best time of other classes from the same grade level. This activity lends itself to charting activities and understanding ratios in math. If 25 people can complete the task in x amount of time and 27 people can complete the task in y amount of time, which class had the best per student time. Also, this activity can be used to encourage team building, sportsmanship and skill at following directions. The teacher should be firm regarding all procedures (i.e., students begin and end the activity sitting upright on the starting line). Periodic repetition of this activity enhances the competition and reinforces knowledge of MyPyramid.

The banner features a cartoon farmer in a yellow hat and green shirt, holding a red bowl filled with various fruits and vegetables. He is standing next to a large, colorful pyramid that represents the rainbow. A small child is running up the side of the pyramid. In the background, there is a bright blue sky with a large, vibrant rainbow arching over a green field. At the bottom of the banner, there are illustrations of various food items including a bowl of rice, a slice of bread, a banana, a carton of milk, a slice of pizza, and a piece of meat.

The Farmer Grows A RAINBOW

Introduction	PDF ▪ Movie
Main Course	PDF ▪ Movie
Materials	Movie
Rainbow Song	Lyrics ▪ Voice ▪ Instrumental
Pre-K—5th	Lesson Plans & Movies

This site provides teachers with classroom-ready resources to improve nutrition education among Pre-K-5 students. Begin with the introductory information on this page and then move onto the grade specific resources.

**For more resources and activities,
go to the web site listed below.**

Illinois Agriculture in Primary Colors

Grade Level: K-3

Approximate Length of Activity: 30-40 minutes

Objectives:

Teacher:

1. Help students recognize hidden words.
2. Assist students in categorizing words used in agriculture.

Students:

1. Find agriculture words in a word search.
2. Sort the words into one of three categories.
3. Follow directions, using the primary colors.

Illinois Learning Standards: 1.B.1a; 4.A.1c; 12.B.1a

Introduction:

Illinois is a major agricultural producer with a wide range of commodities. Illinois produces 1,130,000,000 bushels of corn, 80,000,000 pounds of apples, two-and-a-half million pounds of milk, 900,000,000 bushels of soybeans, and raises about five million hogs each year. Other Illinois products include wheat, oats, apples, pumpkins, vegetables, Christmas trees, sheep, and much more! Over 77 percent of land in Illinois is farmland. That's over 27.2 million acres! Crops and livestock are produced in different areas of the state depending on the temperature, precipitation, and physical features of the area. For example, fruit trees and berries are grown in southern Illinois rather than northern Illinois because the temperatures and frost dates are more appropriate for the crop. Developed areas are not used for crop and livestock production.

**Note: An acre is about the size of a football field. A bushel is the same as 128 cups or four pecks.*

Materials Needed:

- Copies of "Illinois Agriculture" word search
- A red, blue, and yellow crayon for every student or group



Activity Outline:

1. Pass out the “Illinois Agriculture” word search. Read the directions and the words on the page to the students.
2. Give assistance when needed. After the students find the hidden words, have them color the “animal” words red, the “plant” words yellow, and the “food” words blue.

Discussion Questions:

1. What are some of the products grown in Illinois?
2. Are you surprised at some of the products grown in Illinois? If so, what are they?
3. What are some products you wish could be grown in Illinois? Why?

Related Activities:

1. List other agriculture products and categorize them.
2. List farm animals and what the babies are called. (example: horse - foal, goat - kid, cow - calf, etc.)
3. Have children bring in pictures or examples of products grown in Illinois.
4. Have the students bring in grocery store advertisements and sort them into appropriate categories.



To be used with:

Illinois Agriculture In Primary Colors

Name: _____

Illinois Agriculture Search

Learn about Illinois Agriculture products!

1. Circle the hidden words.
2. Color the animal words red.
3. Color the plant words yellow.
4. Color the food products blue.

pig	corn	eggs
cow	soybeans	milk
horse	wheat	sausage
llama	pumpkins	hotdog
turkey	apples	cheese
sheep	oats	bread
catfish	ostrich	rabbit
watermelon		

w	a	t	e	r	m	e	l	o	n	i	s
h	w	i	w	a	b	c	q	l	b	c	v
e	s	o	y	b	e	a	n	s	a	h	y
a	c	k	m	b	b	r	e	a	d	m	c
t	o	a	i	i	h	e	n	u	l	p	a
o	o	p	l	t	b	p	j	s	a	r	t
s	v	p	k	l	e	c	s	a	q	t	f
t	p	l	l	e	i	t	h	g	i	h	i
r	i	e	h	i	a	x	c	e	x	o	s
i	g	s	h	o	t	d	o	g	e	r	h
c	t	u	r	k	e	y	r	g	y	s	f
h	p	u	m	p	k	i	n	s	x	e	e

To be used with:

Illinois Agriculture In Primary Colors

Answer Key

Illinois Agriculture Search

Learn about Illinois Agriculture products!

1. Circle the hidden words.
2. Color the animal words red.
3. Color the plant words yellow.
4. Color the food products blue.

pig

cow

horse

llama

turkey

sheep

catfish

watermelon

corn

soybeans

wheat

pumpkins

apples

oats

ostrich

eggs

milk

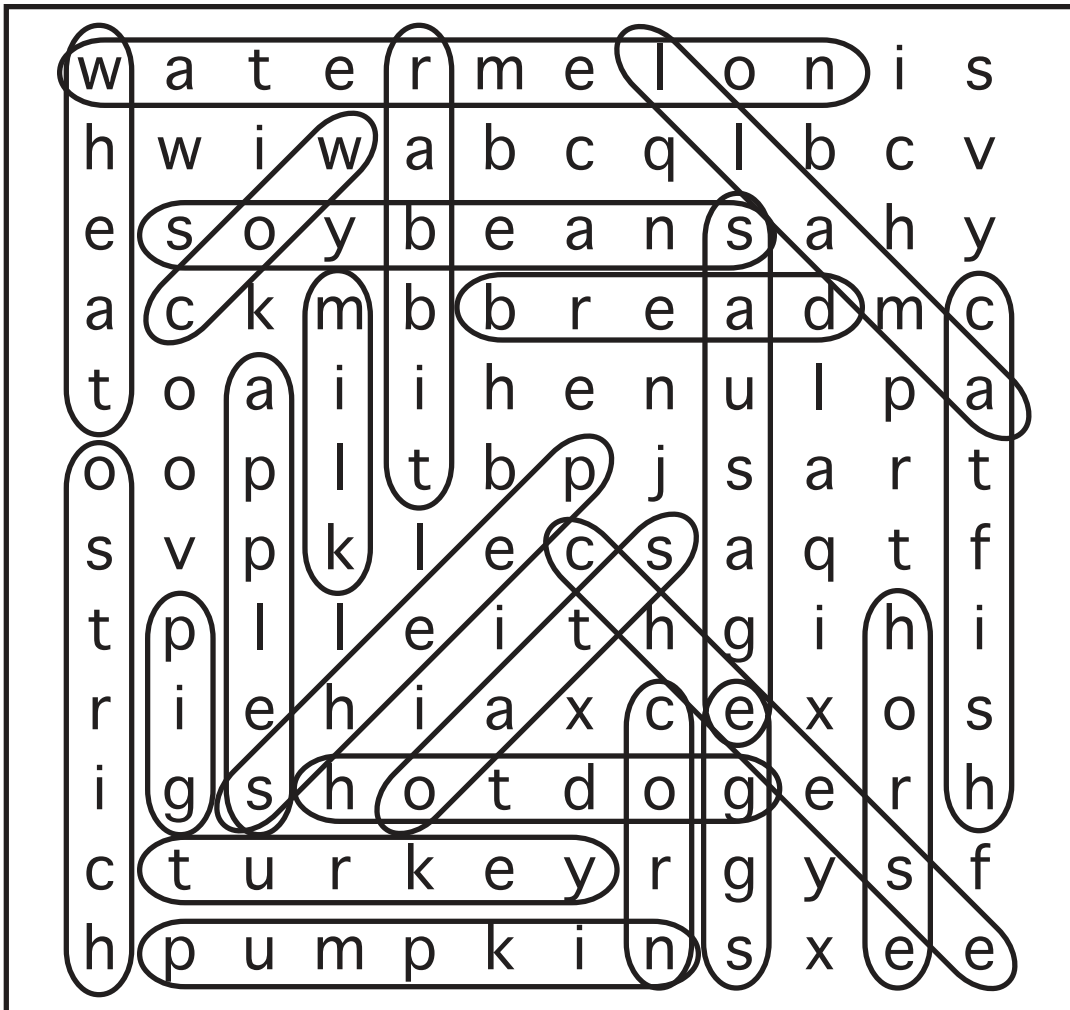
sausage

hotdog

cheese

bread

rabbit



Grain...A Farm Hazard

Grade Level: K-3

Approximate Length of Activity: 30 minutes

Objectives:

Teacher:

1. Teach students about farm safety by learning about the mechanics of farm equipment.
2. Use a variety of media to teach farm safety (videos, brochures, discussion, demonstrations, and writing).
3. Give students practice with rhyming words and writing their own rhyming rap song.
4. Clearly explain the hazards of grain on a farm and how accidents can be prevented.

Students:

1. Learn about the hazards on a farm and the mechanics of farm equipment to determine why accidents happen.
2. Show an understanding of rhyming words by underlining them.
3. Create a farm safety rap song after learning about farm safety and seeing a sample song.
4. Observe demonstrations about grain hazards and relate it to farm safety.

Illinois Learning Standards: 22.A.1c; 22.B.1; 24.B.1

Introduction:

When grains such as corn, soybeans, and oats are harvested, they are placed into wagons, trucks, and storage bins. The grain moves from a large area into a small opening so a funnel is created by gravity. This funnel can pull people into the grain and cause them to suffocate, or die from lack of oxygen. It only takes two to four seconds to become helpless in a flow of grain. In 10 seconds, a person can be completely covered. Never play around grain equipment and never go in a grain wagon, truck, or bin.

Grain suffocation can also happen in grain bins where the grain is stored. Sometimes a crust, or bridge, forms over the grain and people think it is safe to walk on. There could be an open pocket underneath the crust that is not filled with grain. When a person steps on the crust, they can fall through, be covered by grain, and suffocate. Even adults do not have the strength to pull themselves out of grain before they are covered.



Materials Needed:

- Pictures of “Farm Machinery and Structures”
- “Farm Safety Rap Song” for each student
- Dry erase board/chalkboard
- Dry erase marker/chalk
- Plastic gallon milk jug
- Grain (corn seeds, bean seeds, wheat kernels)
- Small toy figure
- Large bowl
- Five-gallon bucket
- Balloon
- Needle (or something to pop balloon)
- Markers or crayons

Activity Outline:

1. Talk to your class about farm safety. You can contact your county Farm Bureau® to receive free copies of Illinois Farm Bureau®’s *Ag Mag* 15 entitled “Safety Sleuths.” You may also want to show them the pictures of farm machinery and structures that are included. Ask them why accidents happen on farms.
2. Try this demonstration to show the students what it is like to be trapped in grain while it is emptied.
 - a. Cut the bottom off a plastic gallon milk jug.
 - b. Turn the jug upside down and fill it with grain while the cap is on.
 - c. Place a small toy figure on top of the grain and place a large bowl under the jug.
 - d. Remove the cap. As the grain quickly flows out of the jug, it will pull the toy figure along with it.
3. Try this demonstration to show the students what it is like to fall into grain that has a pocket of air under it.
 - a. Inflate a balloon and place it at the bottom of a five-gallon bucket.
 - b. Fill the bucket with grain and place a toy figure on top of the grain.
 - c. Pop the balloon with a needle attached to a stick. As the balloon pops, the person will sink into the grain.
4. Optional extra activity: Try this demonstration to show students how heavy grain is and how hard it is to pull out when you are being submerged deeper and deeper.
 - a. Attach a rope to a wooden disk.
 - b. Place the wooden disk in a 30-gallon trash container and fill the trash container with grain.
 - c. Ask the students to pull the disk out. The weight of the grain is more than most kids can pull.
5. The “Farm Safety Rap Song” was written by fifth graders from Allison-Bristow school in Iowa. They were able to perform it for Barbara Bush when she visited Iowa as the First Lady! Pass out copies of the rap song for your students.



6. Teach the students about rhyming words and then ask them to underline the rhyming words with various colors using markers or crayons.
7. Let the class make up their own farm safety rap. Write it on a dry erase board or the chalkboard.

Discussion Questions:

1. How can grain suffocation be prevented?
2. Why do people get trapped in grain while it is being unloaded?
3. Why do people get trapped in grain while it is being stored?
4. How do the demonstrations above relate to farm safety and how do they work?
5. What are rhyming words? Have the students give examples.

Related Activities:

1. Make a safety poster showing what not to do on farms.
2. Visit a farm to see the various machines and equipment that farmers use.
3. Contact one of the organizations listed in Other Resources for more information and lessons about farm safety.

Other Resources:

1. Contact your county Farm Bureau® to receive free copies of Illinois Farm Bureau®'s *Ag Mag* 15 "Safety Sleuths." This issue teaches about farm safety and provides fun activities to learn about farm safety.
2. "Tug of War with Grain" - A grain safety curriculum which uses flowing grain to explain force, resistance, pressure, velocity, and friction. (Junior High and High School)
3. Farm Safety 4 Just Kids—an organization which provides written materials, decals, and videos about farm safety. 110 S. Chestnut Ave., P. O. Box 458, Earlham, IA 50072, (515)758-2827, www.fs4jk.org.
4. Resource Units, TASK-Teaching Agricultural Safety to Kids, 221 North 48th, Quincy, IL 62301, 1-800-323-8275.
5. "Farm Safety, Family Style" Video, DowElanco, P. O. Box 5166, Cedar Rapids, IA 52406-5166.
6. "Safety Net" Video, "Farm Safety, A Second Chance" Video, and "Farm Safety for Kids" Video, Farm Safety 4 Just Kids, P. O. Box 458, Earlham, IA 60072, 1-800-423-5437.



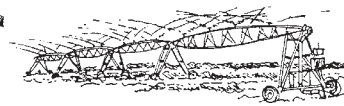
Farm Machinery and Structures



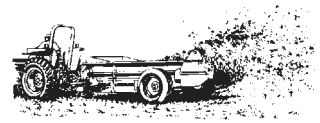
Plow



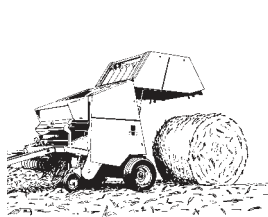
Combine



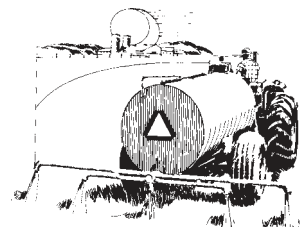
Irrigation System



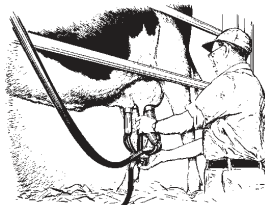
Spreader



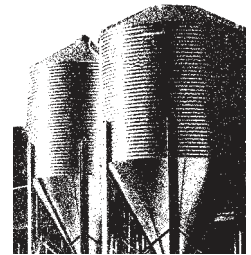
Hay Baler



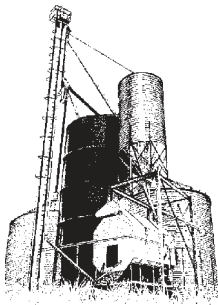
Sprayer



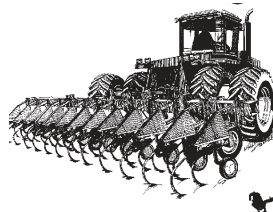
Milking Machine



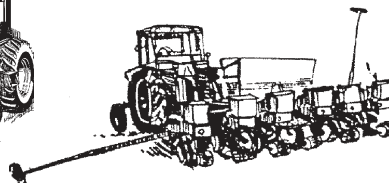
Grain Tank



Silo



Cultivator



Planter



Tractor

Farm Safety Rap Song

The following rap song was written by fifth graders from Allison-Bristow school in Iowa. They were able to perform it for Barbara Bush when she visited Iowa as the First Lady.

Let me tell you about a story of a man and his grain.
Stepped in the bin, corn fell around him like rain.
It was a mistake, but it ain't no sin,
suffocation in the grain bin.
Tractor on the shoulder late at night.
Loaded grain wagons; it was quite a sight.
No use trying to keep it on the shoulder,
another farm vehicle tipped over.
This is a rap of farm safety for kids.
Listen up, you may learn something you never did.
If you don't stay alert,
Someone could really get hurt.

Find the rhyming words in the farm safety rap song above and underline them with matching colors. Write your own rap song using rhyming words (such as these below) and what you've learned about farm safety. Some words you might use are:

care	warning	caution	safety	heed
look	alert	mind	notice	observe
	watchfulness	advice	wariness	

Barnyard Bingo

Skills: Language Arts, Mathematics

Objective: Students will sing a song that introduces farm animal sounds and mark farm animal bingo cards as they recognize the correct sounds.

Background

Talking animals are the subject for many popular books and movies. Although farmers can't exactly talk to their animals, they do communicate with them in other ways. They also learn to observe behavior that helps the animals communicate with them.

Some people observe animal behavior to predict changes in the weather. Pigs grow more aggressive when a storm is near. Cattle congregate at the highest point of their pasture when they expect fair weather but lie down in a huddle for bad weather. Horses predict wet weather when they stand with their tails to the wind or graze in close groups.

For centuries humans have relied on dogs to bark and let them know when intruders are approaching, but dogs are not the only domestic animals that do guard duty. **Geese** threaten intruders by spreading their wings, sticking out their long necks and hissing loudly. **Guinea hens** raise a huge racket when strangers approach.

Roosters crow to let us know the sun is rising. **Turkeys** say "gobble, gobble," but only if they are male, or toms. Female, or hen, turkeys makes a clicking sound, while the sound an ostrich makes is a loud "boom, boom, boom."

Sheep make a bleating sound. A baby lamb can identify its mother by her bleat.

The squeal of a single baby **pig** can reach 115 decibels, which is slightly louder than the roar from a jet airliner's engine. Pigs respond to particular calls from the humans who feed them. Some common calls are "soo-ee, hy-yee-aaa, who-o-eeey and p-eee-agg."

Llamas and camels communicate their displeasure by spitting.

The tail of a **bison** indicates how the animal is feeling. If the tail is down, the animal is calm. If the animal is disturbed the tail will elevate slightly. If a bison raises its tail to a vertical position and starts walking toward the observer, he is waving a flag of challenge.

Bees move in dance-like patterns to show other bees where to find pollen.

P.A.S.S.

Kindergarten

Reading—2.1; 4.1,2;

Writing—1.1

Oral Language—1.3

Math—2.1,4; 5.1,2

Motor Skills—1.1,3

Science—1.1; 2.3

Geography—1.1,3;

Social and Personal Skills—1.1

Civics—1.1,3

Visual Art—3.1

Grade 1

Reading—2.1,3; 4.3

Writing—3.4

Listening—.1

Oral Language—1.1; 3.1,2

Visual Literacy—1.2

Social Studies—2.2,3

Math—2.4; 3.1,2; 5.1

Physical Education—1.1;

4

World Languages—1.3,4

Vocabulary

aggressive—showing readiness to attack

approach—to come near or nearer

behavior—anything a living being does that involves action and response to stimulation.

challenge—to object to as bad or incorrect.

communicate—to make known.

congregate—to come together into a group or crowd.

cue—something serving as a signal or suggestion

huddle—to crowd, push, or pile together.

Oklahoma Ag in the Classroom is a program of the Oklahoma Cooperative Extension Service, 4-H Youth Development, in cooperation with the Oklahoma Department of Agriculture and the Oklahoma State Department of Education.

Oklahoma Ag in the Classroom
Oklahoma 4-H Programs
205 4-H Youth Development
Oklahoma State University
Stillwater, OK 74078
405-744-8889 <http://www.agclassroom.org/ok>



For years cowboys have used specific commands to get **cattle** to move in the direction in which they want them to move. “Gee” means “go right,” and “haw” means “go left.” Some researchers have found cows move in different directions based on where the researcher stands or by the direction, angle and speed of his or her approach. Animals move away from startling sounds, so if they want to move the animal to the left, they give cues on the right side, and vice versa.

Horses take cues from their riders. A rider communicates with a horse through his or her hands, legs, voice and by shifting body weight.

Farmers must observe their animals closely to meet their needs and keep them healthy.

Language Arts

1. Have students listen as you read the background information about animal communication. Lead a discussion about appropriate ways to communicate.
2. Use flash cards or books to review the sounds farm animals make, and sing “Old MacDonald Had a Farm” to reinforce the sounds.
3. Copy enough of the Farm Animal Bingo cards to provide one for each student. Before playing Bingo with the cards, white out the names of the animals, and have students write them in. Provide popcorn for students to use as markers. Sing the song again, and have students place markers on their cards when they hear the animal sound that matches the animal on the card. When the entire card is covered, have the student call out “Bingo.” Play the game several times, to give as many students as possible the opportunity to win. Make sure you shift the order in which you name the animals in the song.
4. Have students use the names of the animals to write or say simple sentences.
5. Write some of the animal sounds on the chalk board and have students brainstorm to find words that rhyme with the words (e.g., moo/boo, ruff/tough, neigh/play, etc.)
6. Pigs respond to particular calls from the humans who feed them. Have students make up their own calls, and conduct a hog-calling contest. Invite the principal or a swine producer to judge.
7. Divide students into groups, and have each group develop nonverbal (and non-touching) ways to communicate the following: happiness; sadness; anger; fear. Have each group act out the feelings while the class guesses what emotion they are depicting.
8. Divide students into groups of four or five, and have one student in each group serve as cattle herder, using the instructions presented in the background material for herding his or her cattle group. (“Gee” means “go right,” and “haw” means “go left.”) Have students take turns so each one gets to be the herder.
9. Have students play Farm Animal Charades. One person or group acts out a farm animal without making any sound while the rest of the class

guesses what the animal is.

Geography

1. Make word cards with the names of several farm animals. Make enough so that every student has a card and at least two students are assigned to each animal. Hand out the cards, and whisper the names of the animals in students' ears as you hand them out. Tell students not to reveal the name of the animal on his or her card. Choose spots in your classroom to serve as "pens" for the different animals. Make signs with the name of the animal and a picture to show the location of each pen. Show students where the pen is for each animal. Explain that students must find others with the same animal card by making the noise of the assigned animal. Once all of one kind of animal are together, they can go to their pen. The game is over when all the "animals" are in their "pens."
2. Have students draw a map of the classroom, showing where the pen for each group of animals is located.

Mathematics

As a group, count the "animals" in each "pen." (See Geography activity.) Which pen has the most animals? Have students graph the animals. Have students create number sentences using the number of animals in each pen.

Motor Skills

Sing "Old MacDonald," and lead students in appropriate movements to represent each animal (hopping as a chick, galloping as a horse, walking slowly as a cow, etc.)

Foreign Language

Teach students the Spanish song "Mi Chacra" ("My Farm"), using the flash cards with pictures of the animals and their Spanish names. Words to the song in Spanish and English are attached.

Extra Reading

Miller, Jane, *Farm Noises*, Simon & Schuster Books for Young Readers, 1989.

Lofting, Hugh, *The Story of Dr. Doolittle*, William Morrow, 1997.

Lofting, Hugh, *The Voyages of Dr. Doolittle*, Yearling, 1988.

Most, Bernard, *Cock a Doodle Moo*, Harcourt Brace, 1996.

Roberts, Monty, and Lucy Crealy, *The Man Who Listens to Horses*, Ballantine, 1999.

Sloat, Teri, and Nadine Bernard Westcott, *Farmer Brown Goes Round and Round*, DK, 1999.

intruder—someone who comes or goes in without invitation.

observe—to watch carefully.

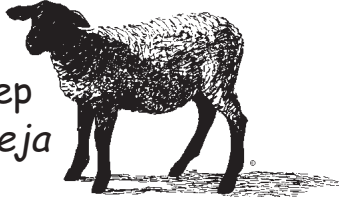
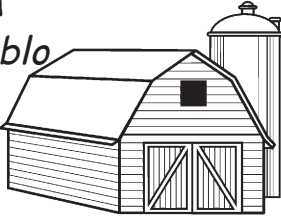
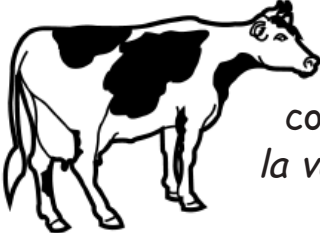
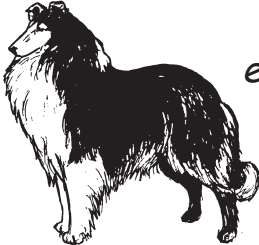
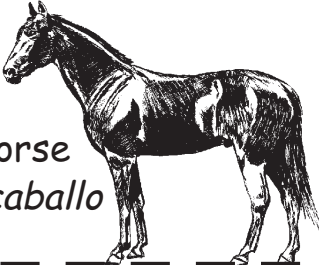
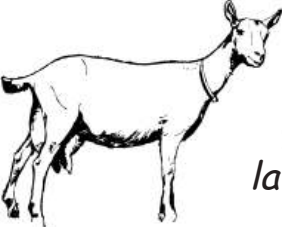
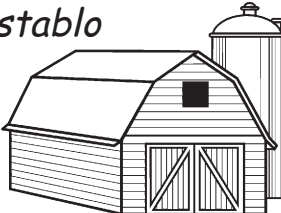
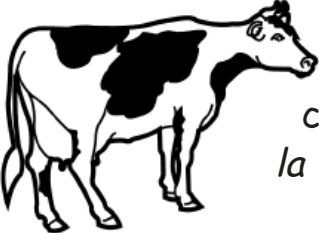
predict—to tell ahead of time.

Barnyard Chorus

Assign each student the name of a barnyard animal whose sound is easily recognized. If necessary, assign more than one student with the same animal. On signal, have all the students make a noise, as loud as possible, like the assigned animals.

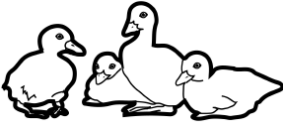
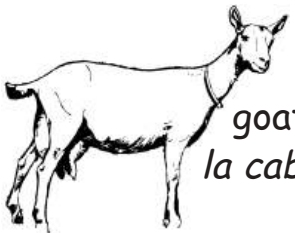
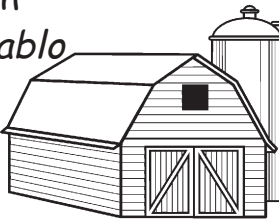
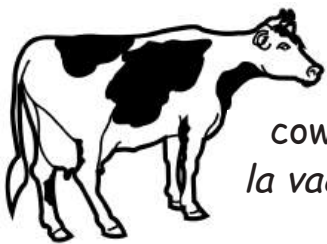
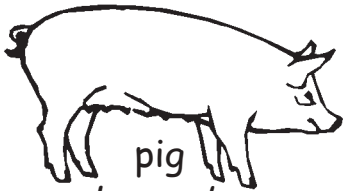
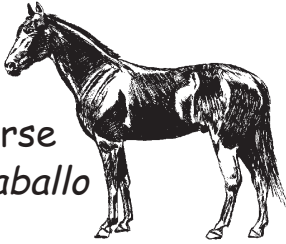
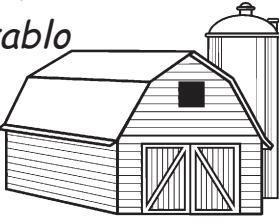
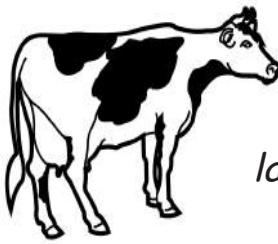
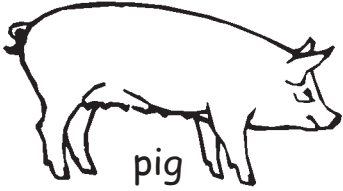
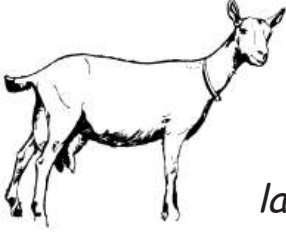
Welcome to the barnyard, Boys and Girls.

Animal Names (English/Spanish)

 turkey el pavo	 goose el ganso	 goat la cabra
 sheep la oveja	 barn el establo	 cow la vaca
 dog el perro	 horse el caballo	 piglet el choncito
 piglet el choncito	 bee la abeja	 duckling el patito
 goat la cabra	 barn el establo	 chicken el pollito
 cow la vaca	 goose el ganso	 horse el caballo



Animal Sounds Bingo

 duckling el patito	 sheep la oveja	 goat la cabra
 goose el ganso	 barn el establo	 horse el caballo
 cow la vaca	 dog el perro	 pig la cerdo
 chicken el pollito	 bee la abeja	 turkey el pavo
 horse el caballo	 barn el establo	 cow la vaca
 pig el cerdo	 goose el ganso	 goat la cabra



Mi Chacra (My Farm)

Sing this song using flash cards, with pictures of the animals and their Spanish names.

SPANISH:

Vengan a ver mi chacra que es hermosa,

Vengan a ver mi chacra que es hermosa,

El pollito hace así: peep, peep!

El pollito hace así: peep, peep!

O va camarad', O va camarad',

O va, O va, O va!

O va camarad', O va camarad',

O va, O va, O va!



ENGLISH:

Come and see my farm which is so beautiful,

Come and see my farm which is so beautiful,

Little chicken goes like this: peep, peep!

Little chicken goes like this: peep, peep!

O come my friend, O come my friend,

O come, O come, O come!

O come my friend, O come my friend,

O come, O come, O come!

OTHER VERSES:

—El patito (the duckling) hace así: quack, quack!

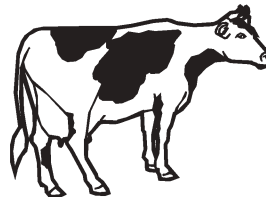
—El caballo (the horse) hace así: neigh, neigh!

—El choncito (piglet) hace así: oink, oink!

—Y el ganso (and the goose) hace así: honk, honk!

—La oveja (the sheep) hace así: baa, baa!

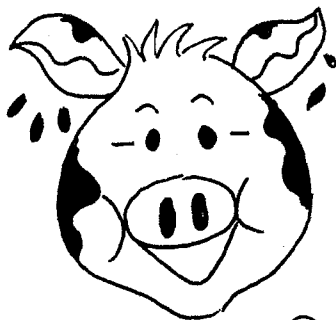
—Y la vaca (and the cow) hace así: moo, moo!





FARM SYMPHONY

By Susan Munguia
for Lasting Lessons



The horse lets out a whinny,
The chicken gives a cluck,
The quack, as you know,
Comes from our friend the duck.
A baa-baa from the sheep,
A moo-moo from the cow,
Squealing from the baby pigs,
Grunting from the sow.



The farm is like a symphony,
Just listen to the sounds.
It's music to the farmer's ears
As he makes his rounds!



Please Note: Make a copy of this poem for every student in the class. This can be used in their poetry folders. Use the poem above to do the activities on the next page.

Activities for **FARM SYMPHONY** (Poem)

Preparation:

Copy the poem from the previous page onto chart paper or posterboard. Laminate and use Wikki Stix® or Vis-a-Vis® pens for the activities below. Make a copy of the poem for each student's poetry folder (a folder in which all LastingLessons® poems and other poems can be collected throughout the year).

Reading

Read the *Farm Symphony* poem together, then have volunteers read solo.

Rhyming Words

Make a list of all the rhyming words (*cluck, duck; cow, sow; sounds, rounds*). Can you think of other farm-related rhyming words (*peep, jeep; truck, duck; eat, bleat*)?

Art

Thumbs up for music! Everyone will need some paint, a 9"x12" piece of colored construction paper, and yarn. Glue the yarn to the construction paper to make the "stems" of the musical notes. Dip a clean thumb into paint and make a thumbprint "note" at the bottom of your stem. (Older children may be able to make a staff with yarn lines and illustrate a "tune" with the correct notes.)

Nouns

Teach (or reteach) that a *noun* is a person, place or thing. List all the nouns in the poem (*horse, chicken, friend, duck, sheep, cow, pig, sow, farm, symphony, music, ears, he*). If the students are using their individual copies of the poem, they can circle the nouns using a yellow crayon.

Music

Take a moment to discuss the musical term – **symphony**. (*A symphony is a piece of music played by several instruments; it is*

considered a work of art.) Ask a professional musician to come and talk to your students about a symphony. Have them bring a sample piece of music for the students to hear.

Physical Activity

Play the game, "Help the Farmer Find His Animals". (Note: The object of this game is for the Farmer to find his/her lost animals by following their sounds.) Choose a student to be the farmer. Put the blindfold on the farmer and spin him/her around several times. As the farmer is spinning, the other students move very quietly around the room trying not to be heard. When the farmer stops, he/she will call out the name of an animal. For example: The farmer says, "pig". All of the other students then start to make the "pig" sound. The farmer walks toward the sound. The animals are allowed to move until one animal is tagged. This person becomes the next "farmer".

Extension

Borrow some musical instruments from your music department or from individuals and have a farmyard band! Try to play, "Old MacDonald", "The Farmer in the Dell", "BINGO", "Six Little Ducks", or any other farm-related music. Record or videotape to show the parents sometime during the year!

Farm Poems

Farm Day

Teacher: Animals living in the barn,
Wake up early on the farm.

Class: The cows say, "Moo," The
pigs "Oink Oink"
And the rooster goes, "Cock-a-doo."

Teacher: The farmer and his family too, All
have chores that they must do.

Class: The cows say, "Moo," The
pigs "Oink Oink"
And the rooster goes "Cock-a-doo".

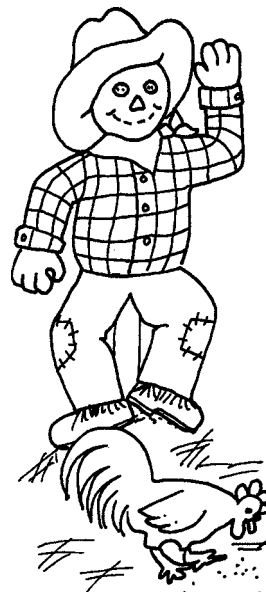
Teacher: They milk the cows and feed the hen,
And put the pigs out in their pen.

Class: The cows say, "Moo," The
pigs "Oink Oink"
And the rooster goes, "Cock-a-doo."

Teacher: A farmer's work is never done, From
early mom 'til setting sun. *(Children may
memorize the repeated section.)*

The Scarecrow

Scarecrow standing in the field
On a bright and sunny day,
Don't forget to do your job.
Scare the hungry crows away!



The Farmer

Sun is coming up
Farmer's out the door,
He will go to milk the cows,
And start his daily chores.

Sun is going down
Horse is in the stable,
All the fields are planted now,
Supper's on the table.

Suggestions for Using the Poems

These techniques help to promote reading readiness and introduce children to the "idea" of reading as well as provide practice in oral language skills.

- You may print the poems on sentence strips in two different colors. One color indicates lines the teacher reads, and the other indicates the lines the class reads.
- Print the poem on poster board with magazine pictures of farm animals. Pictures may be cut from magazines.
- Make puppets out of paper lunch sacks and have several groups of children be the various animals.
- Practice tracking the words with your children while reading the poems.

Cinquain Poetry

The beauty of golden grain fields, the wonder of a newly born animal, the rich smell of just plowed soil are all a part of the nature and beauty of agriculture.

Writing a form of poetry called cinquains are a very descriptive way to express the nature and beauty of agriculture.

Think about what you have read, seen, or heard about raising poultry. Use a cinquain outline to help you express what you know in poetry.

To write a cinquain poem, you will need to use many adjectives or describing words. First, choose one word to give your poem a title. This will also be the first line of your poem.

Now brainstorm and think of as many words as you can to describe a chicken, a duck, a turkey, an egg, etc.

COLOR	FEELINGS	ACTIONS	OTHER NAMES
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Now write an agriculture cinquain.

Line 1 _____
one word to give the title

Line 2 _____
two words to describe the title

Line 3 _____
three action words about the title

Line 4 _____
four words that express the feeling about the title

Line 5 _____
one word that renames the title

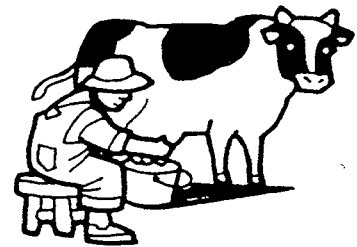
Pantomime, Puppets, and Poetry

Read the following poem aloud as students pantomime the corresponding actions written in parentheses. Or, have the class recite the poem while groups of students dramatize the actions with stick puppets made from photocopies of the Farm Figures sheets (pages 22 and 23).

Five Friendly Farmers

*Five friendly farmers
Wake up with the sun.*

(stretch and yawn)

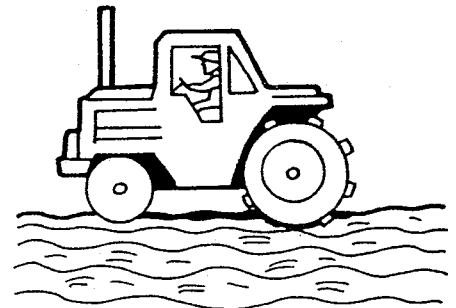


*For it is early in the morning
And the chores must be done.*

(put on a hat and march to the farmyard)

*The first friendly farmer
Goes to milk the cow.*

(milk a cow)



*The second friendly farmer
Thought he'd better plow.*

(work in a garden)

*The third friendly farmer
Feeds the hungry hens.*

(toss grain to the chickens)



*The fourth friendly farmer
Puts the piggies in their pens.*

(shoo the pigs into their pens)

*The fifth friendly farmer
Picks the ripe corn*

(pick corn)

*And waves to the neighbor
When he blows his horn.*

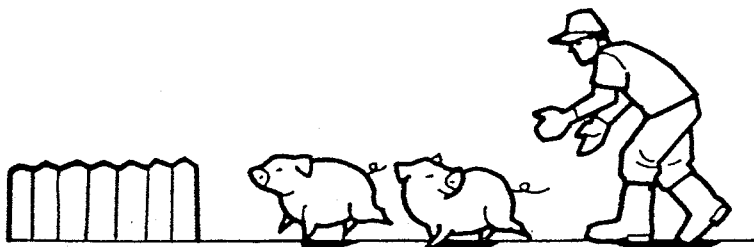
(wave)

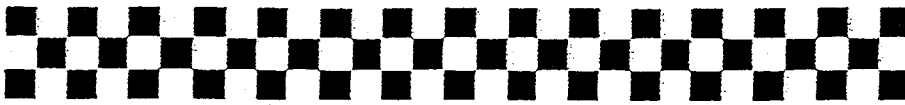
*When the work is finished
And the evening sky is red,*

*Five tired farmers
Tumble into bed!*

(yawn and stretch)

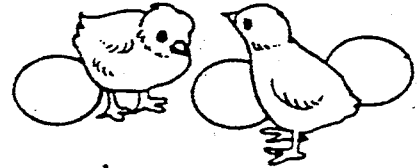
(go to sleep)





■ Ten Little Chickens ■

(Math Rhyme)



Ten little chickens pecking in a line
One scampered off and then there were nine.

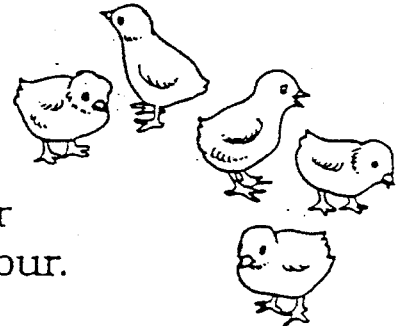
Nine little chickens ran through the gate
One stubbed her claw and then there were eight.



Eight little chickens the oldest named Kevin
He moved to Kansas and then there were seven.

Seven little chickens jumped over sticks
One flew the coop and then there were six.

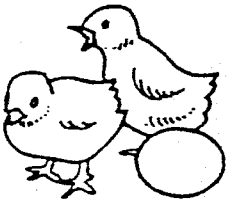
Six little chickens found a bee's hive
One got stung and then there were five.



Five little chickens scratched at the door
One hid behind it and then there were four.

Four little chickens played in a tree
One broke a branch and then there were three.

Three little chickens had nothing left to do
One ran home and then there were two.



Two little chickens weren't having fun
One waved good-bye and then there was one.

One little chicken thought she was a hero
She pranced on home and then there were zero!



Animal Poems

Goose Feathers

Cackle, Cackle, Mother Goose,
Have you any feathers loose?
Truly have I, pretty fellow,
Half enough to fill a pillow.
Here are quills, take one or two,
And down to make a bed for you!

A Pig

A pig loves the mud, it helps him stay cool,
Since he can't sweat, or swim in a pool!

Bow-Wow

Bow-wow says the dog,
Mew, mew says the cat,
Grunt, grunt goes the hog,
And squeak goes the rat.
Whoo-oo says the owl,
Caw, caw says the crow,
Quack, quack says the duck,
And what cuckoos say, you know.

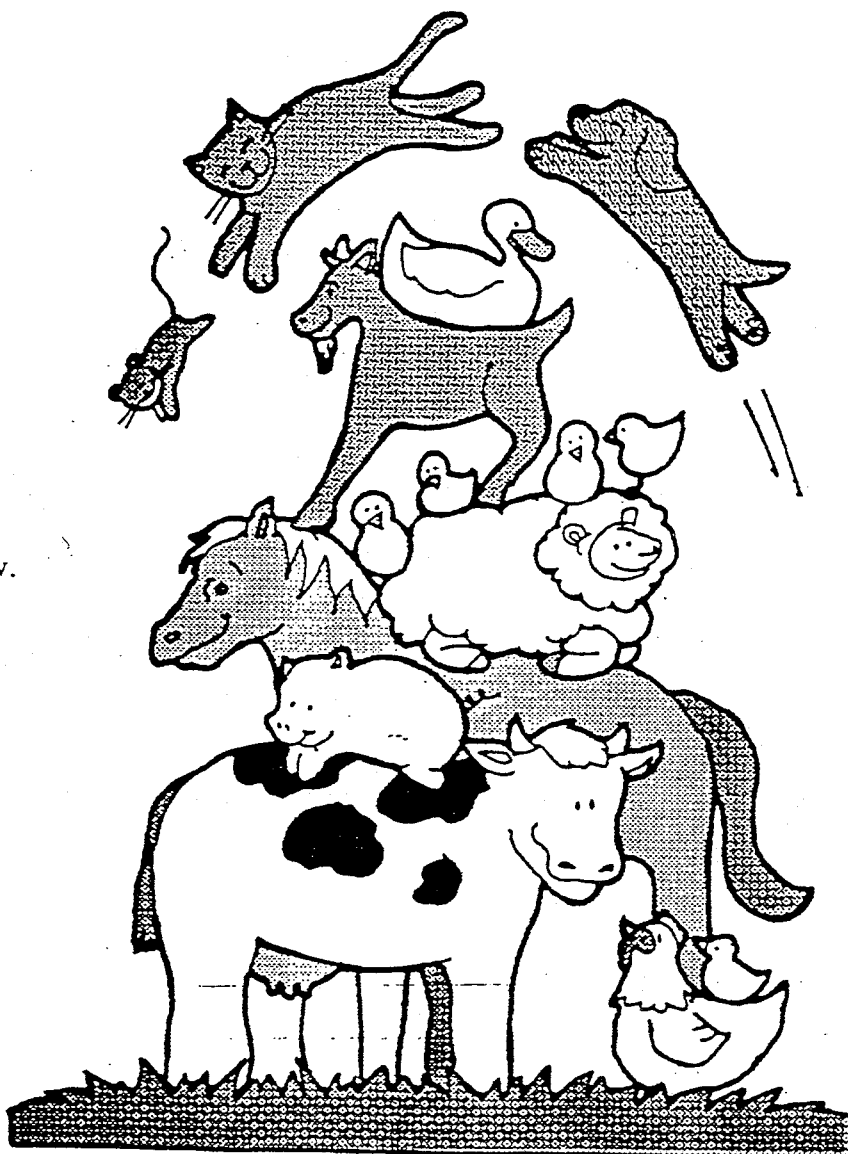
So with cuckoos and owls,
With rats and with dogs,
With ducks and with crows,
With cats and with hogs,
A fine song I have made,
To please you, my dear;
And if it's well-sung,
"Twill be charming to hear!

The Black Hen

Hickety, pickety, my black hen,
She lays eggs for gentlemen;
Gentlemen come every day
To see what my black hen does lay!

Baa, Baa, Black Sheep

Baa, Baa, black sheep, have you any wool?
Yes, sir; yes, sir; three bags full.
One for the master, one for the dame,
And one for the little boy who lives down the lane.



Unit 5: Class Introduction**The Giving Grace****By Sandy Stryker**

Bees give us honey,
Worms give us silk,
Birds give us music,
Cows give us milk.

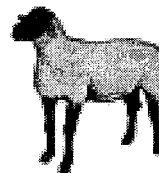
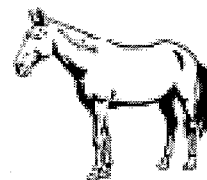
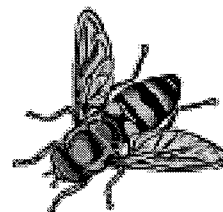
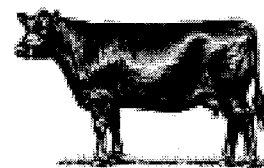
Trees give us shelter,
Flowers, perfume.
Sheep provide wool
We can weave on a loom.

Geese give us feathers,
Chickens give eggs.
Horses give rides
Flying fast on fine legs.

Dogs give us friendship,
Cats bring us joy.
We can give thanks —
Every girl and each boy.

*Source: Mother Nature Nursery Rhymes.
Advocacy Press, Santa Barbara, CA, 1990.*

Directions: Match the word in the first column with the picture in the second column.

bee**honey****cow****sheep****horse**

The Cow

by Robert Louis Stevenson

The friendly cow all red and white,
I love with all my heart:
She gives me cream with all her might,
To eat with apple tart.
She wanders lowing here and there,
And yet she cannot stray,
All in the pleasant open air,
The pleasant light of day;
And blown by all the winds that pass
And wet with all the showers,
She walks among the meadow grass
And eats the meadow flowers.



**NOTE: Additional poetry may be found in
My Little Farm: Money, Place Value and Mapping
curriculum in this Adventures Around the Farm kit.**

Adventures Around the Farm Cloze Activity

Name: _____

Use the word bank to complete each sentence.

Word Bank

acre

farm

machine shed

barn

farmer

tillage

combine

fibers

tractors

livestock

1. The first grade students saw dairy cows and a corn field when they visited the Jones Dairy _____.
2. When our family went to the fair, we walked through the _____ barns full of farm animals.
3. The farmer went to the _____ to check on the animals.
4. Some _____ have 4 wheels and no cab while others are much larger with 6 wheels and a cab to sit in. They can be almost any color of the rainbow.
5. The wool _____ in my sweater help keep me warm on cold winter days
6. In the spring, we see farmers using _____ equipment before they plant the seeds.
7. In the fall of the year, people driving by the fields may see a _____ harvesting the corn and soybeans.
8. When we drove by the Smith Family Farm, we saw them working on a tractor inside their _____.
9. We watched the farmer harvest a 20 _____ field of wheat by our house.
10. One _____ produces enough food to feed 140 people.

**Adventures Around the Farm
Cloze Activity Answer Key**

Name: _____

Use the word bank to complete each sentence.

Word Bank

acre

farm

machine shed

barn

farmer

tillage

combine

fibers

tractors

livestock

1. The first grade students saw dairy cows and a corn field when they visited the Jones Dairy Farm.
2. When our family went to the fair, we walked through the livestock barns full of farm animals.
3. The farmer went to the barn to check on the animals.
4. Some tractors have 4 wheels and no cab while others are much larger with 6 wheels and a cab to sit in. They can be almost any color of the rainbow.
5. The wool fibers in my sweater help keep me warm on cold winter days
6. In the spring, we see farmers using tillage equipment before they plant the seeds.
7. In the fall of the year, people driving by the fields may see a combine harvesting the corn and soybeans.
8. When we drove by the Smith Family Farm, we saw them working on a tractor inside their machine shed.
9. We watched the farmer harvest a 20 acre field of wheat by our house.
10. One farmer produces enough food to feed 140 people.

Adventures Around the Farm

Math

Lessons with standard and brief synopsis

1. Adventures Around the Farm Glyph – 6.A, 6.B, 10.A, 10.B.
Students collect, display, and interpret data about themselves and other meaningful topics. These activities will also allow the student to practice using a legend in the creation of the glyph.
2. Farm Logic Puzzle - 10.A.
Students determine the placement of each picture using logical thinking.
3. Agriculture Counts - 6.A, 6.C, 6.D, 10.B.
After reading about the nation's first survey of agriculture, students practice counting and sorting a variety of agricultural items.
4. Corners - 6.A, 6.C, 6.D, 8.B, 10.A, 10.B.
Students learn about various livestock while creating a variety of graphs.
5. Introductory Lesson Edible Numbers - 6.A, 6.B, 6.C.
Students develop working vocabulary of food and categorize it by source. Then, they use grocery ads to sharpen their math skills. Students apply what they learned about food to their daily lives by analyzing the foods they eat at a particular meal.
6. Have You the Time of Day - 7.A. [Note: A Day in the Life of a Farmer book located in this kit would also go well with this lesson.]
Students will read a story about a day in the life of a farmer and gain practice reading and writing time.
7. Farmer's Share - 7.A.
Students learn about the farmer's share of their family's money spent on food.
8. My Little Farm – Money, Place Value and Mapping (located in this kit)
Life on a small family farm provides the context for exploring place value, money, area and perimeter, mapping, and computation. In this 4-week unit, students create a paper model of a farm and learn about farm life and farm animals.

*****NOTE: Many of the lessons in other disciplines also align with the Math standards.**

Illinois State Goals

- 6: Demonstrate and apply a knowledge and sense of numbers, including numeration and operations (addition, subtraction, multiplication, division), patterns, ratios and proportions.
- 7: Estimate, make and use measurements of objects, quantities and relationships and determine acceptable levels of accuracy.
- 8: Use algebraic and analytical methods to identify and describe patterns and relationships in data, solve problems and predict results.
- 10: Collect, organize and analyze data using statistical methods; predict results; and interpret uncertainty using concepts of probability.

Illinois State Learning Standards

- 6.A. Demonstrate knowledge and use of numbers and their representations in a broad range of theoretical and practical settings.
- 6.B. Investigate, represent and solve problems using number facts, operations. (addition, subtraction, multiplication, division) and their properties, algorithms and relationships.
- 6.C. Compute and estimate using mental mathematics, paper-and-pencil methods, calculators and computers.
- 6.D. Solve problems using comparison of quantities, ratios, proportions and percents.
- 7.A. Measure and compare quantities using appropriate units, instruments and methods.
- 8.B. Interpret and describe numerical relationships using tables, graphs and symbols.
- 10.A. Organize, describe and make predictions from existing data.
- 10.B. Formulate questions, design data collection methods, gather and analyze data and communicate findings.

ADVENTURES AROUND THE FARM

Glyph Directions

Read and follow directions for each question.

1. Some Farmers milk their cows twice a day and some three times a day. How often do you drink milk?

0 times per day	1 time per day	2 or more times per day
Don't glue any cows in the picture	Glue 1 cow in the picture	Glue two cows in the picture

2. To get wool from sheep, the farmer has to shear or cut the wool off of the sheep. Shearing is like getting a hair cut. Do you like to get your hair cut?

Yes, I do like to get a hair cut	No, I don't like to get a hair cut
Color the sheep black	Color the sheep brown

3. Mother pigs carry their babies for 3 months, 3 week and 3 days. Which month were you born?

January, February or March	April, May or June	July, August or September	October, November or December
Color 1 pig pink and glue it onto the picture	Color 2 pigs pink and glue them onto the picture	Color 3 pigs pink and glue them onto the picture	Color 4 pigs pink and glue them onto the picture

4. Some farmers have to irrigate or water their corn to help it to grow. Does your family water the grass in your yard?

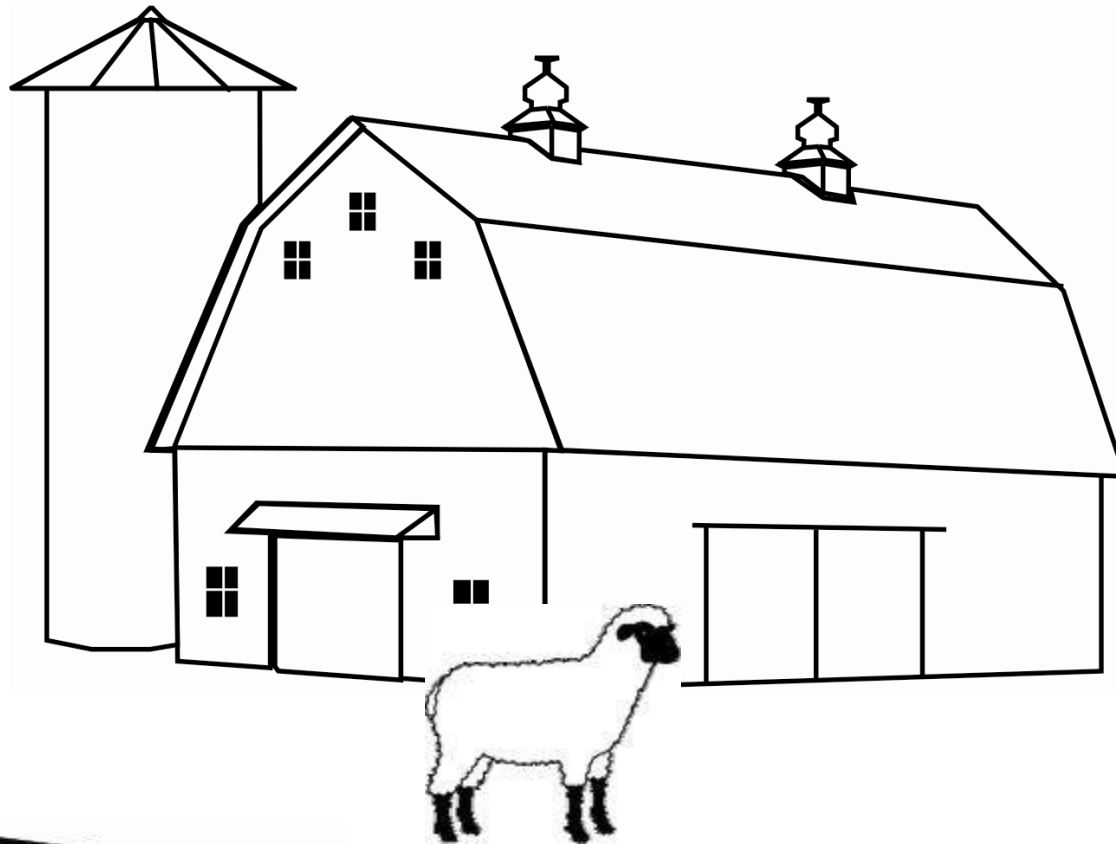
Yes	No
Color the corn green	Color the corn yellow

5. Many farmers use tractors to help them do the work on their farm like planting, working the ground or hauling grain. Some farmers have different tractors to do these different jobs. Does your family have a car or truck?

No, my family doesn't have a car or truck	Yes, my family has 1 car or truck	Yes, my family has two cars or trucks	Yes, my family has three or more cars or trucks
Color the tractor in the picture blue	Color the tractor in the picture green	Color the tractor in the picture red	Color the tractor in the picture yellow

6. Color the barn your favorite color.

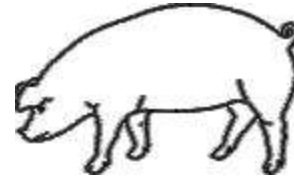
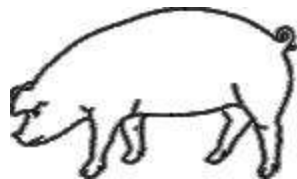
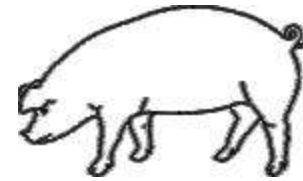
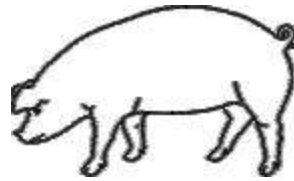
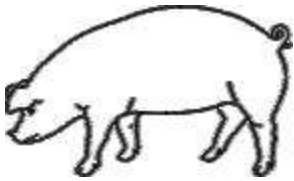
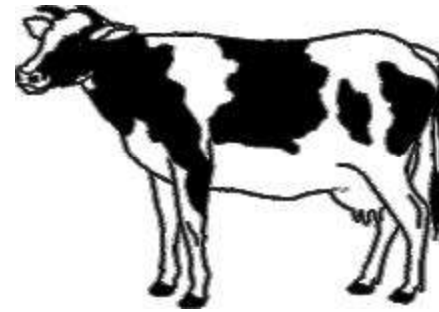
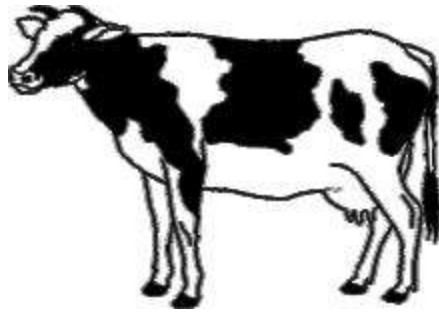
Adventures Around the Farm Glyph



Adventures Around the Farm

Glyph Cutouts

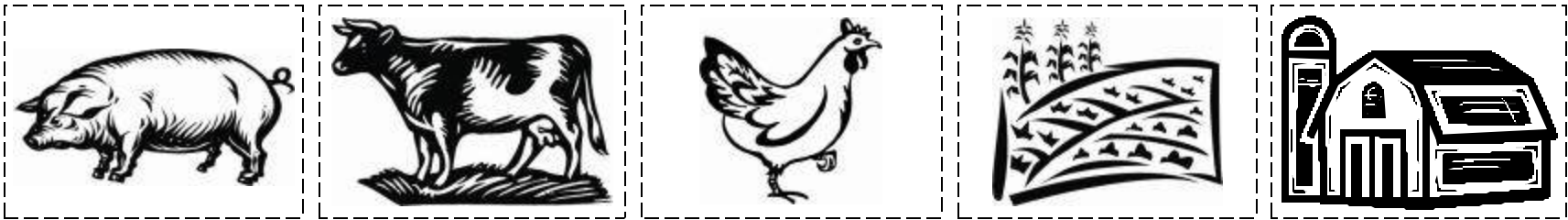
You will need: scissors, glue stick and crayons, markers, or colored pencils



Farm Logic Puzzle

Directions: Cut out the pictures and then paste them onto the correct square after reading the clues.

Cut here-----



Name: _____

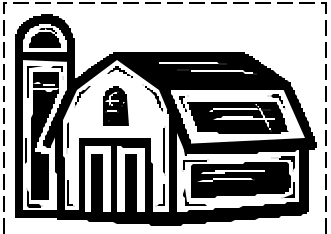
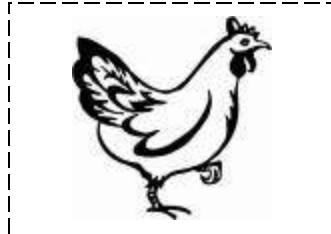
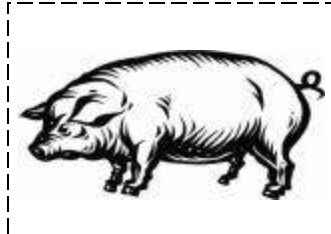
CLUES:

1. The pig is to the right of the barn.
2. The chicken is by the barn, but not by the pig.
3. The cow is next to the chicken.
4. The cow and the cornfield are on opposite ends.

Farm Logic Puzzle (Answer Key)

Directions: Cut out the pictures and then paste them onto the correct square after reading the clues.

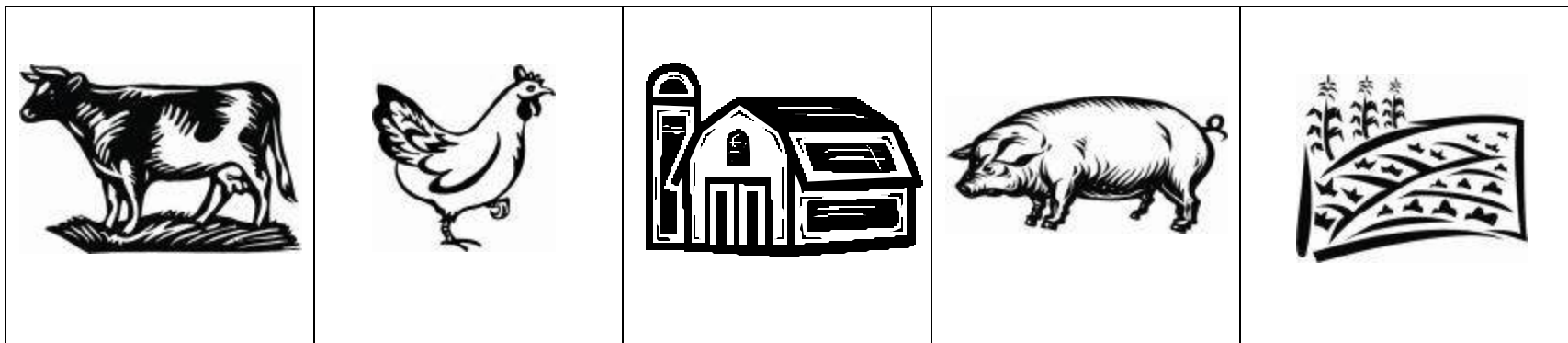
Cut here-----



Name: _____

CLUES:

5. The pig is to the right of the barn.
6. The chicken is by the barn, but not by the pig.
7. The cow is next to the chicken.
8. The cow and the cornfield are on opposite ends.



AGRICULTURE COUNTS

9

GRADES: K-3

SUBJECTS: Math, Reading, Social Studies, Visual Arts

OBJECTIVE: Students will read a story about our nation's first survey of agriculture, discuss reasons for counting things and gain practice by sorting and counting a variety of objects related to agriculture.

BACKGROUND

Do you remember when you first learned to count? For most people, counting is one of the first things their parents teach them. So if you're like most people you've been counting things almost as long as you've been talking.

Why do we count things? What kinds of things do we count? In ancient times people used tokens made from clay to keep count of things. If they wanted to remember how many sheep they had, they would gather as many of the tokens as they had sheep and place them in a safe place. Over time people began to keep count by making marks on the walls of caves to designate numbers. Some people think this was the first writing.

Why would ancient people need to remember how many sheep they had? They might need to keep track of them so they would know if any had wandered off. In that case they would need to go look for the one that was missing.

What are some of the things that you count? Maybe your mom tells you you can have three cookies. Or maybe you know you have 25 baseball cards and want to make sure your little brother didn't take any. Or maybe you know you will need 75 cents to buy a can of pop, and you need to know if you have enough money before you go to the store.

Counting is a very important part of all of our lives. The people who grow our food have to count very closely and keep very good records. They have to know how many acres to plant. They need to know how much seed and fertilizer they will need. And they need to know how many bushels of wheat or soybeans or peanuts their fields produced during the year. They keep careful records so they can make sure they are earning enough money to pay their

MATERIALS

Large bag of animal crackers

Snack mix (pretzels, peanuts, rice cereal, corn cereal, sunflower seeds, raisins)

8-10 paper plates



expenses. Those who raise animals need to know how many offspring their animals produce so they will know how much food to buy and how many they can sell. They need to know how much money they can expect to make, so they can plan for the coming year. Counting is a very important part of the farmer's job.

Our government needs to keep a good count of crops and farm animals so they will know what kind of help the farmers need to make sure we have enough food to eat. The U.S. Department of Agriculture's National Agricultural Statistics Service is the government agency responsible for keeping count.

ACTIVITY

1. Ask students why they count things. What kinds of things do they count? Write answers on the chalkboard.
2. Share background material, and read the story about Arthur Young and the President on Student Worksheet A.
3. Tell students they will be conducting their own agricultural census. Divide them into groups of four or five. Provide each group with a plate of animal crackers and a copy of the chart on Student Worksheet B.
4. Show students how to use tally marks to keep count. Explain that this is similar to the way ancient people kept count by drawing pictures on the walls of caves.
5. Have students draw pictures of the different animal crackers in separate columns on their worksheets. Then have students sort the animal crackers and use tally marks in the appropriate columns to count them.
6. Have students translate their tally marks into numbers, and ask one person from each group to make a "livestock report."
7. Draw a classroom chart on the chalkboard and record the data as the groups report it.
8. Repeat the process with the snack mix. Explain to students that the different ingredients in the mix represent different crops. Show students what each ingredient represents, and have students write the names of the different crops at the top of the columns on the chart on Student Worksheet C. Have students sort, count, record and report, as in steps five through seven.
9. Provide extra snack mix and animal crackers for students to eat.

ADDITIONAL ACTIVITIES

1. Provide students with other assortments to sort and count—

VOCABULARY

agriculture
census
livestock
crop
fertilizer
expenses
counting
token
acre



mixed seeds, mixed beans, mixed grains, variety candy mixes, crayons, bags of plastic farm animals, etc.

2. On a map of the U.S., have students locate the area surveyed in the story of Arthur Young and George Washington.
3. Have students make a mural like ancient cave drawings showing their animal cracker count. Use the classroom chart you made, and assign one animal to each of the groups. Students should make simple drawings to represent the animals they counted. Use brown paper and tempera paint in earth tones to make the mural look more like a cave drawing.
4. Make copies of the worksheets at the end of the lessons to give students additional practice counting.

EXTRA READING

Demi, *One Grain of Rice: A Mathematical Folk Tale*, Scholastic, 1996.

Mitsumasa Anno. *Anno's Counting Book*, HarperTrophy, 1986

Mitsumasa Anno. *Anno's Mysterious Multiplying Jar*, Paper Star, 1999.



Arthur Young and the President

In January of 1791, President George Washington received a letter from an Englishman named Arthur Young. Arthur Young had many questions about America.

“How much does it cost to buy land in America?” Arthur wrote.

“What kinds of crops grow there? How much does the land produce?”

“What kinds of animals do you raise on your farms? When you sell them, how much do you get paid?”

President Washington didn’t know the answers to all these questions, but he wanted to help. He thought as president of the new country he needed to know the answers to those questions.

But how could he find out what he needed to know?

He thought and thought and finally got an idea. He decided to send letters to all the farmers in the land and ask them the questions Arthur Young had asked him. This was our country’s first agricultural survey.

At that time nine of every ten of the citizens of our country were farmers. Most lived and farmed in what is today Pennsylvania, West Virginia, Maryland, Virginia, and the District of Columbia.

Washington sent the letters out and waited. The mail was much slower in 1791 than it is today. There were no airplanes or even trucks to deliver the mail across country. There were barely roads. And certainly there were no telephones, e-mail or fax machines.

Finally, after several months had passed, President Washington started getting letters back from the farmers. When he got all the information back, he put it together.

Between September 24 and November 18, 1791, President Washington sent three letters to Arthur Young. These were our country’s first crop reports.

Name _____

Agriculture Counts

B

My Census of Agriculture Livestock

Picture of animal	Count	Total

Name _____

Agriculture Counts

C

My Census of Agriculture
Crops

Name of Crop	Count	Total

Name _____

Agriculture Counts

D

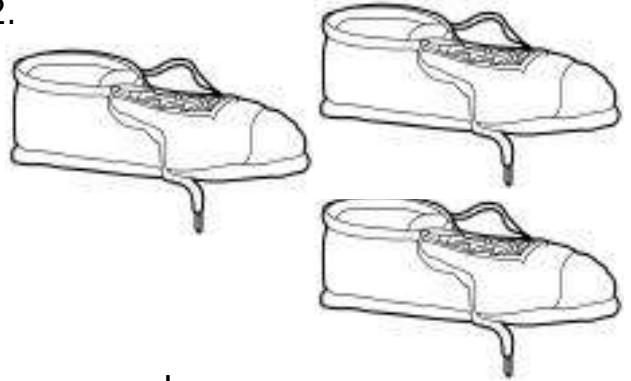
Count and write the number.

1.



_____ trees

2.



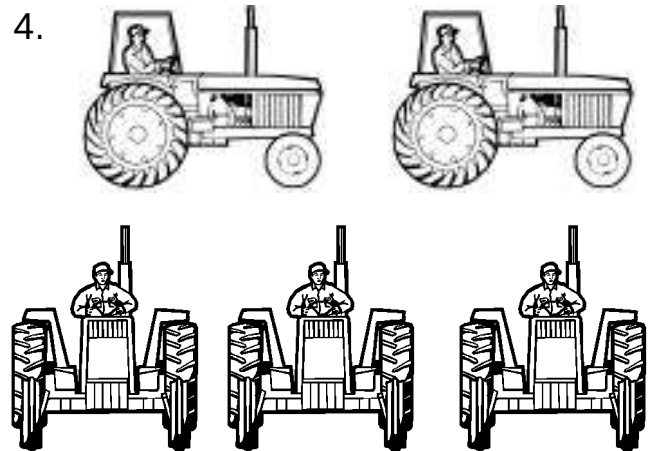
_____ shoes

3.



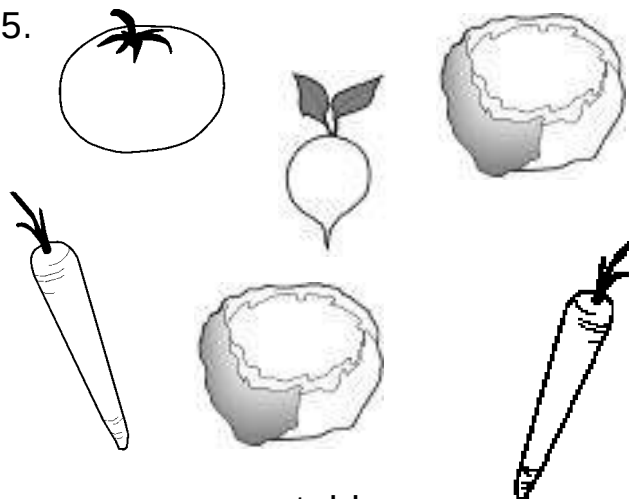
_____ bugs

4.

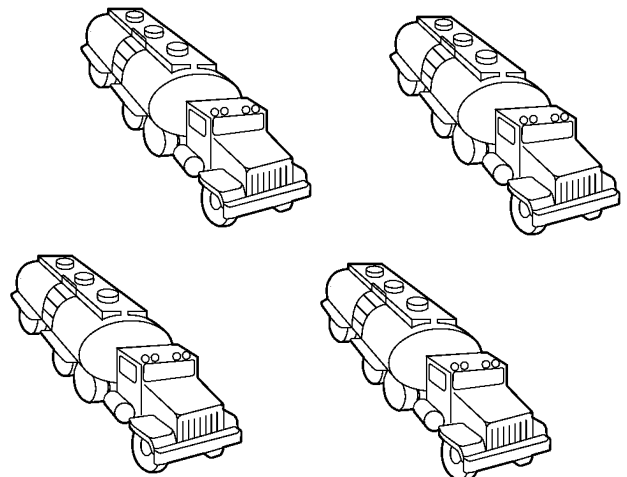


_____ tractors

5.



_____ vegetables



Oklahoma Ag in the Classroom,
1995

_____ trucks

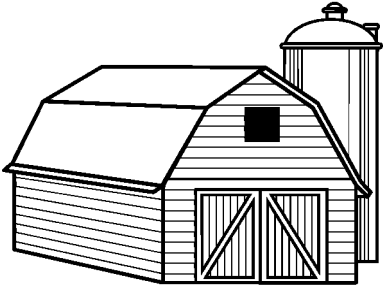
Name _____

Agriculture Counts

E

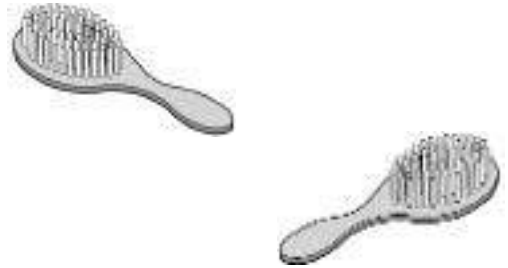
Count and write the number.

1.



_____ barn

2.



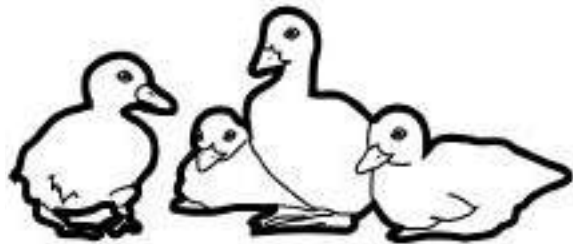
_____ brushes

3.



_____ pennies

4.



_____ ducklings

5.



_____ belts

6.



_____ ice cream cones

Oklahoma Ag in the Classroom, 1995

Corners

Purpose

To introduce students to various livestock raised by North Carolina farmers.

Competency

The learner will explore concepts of geometry.

The learner will collect, organize and display data.

The learner will build an understanding of the properties/movement of common objects and organisms.

The learner will use language for acquisition, interpretation and application of information.

The learner will use language for aesthetic and personal response.

Vocabulary

bar graph graph line graph pie/circle graph

Materials Provided

"Just for Fun" (Located in Lesson 1, Activity 1c.)

Materials Needed

cards with word/picture, ball of string or roll of crepe paper, clock/watch

Teaching Strategy

Preparation: In addition to the ball of string or roll of crepe paper, you will need four pieces of the string or crepe paper.

1. **CORNERS*:** In each corner of the classroom, place a picture of a different farm animal (see Lesson Plan 1, Activity 1c for pictures from which to choose). Students pick one of the four as their favorite. Students go to the corner where their favorite word/picture is posted.
2. Students pair with one other person. Do TIMED-PAIR SHARE:* Establish A-B. A talks for one minute while B listens (B may not talk or comment). "Why did you choose this _____ as your favorite?" When A finishes, instruct B to say, "Thank you for sharing." Reverse roles. When B finishes, instruct A to say, "I enjoyed listening to you." (Forty years ago the classroom make up was predominantly John Boy Waltons; today the classroom may be composed primarily of Bart Simpsons; schools must help socialize students today! Teach them to say "thank you." Thirty percent (30%) of students today are from single parent homes – little time with their children; very mobile – long way from grandparents.)
3. **HUMAN GRAPHING:* Bar Graphs:** Have one student in each group hold that group's animal picture and the other students in that group form a line behind the person holding the picture. The last person in line will have his/her back against the wall; the other group members will line up one-by-one, facing away from the wall, with the person in the front of the line holding the picture. Have the other groups form lines in the same manner along the same wall. See diagram for a graphic representation of the formation of lines.

x – student facing
forward in row

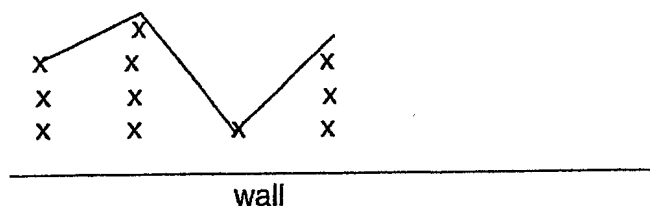
	x		
x	x		x
x	x	x	x

wall

Explain that the class has created a bar graph that expresses students' preferences. Point out that a graph is a picture that represents facts.

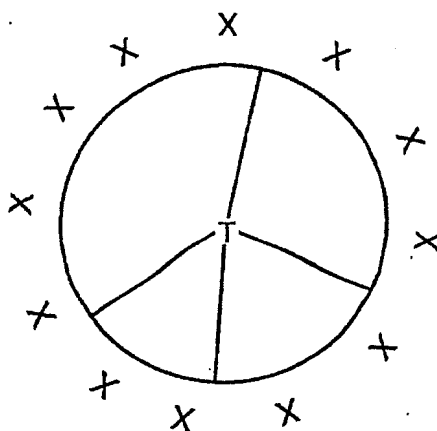
4. **HUMAN GRAPHING – Line Graph:** Hand the first person in the first row the end of a ball of string or roll of crepe paper. Walking in front of each row, have the first person take hold of the string or paper, ending with the person at the front of the 4th row. Ask the class what graph they have now formed: a line graph. Make sure students understand that the bar graph and line graph both represent the same information.

x – student facing
forward in row



5. **HUMAN GRAPHING – Pie/Circle Graph:** Have students in each line join hands. Form a circle beginning with the students in the first line. As the teacher marches in a circle, the students in each line take the hand of the last person in the line ahead of them. Once all four groups/lines are in the full circle, have students drop their hands. The student holding the picture lays it on the floor in the middle of their group such that everyone in the circle can see it. The teacher moves to the center of the circle holding four pieces of string or crepe paper. The first person in each group goes to the teacher and takes the end of one piece of string/paper and then returns to his/her place in the circle. See diagram for visual understanding.

T = Teacher
x = Student



Clarify with class that each of the graphs created represents the same findings; these are merely three different methods to depict that data. A follow up lesson with graphs on paper and/or computer will help reinforce student understanding.

**Adapted with permission from Kagan Publishing from Dr. Spencer Kagan's Book Cooperative Learning. Available from Kagan Publishing, 1 (800) WEE CO-OP, www.KaganOnline.com.*

CORNERS

Place a picture in each corner of the room.

1. cow
2. pig
3. chicken
4. sheep

In each corner place a picture book about the animal pictured there.

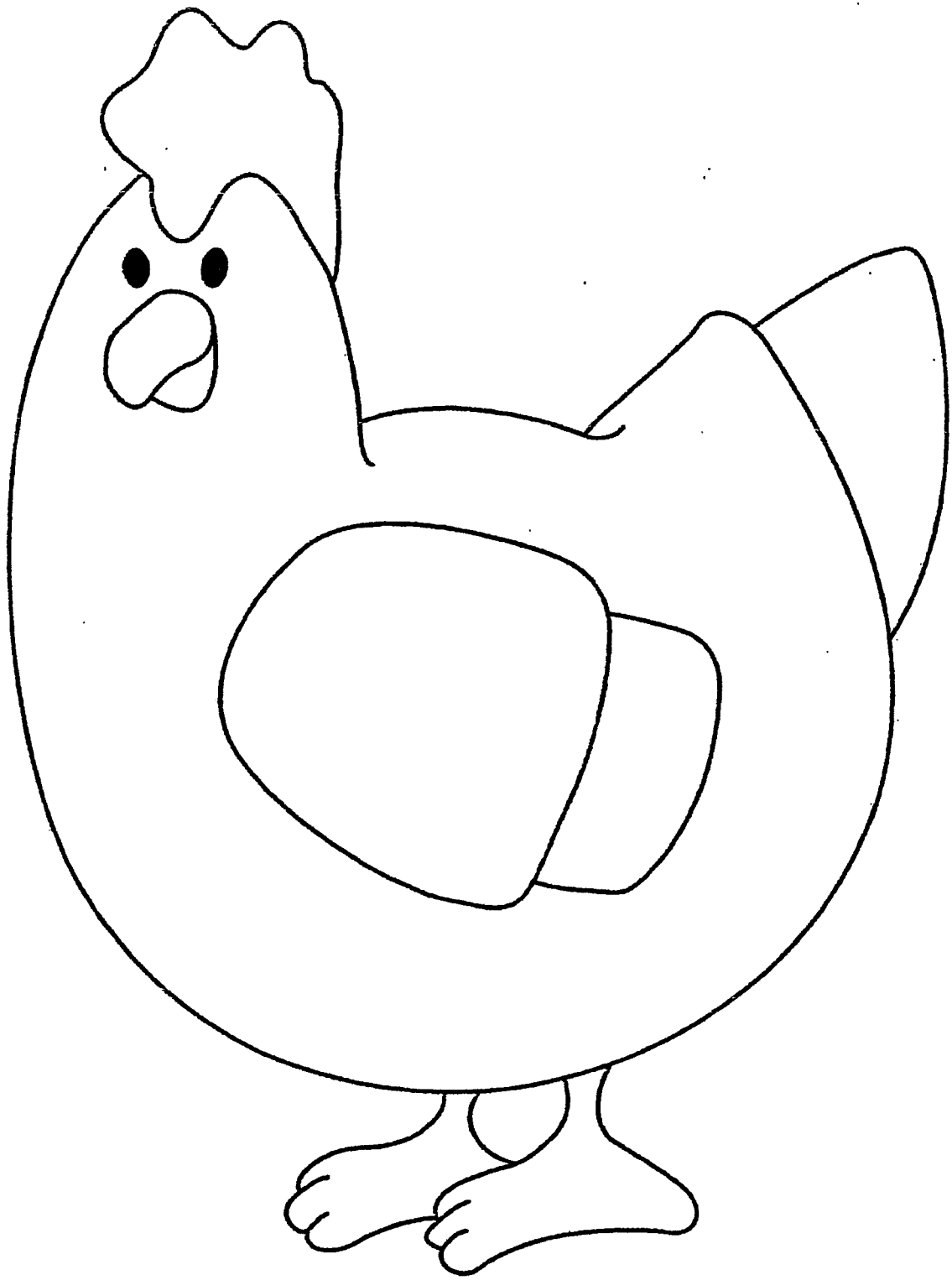
Ask WP's to go to the corner that has the picture of their favorite farm animal. Once there, they may conduct a brief "buzz" session about their reasons for the choices they made.

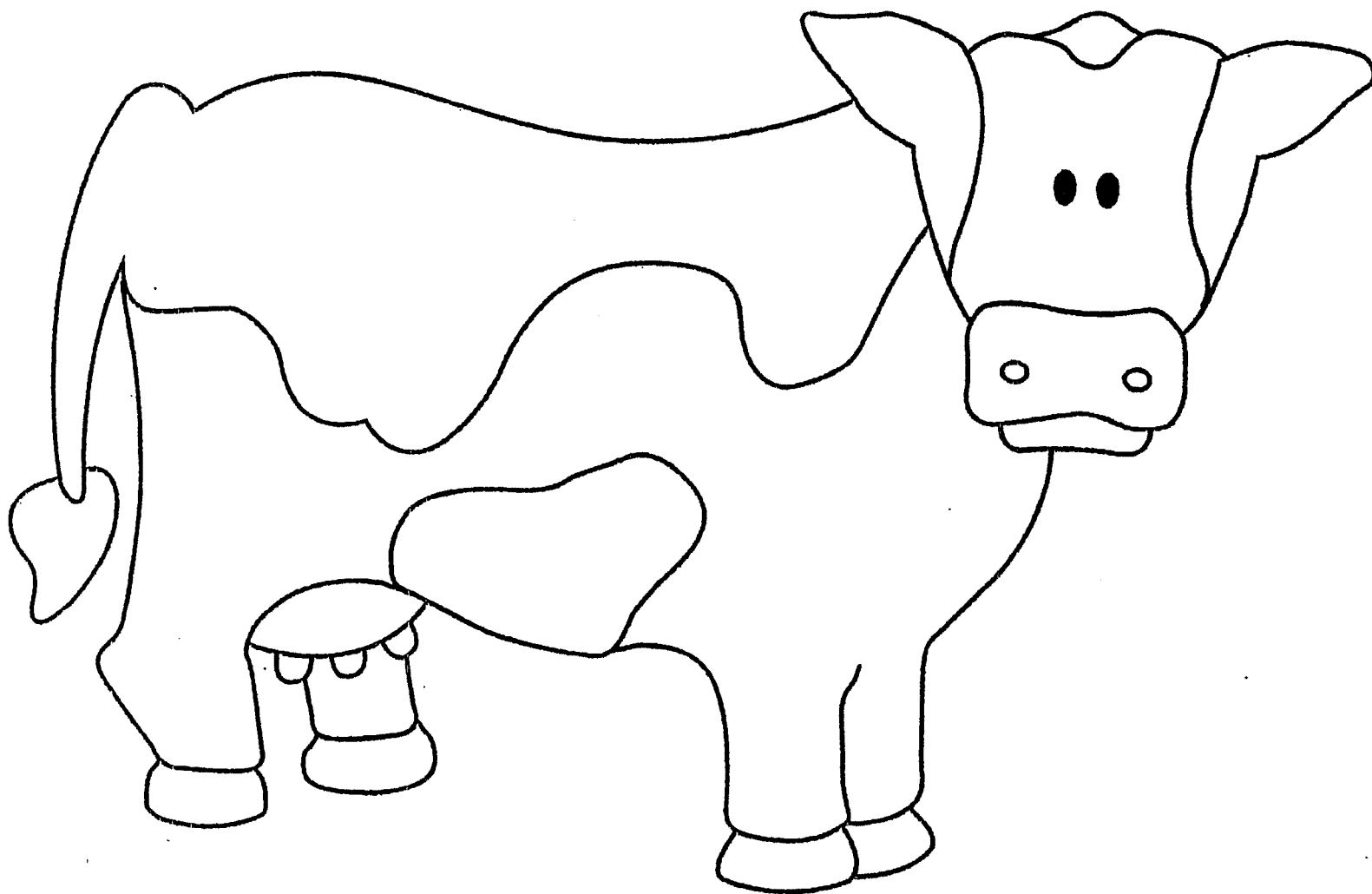
Each group should, then, choose a reader to read the picture book aloud to the group.

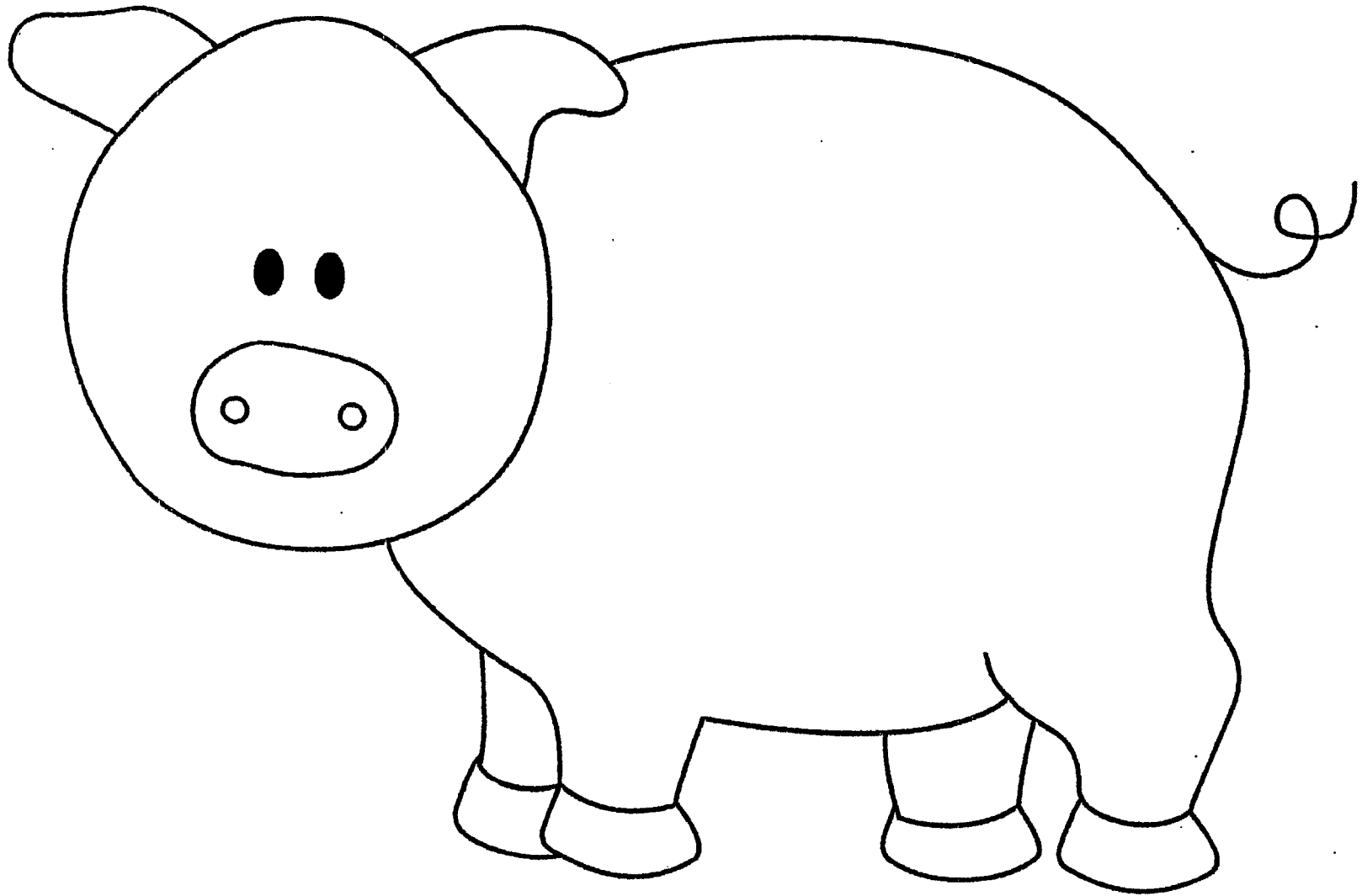
Following the reading, group members should use the index cards provided and list characteristics of the animal in their corner. (ex. four legs, gives milk, etc.)

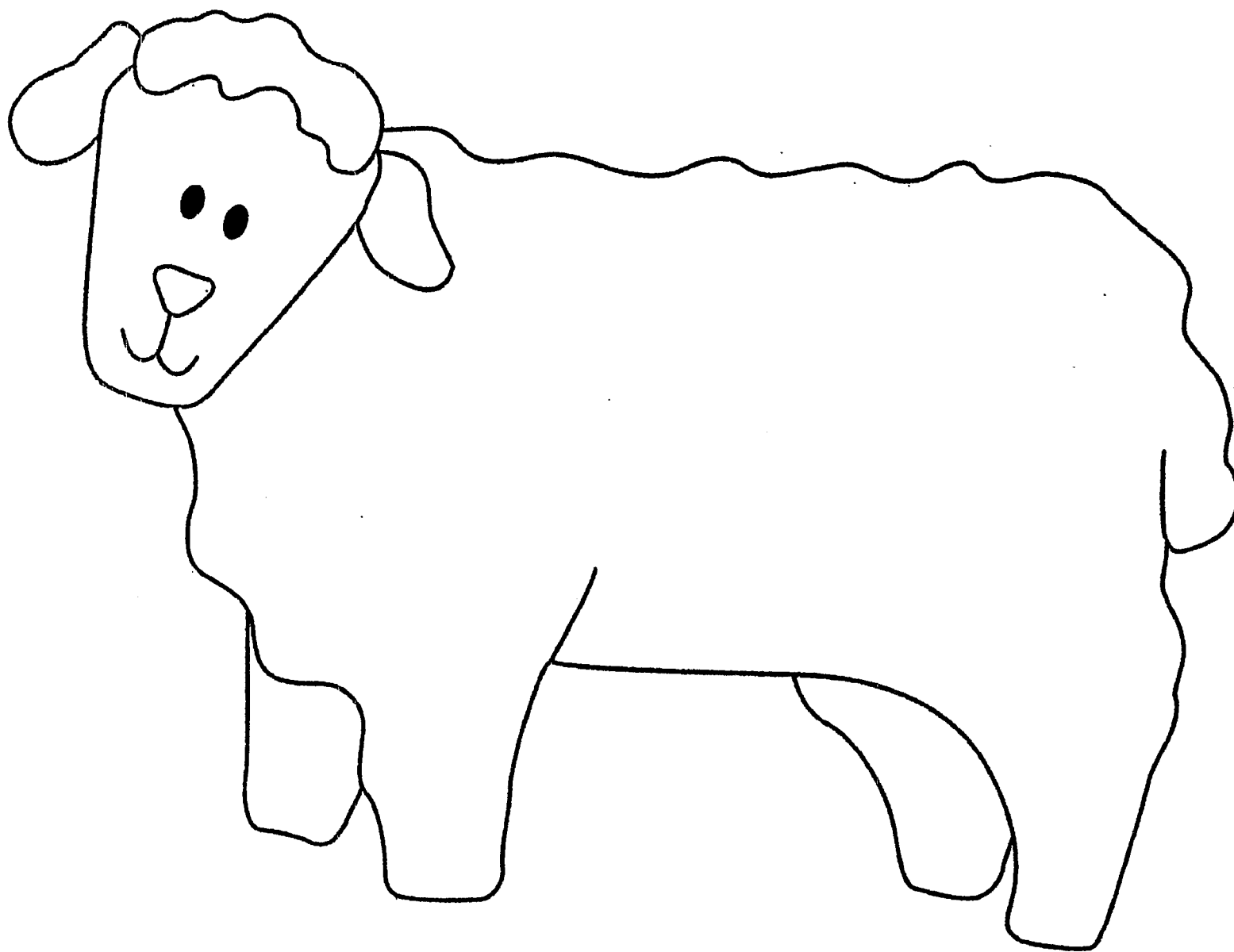
When cards are completed, groups should "pair" with one more group to compare characteristics of their two animals. They can use hula hoops to create a 3D Venn diagram.

When Venn Diagrams are done, the double sized groups can switch places to view the work of their colleagues.









Introductory Lesson

Grades 3-4

Purpose

The purpose of this lesson is for students to develop a working vocabulary of food and to categorize foods by their sources. Students will work cooperatively in small groups to meet a team goal. This lesson serves as an initial assessment of your students' background knowledge on food and food origins.

Time

Teacher Preparation:
35 minutes

Student Activity:
Two 45-minute class sessions

Materials

For each group of three to four students:

- Food pictures (pages 43–49)
- *Fun Agriculture Facts* packet (pages 27–36)
- Large poster board, butcher paper, or construction paper
- Markers
- Old magazines with pictures of food
- Old seed packages (optional)

Background Information

Food can be classified in a variety of ways. In this activity, students classify foods according to their origins. There is no set way of classifying food in this manner; however, the following four groupings may be used: food that grows on a tree, food that grows above ground but not on a tree, food that grows underground, and food that comes from an animal. Feel free to have the students form different classification headings. The idea is to practice sorting and to establish a common vocabulary for use in the upcoming scavenger hunt lesson. Examples of food from the various categories are described below:



Grows on Trees	Grows Above Ground But Not on a Tree	Grows Underground	Comes From Animals
apples apricots cinnamon coconuts oranges pears walnuts	beans corn cucumbers grapes kiwifruit lettuce peas pumpkins squash strawberries tomatoes	beets carrots ginger onions peanuts potatoes radishes turnips	beef cheese chicken eggs fish gelatin lamb milk pork turkey

Preparation

- For student groups of three or four, copy the blackline masters of the *Food Pictures* (pages 43–49).
- Collect magazines, seed packages, catalogs, and grocery advertisements that students can cut up and use for their posters.
- Create *Fun Agriculture Facts* packets for each group. You may duplicate pages 27–36 and/or use other information you find about California agriculture. The information can be placed in manila envelopes and used again for different purposes.

Introductory Lesson

Grades 3-4

Materials *(continued)*

- Scissors
- Tape or glue

Content Standards

Grade 3

English/Language Arts

Reading • 1.0, 1.7

Writing • 1.2

Written and Oral English
Language Conventions
1.0

Grade 4

Science

Life Sciences • 2.0

English/Language Arts

Reading • 2.2

Written and Oral English
Language Conventions
1.0

Procedure

1. As a class, brainstorm different ways food is grown. Some examples include: grows on a tree, grows above ground but not on a tree, grows underground, and comes from an animal. As a class, determine four groups the students will use to categorize the food they eat and write them on the board as category headings.

Four possible categories are shown below:

Grows on a Tree	Grows Above Ground But Not on a Tree	Grows Underground	Comes From an Animal

2. Organize students into groups of three or four.
3. Distribute the *Food Pictures* (pages 43–49). Have the students sort the pictures into the four class-determined groups. Discuss the results.
4. To each group, distribute the *Fun Agriculture Facts* packets, magazines and pictures of food, markers, poster paper, scissors, glue sticks, and a piece of chart or butcher paper.
5. Have the students divide their poster paper into four sections, and label each section with one of the categories. In each quadrant, have the students paste at least four pictures that fit the heading. They must label each picture clearly with the name of the food item. Foods that fit in more than one category may not be used.
6. Using the *Fun Agriculture Facts* packets you created, have the student groups find at least eight interesting facts about the pictures they put on their posters. These facts should be written on

Introductory Lesson

Grades 3-4

a piece of paper and will be used as part of a guessing game during their poster presentation. An example might be, "There are 200 varieties of this fruit." The answer is "plums." In order to use this clue, the students would have plums on their poster.



7. Have the students present their posters to the class. As part of the presentation, have a group member read their facts, one at a time, allowing time for classmates to guess which food item they are referring to.
8. Direct a class discussion to clarify and correct work. Discuss key vocabulary terms that were new to the students.

Variations

- Instead of group posters, each group can research one category. Combine the efforts of each group to create a class poster.
- Instead of making posters, have each group use a large paper to design a floor game on food origins.

Extensions

- Have the students look through magazines or cookbooks to find a recipe or meal that includes food from each of the four categories. Make a class recipe booklet.
- Bring in various foods for the students to see, touch, taste, and smell. Use this opportunity to introduce the students to foods they may have never seen or eaten.

Scavenger Hunt

Grades 3-4

Purpose

Students critically examine grocery ads, use vocabulary acquired in the introductory lesson, sharpen math skills, and work cooperatively in pairs to learn about food and fiber production.

Time

Teacher Preparation:

20 minutes

Student Activity:

Two 45-minute class sessions

Materials

For each team of two:

- *Scavenger Hunt 1* activity sheet (page 12)
- Grocery ads (several)
- Sample grocery ads *optional* (pages 38–40)
- Scissors
- Tape

For each student:

- Paper on which to show mathematics work
- Pencil

Procedure

1. Gather at least 40 grocery ads for students to use. Many grocery stores and newspaper manufacturers will save ads for use in the classroom. If you wish, you may also photocopy the grocery ads on pages 38–40 and make them available to students.
2. Review mathematics vocabulary with your students. The terms they should understand include sum, difference, total price, product, place value in decimals, etc. Students will search through grocery advertisements to find a part of an advertisement that satisfies a particular problem on the scavenger hunt.
3. Organize students into pairs.
4. Have each team look through the grocery ads and find an ad that satisfies each one of the questions on the *Scavenger Hunt* activity sheet. Have the students cut out the ads (picture and price) and tape it (top part only) on top of the clue they think it satisfies.
5. Have each member of the team show, on his/her own paper, the mathematics required to prove the ads they chose do satisfy the clues. Emphasize that neatness and organization is required, so the work can be followed easily. Discuss that many of the problems require a sequence of calculations.



Note: The teacher should circulate among the groups as students work on the activity and discuss the mathematics necessary to substantiate the ad being chosen for the clue. Group papers (one *Scavenger Hunt* activity sheet with ads taped to it and individual papers) should be collected and graded for mathematical content.

Scavenger Hunt

Grades 3-4

Content Standards

Grade 3

English/Language Arts

Reading • 2.6

Mathematics

Number Sense • 1.0, 1.1,
1.3, 2.0, 2.4, 2.8 3.3, 3.4

Algebra and Functions

1.4, 2.1

Mathematical Reasoning

2.0, 2.3, 2.4

Grade 4

English/Language Arts

Reading • 2.2

Mathematics

Number Sense • 1.0, 1.1,
1.2, 2.0, 2.1, 3.0, 3.1, 3.2,
3.3

Mathematical Reasoning

1.0, 1.1, 1.2, 2.0, 2.3, 2.4

Variations

- Complete the activity as a class.
- Have one team correct another team's work.
- Use parent volunteers or "big buddies" to assist with reading clues or finding ads.



Scavenger Hunt I

Name(s) _____

- Instructions:**
1. Read the math problem.
 2. Find grocery ads you can use to solve the problem.
 3. Cut the ads out of the newspaper and tape the ads on top of the problem.
 4. Show your work in an organized fashion, on a separate sheet of paper.
- Be sure to write neatly and check your work!

1. Find a food that grows on a tree that costs less than a half dollar per pound.	2. Find a green food that you might put in a salad whose price has a nine in the hundredth's place.
3. Find the total price of two different canned vegetables you like to eat whose sum has a three in the ones place.	4. Find a fresh vegetable that costs more than three dimes per pound.
5. Find the price of two pounds of a yellow, orange, or green food that grows on a vine.	6. Find the total cost of two pounds of meat that comes from a steer and one pound of meat that comes from a pig.
7. Find a food made of potatoes whose total cost is over four quarters. Write the price as a decimal.	8. Find the difference in price between two different foods that grow underground.
9. Find the total cost of $\frac{1}{2}$ pound of a fruit whose price per pound ends in an even number.	10. Find a red or green food that grows on a tree. It must cost more than two nickels per pound, but less than nine dimes per pound.
11. Find the total price of three pounds of a fruit and one pound of a leafy vegetable.	12. Write, in words, the total price of three pounds of an underground vegetable.

Concluding Lesson

Grades 3-4

Purpose

In this activity, students will apply what they have learned about food to their daily lives by analyzing the foods they eat at a particular meal.

Time

Teacher Preparation:
10 minutes

Homework Assignment:
One 30-minute activity

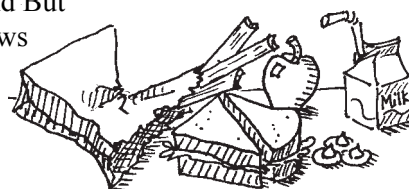
Student Activity:
One 45-minute class session

Materials

- *I Am What I Eat!* activity sheet – one per student (page 16)
- Overhead transparency of *Cherry Breakfast Bar* nutrition facts (page 41)
- Overhead transparency of *Meat Franks* nutrition facts (page 42)

Background Information

The nutrition fact labels of a food provide a variety of information that can be useful when determining the nutritional value of a product. The ingredients are listed in order of quantity. For example, the main ingredient in the cherry breakfast bar is wheat flour; the second ingredient is sugar and the third ingredient is cherries. If this were a food your student were to record on a chart, they would check three or more boxes—"Grows Above Ground But Not On a Tree" for the wheat, "Grows Underground" for the sugar, and "Grows on a Tree" for the cherries, etc.



This activity asks students to examine one specific meal and classify it into categories that they used in the introductory activity. If you feel an evening meal is not appropriate for your students to examine, have them analyze their breakfast or lunch meal. The idea is to have students take a closer look at what they are eating so they understand where their food comes from. At the same time, the students will be asked to think of how they could have altered their meal to make it more nutritious.

Preparation

1. Review the *I Am What I Eat!* activity sheet. If it will meet your needs, make one copy for each student. Otherwise, create an activity sheet that will be more suitable for your students.
2. Make overhead transparencies of the *Cherry Breakfast Bar Nutrition Facts* (page 41) and *Meat Franks Nutrition Facts* (page 42). Take advantage of talking with students about nutrition as you examine the food label examples.

Procedure

1. Ask the students to think to themselves what they ate for breakfast. On a sheet of paper, have them draw a picture of where they think their food came from. For example, if they drank orange juice, they would draw an orange tree. Allow five minutes for quick sketches.
2. Now display the *Cherry Bar Nutrition Label* on the overhead. Have students discuss what they see and discuss where the ingredients for this breakfast bar came from.

Concluding Lesson

Grades 3-4

Content Standards

Grade 3

Reading/Language Arts

Reading • 2.2, 2.6

Writing • 1.1a, 1.1b, 1.2

Written and Oral English

Language Conventions
1.0

Mathematics

Mathematical Reasoning

2.0, 2.3, 2.4

Grade 4

Reading/Language Arts

Reading • 2.2

Writing • 1.0, 1.2a, 1.2b,

1.2c, 1.2d, 1.2e, 1.4

Written and Oral English

Language Conventions
1.0

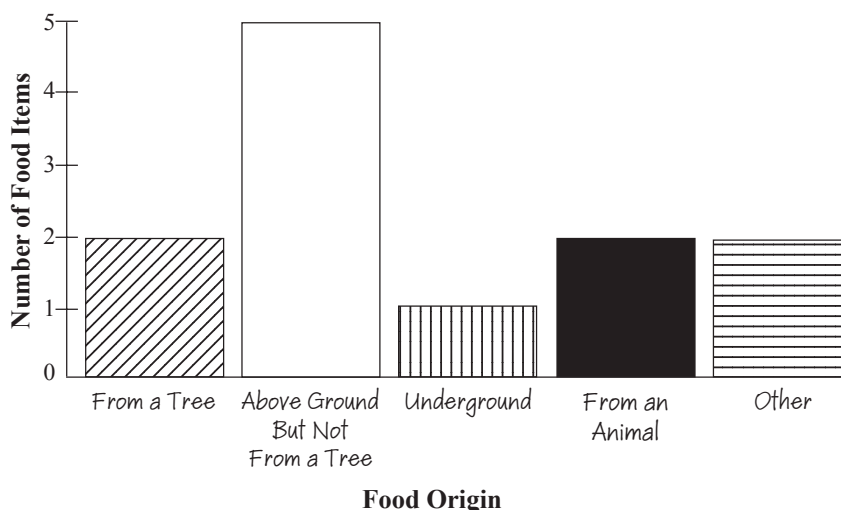
- Distribute the *I Am What I Eat!* activity sheet or the activity sheet you created. If they actually ate a cherry breakfast bar, ask the students what boxes they would check. This will lead into a good discussion on where food comes from. If appropriate, examine and discuss the amount of fiber, fat, calcium, and protein found in this product.

- Explain to the students that they will be collecting data on the food they eat for a particular meal. They will need to keep careful track of the foods they eat and drink. As they consume them, they are to write them down on the chart and then check the appropriate boxes. One food item may require several checks.



- Have the students make a bar graph of their individual data. The graph should contain the categories across the bottom on the horizontal axis (x-axis) and the quantity (number of entries in a particular food category) of food eaten on the vertical axis (y-axis).

Where My Food at Dinner Came From



- Have a class discussion on their findings. Sample discussion topics may include:

- Into which category does the majority of food you ate fall?
- Into which category does the majority of fruits fall?
- Into which category does your favorite food fall?

Concluding Lesson

Grades 3-4

7. In a well-written paragraph, have students write what they learned about where their food comes from. They should check their work for completeness in paragraph development, i.e. include a topic sentence, details to support thoughts, and a concluding sentence. They should also check for proper punctuation, spelling, and capitalization.

Variations

- Have students collect data for an entire day (24 hours) rather than for just one meal.
- Make a bar graph of the group's results.
- Have students write a report that includes a cover page, data, bar graph(s), and a conclusion.
- Have students compile data and generate graphs using a computer.

Extensions

- Have students compare bar graphs within their group and discuss or write reasons for the differences.
- Have students write stories or poems about growing food.
- Have students write thank you notes to local farmers for growing their favorite foods.
- Arrange for a farmer to visit your classroom to speak about his/her occupation.
- Visit a farmers' market and observe the variety of fresh food.

I Am What I Eat!

Grades 3-4

Name _____

Date _____

Instructions: List the foods you eat for dinner and dessert tonight. Place checks in the appropriate boxes. Bring this completed list back to class.

<i>Food</i>	<i>Grows on Trees</i>	<i>Grows Above Ground But Not on a Tree</i>	<i>Grows Underground</i>	<i>Comes From an Animal</i>	<i>Food of Other Origin</i>

Have You the Time of Day?

Skills: Math, Language Arts

Objective: Students will read a story about a day in the life of a farmer and gain practice reading and writing time.

Background

Farmers work hard. Many farmers have to get up very early to care for their animals or do other chores. On the dairy farm, the farmer's work day begins and ends with milking. On other farms, the farmer may begin working in the field at first light, take a break during the heat of the day, then go back to the field in the late afternoon.

Language Arts

1. Read aloud to your class the short story included with this lesson.
2. Provide students with a copy of Worksheet A, included with this lesson. The student will scan the story for the information, then put the hand in the correct position on the clock face.
3. Have each student write a picture story about his or her day. As students write their stories, have them draw clock faces showing what time of day each of the events occurred.

Math

1. Provide students with copies of Worksheet B. The student will draw the hands correctly on the clock face, rewrite the time, then write a.m. or p.m., whichever is correct.
2. Provide students with copies of Worksheet C. The student will fill in the clock faces to reflect his or her daily schedule, for example:
Wake up 6:30 a.m.
Recess 10:00 a.m.
3. Post a daily schedule somewhere in the classroom. Include all the important times (bathroom breaks, recess, etc.) Draw clocks with the hands in positions corresponding to the times you have posted.

Extra Reading

Lillie, Patricia, *When the Rooster Crowed*, Greenwillow, 1991.
Tresselt, Alvin, *Sun Up*, Lothrop, Lee & Sheperd, 1991.
Tresselt, Alvin, *Wake Up Farm!* Lothrop, Lee & Sheperd, 1991.

P.A.S.S.

KINDERGARTEN

Math—4.5

GRADE 1

Math—4.2a

Reading—6.1a

GRADE 2

Math—4.3a

Reading—5.1a,2a,4a; 7.1e

GRADE 3

Math—4.4

Materials

paper
pencils
crayons or markers

Name _____

Have You the Time of Day?



Read the story. Use the facts to complete the clock problems.

The day begins early on the farm. Farmer Smith is helping out this week at his neighbor's dairy. Farmer Brown's son usually helps with the milking, but he is away for a short vacation. While Farmer Brown's son is away the cows must still be milked.

Farmer Smith will get up at 4:30 a.m. He will be at the dairy and ready to milk by 5:30 a.m. The milk truck will come at 8:00 a.m. They must be finished milking and cleaning by then. After that Mr. Smith takes care of chores on his own farm. At 11:00 am, he eats lunch.

Mr. Smith got a new tractor last year. It has a cab with an air-conditioner, so Mr. Smith can work during the heat of the day. At 2:00 p.m., when the sun is hot, Farmer Smith goes out to bale hay.

Farmer Smith will stop at 4:30 p.m. to go help Farmer Brown milk. He will eat dinner at 7:00 p.m. with his wife, then go back to the hay field. The Smiths will be in bed early tonight, probably by 9:30 p.m. It has been a long day, and the new day will begin early on the farm.



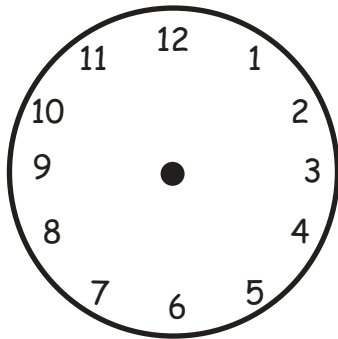
Name _____

Have You the Time of Day?

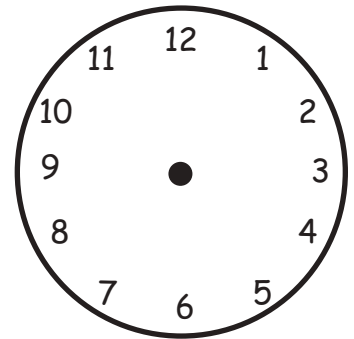
A

Draw the hands on the clock, using the story as a guide.

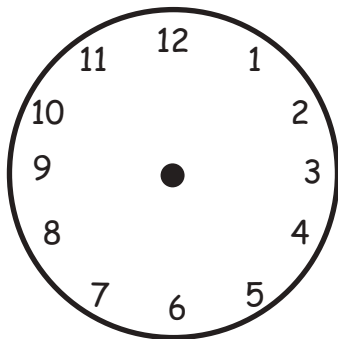
What time did Farmer Smith get up?



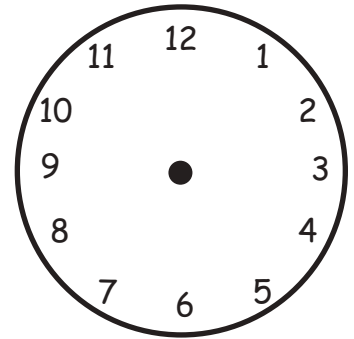
When did milking begin at the dairy?



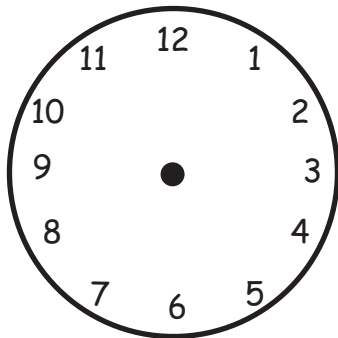
What time did the milk truck come?



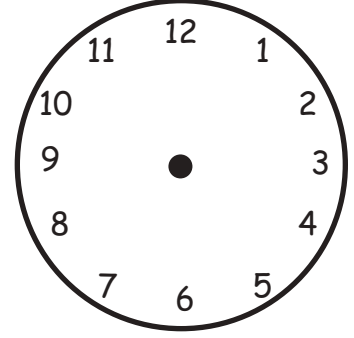
When did Mr. Smith eat lunch?



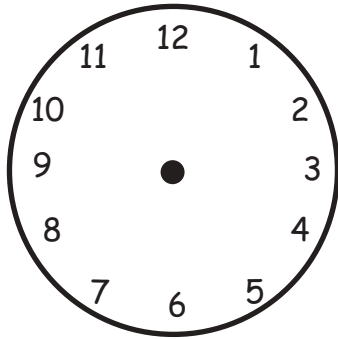
What time does Farmer Smith go out to bale hay?



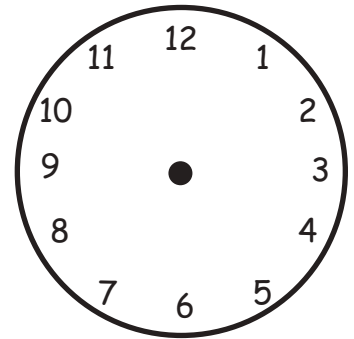
What time does Farmer Smith stop to help Farmer Brown milk?



What time did the Smith family eat dinner?



When did the Smith family go to bed?



Name _____

Have You the Time of Day?

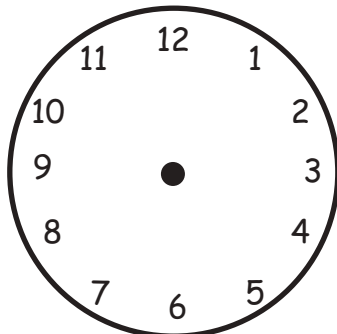
B

Draw the hands on the clocks. Write the times.

Get up.

4:30 a.m.

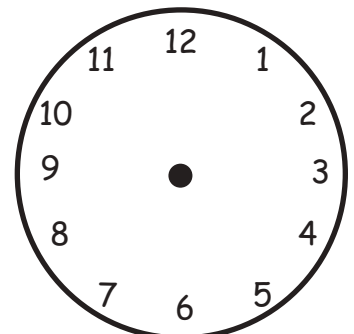
____:____



Milk.

5:30 a.m.

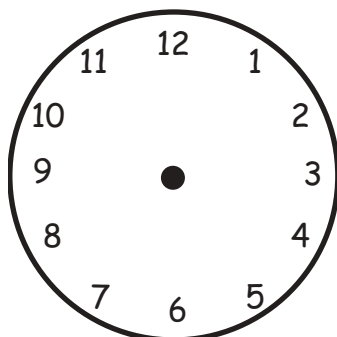
____:____



Meet milk truck.

8:00 a.m.

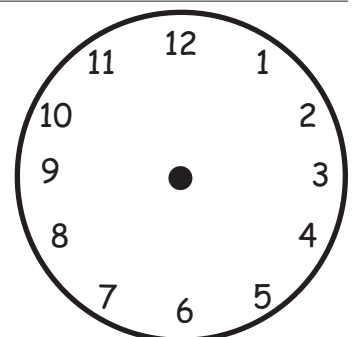
____:____



Eat lunch.

11:00 a.m.

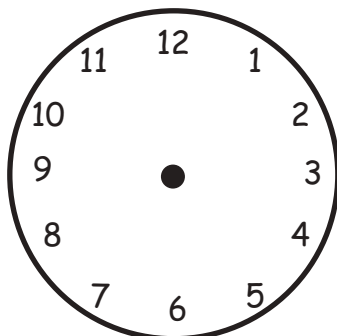
____:____



Bale hay.

2:00 p.m.

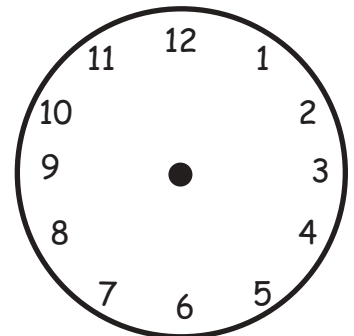
____:____



Milk.

4:30 p.m.

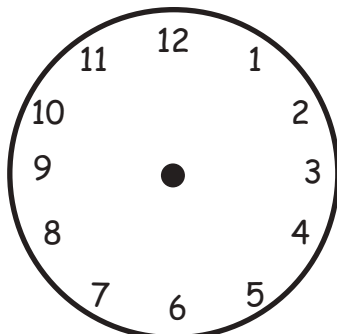
____:____



Eat dinner.

7:00 p.m.

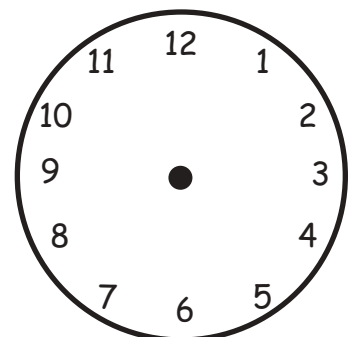
____:____



Go to bed.

9:30 p.m.

____:____



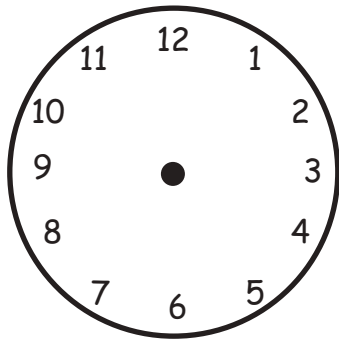
Name _____

Have You the Time of Day C

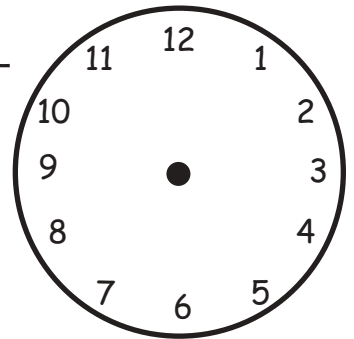
Write the times you do things in your day. Draw the hands on the clocks, then write the times.

Wake up.

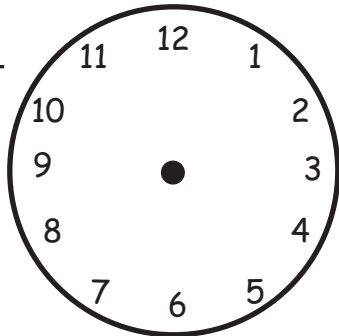
____:____



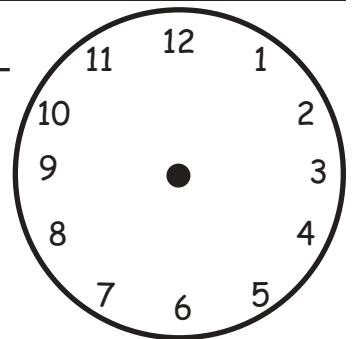
____:____



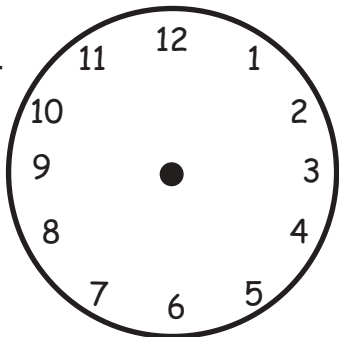
____:____



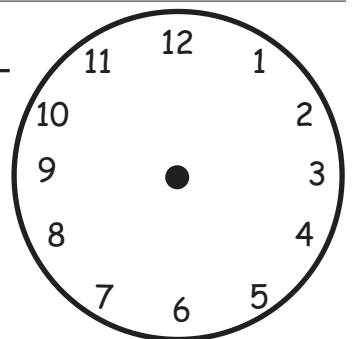
____:____



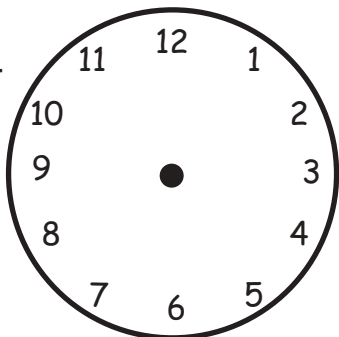
____:____



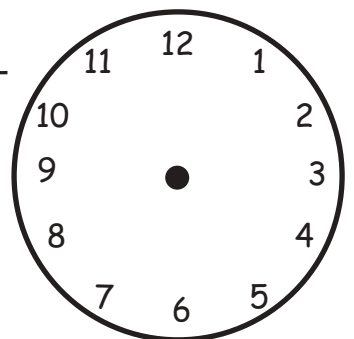
____:____



____:____



____:____



Who Gets Your Food Dollar?

Attention Getter...

Bring in a grocery sack with various food items inside. Take them out one at a time and ask the students how much each cost? Write on the board their guess, and the actual cost.

Next...

Ask your students; **"Where Does Your Food Dollar Go?"** Write on the board all of your students' responses, including the following items: farmers (farm value or return to the farmer), laborers (the money paid to people for processing, wholesaling, and retailing), packaging (food containers, wrappers, etc.), transportation (railroads and trucks), and advertising. There are other costs noted in the American Farm Bureau Farm Facts brochure. (Order copies from www.agclassroom.org/ut.)

Then...

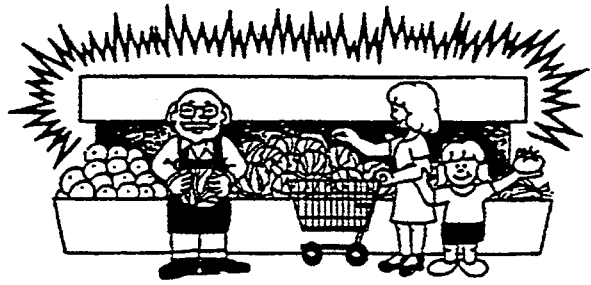
Using either play money or copies of the dollar given, and a pair of scissors, ask the students to estimate and cut off the amount of each dollar they think a farmer receives. This is a good time to incorporate some math skills: half a dollar is 50¢, a quarter of a dollar is 25¢, etc. The correct cut should be slightly less than a quarter (19¢). Using the American Farm Bureau Farm Facts brochure, discuss with the students where the rest of their food dollar goes.

The Extra Step...

Using the actual costs of the food items you brought in for an attention getter, ask the students to calculate how much the farmer received for each product. Simply take the cost of the item and multiply it by .19; this will be an estimate. Products such as macaroni and cheese have very little farm input but a huge labor and packaging input; conversely a steak has less labor and fewer packaging costs and returns more to the farmer.



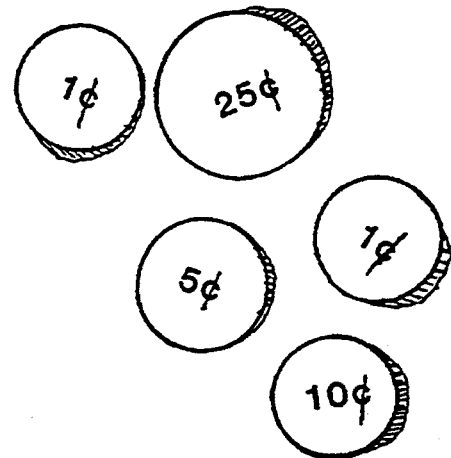
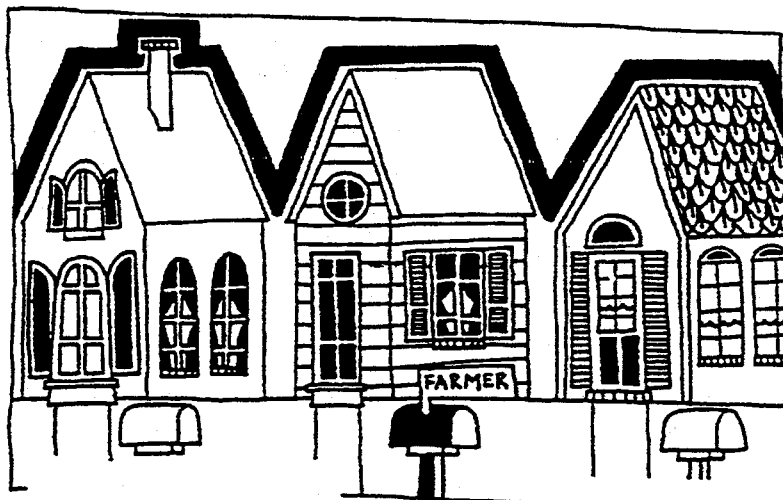
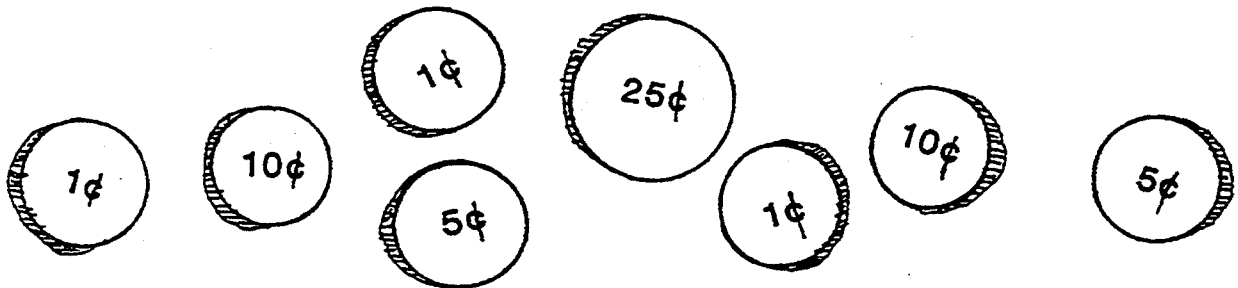
SEND THE FARMER'S SHARE HOME



FOR EVERY \$1.00 YOU SPEND ON FOOD,
22¢ GOES BACK TO THE FARMER.

Below is \$1.00 in change.

Can you send the farmer's share of that dollar back to his house by circling the coins which total 22¢?



How much is left?

Where do you think this goes?

How Much of the Food Dollar Does the Farmer Receive?



* Other costs include property taxes and insurance, accounting and professional services, promotion, bad debts and many miscellaneous items.

Adventures Around the Farm

Science

Lessons with standard and brief synopsis

1. What is a Farm? The Farm Charm – 12.E, 13.B.
Students will learn about the importance of agriculture in our lives and the need to protect the environment.
2. How Many Hats Does a Farmer Wear – 13.B.
Students explore careers and learn about the various skills needed by farmers.
3. Butter Making - 11.A, 12.C, 13.B.
Students will make butter as they learn about the dairy industry.
4. Farm Equipment - 11.B, 13.B.
While learning about farm equipment, students will describe what life would be like without modern machinery and try to invent a new type of farm equipment.
5. Mighty Machines - 13.B.
Students learn about farm equipment and test their memory of the machinery.
6. Now You Have It, Now You Don't - 12.E, 13.B.
Students learn how new products can help our environment.
7. Where does food come from? – 13.B.
Students explore the source of food products.

*****NOTE: Many of the lessons in other disciplines also align with the Science standards.**

Illinois State Goals

- 11: Understand the processes of scientific inquiry and technological design to investigate questions, conduct experiments and solve problems.
- 12: Understand the fundamental concepts, principles and interconnections of the life, physical and earth/space sciences.
- 13: Understand the relationships among science, technology and society in historical and contemporary contexts.

Illinois State Learning Standards

- 11.A. Know and apply the concepts, principles and processes of scientific inquiry.

- 11.B. Know and apply the concepts, principles and processes of technological design.
- 12.C. Know and apply concepts that describe properties of matter and energy and the interactions between them.
- 12.E. Know and apply concepts that describe the features and processes of the Earth and its resources.
- 13.B. Know and apply concepts that describe the interaction between science, technology and society.

What is a Farm?

Objectives

1. Students will describe a farm as a place where either crops or livestock are raised to be used as food, clothing and other products we need to live our everyday lives.
2. Students will define the words “crops” and “livestock.”
3. Students will list resources that are necessary on a farm.
4. Students will name crops and livestock that are raised on Illinois farms.

Materials

- Farm-related posters
- Farm toys
- If It Weren't for Farmers book
- Farm Charm supplies (see “The Farm Charm” activity page)

Method

1. Ask the children:
 “What is a farm?”
 “What do you think you would see if you visited a farm?”
List answers on the board.
2. Read and show all or portions of the book If it Weren't for Farmers. Emphasize the following points:
 - Farmers are the people who raise crops or livestock for our use. Farmers generally live where they work– on the farm.
 - Crops are the plants farmers raise for food and other products. Corn, soybeans, wheat, apples, pumpkins, oranges, peanuts, etc. are all crops.
 - Livestock is the term used for the animals farmers raise. Cattle, pigs, chickens, etc. are called livestock.
 - Neither plants nor animals can survive without water and soil.
 - Farmers use machines such as tractors, planters, and combines, to help them do their work.
 - Modern farms usually raise a few specific crops and/or livestock. For example, poultry farms raise chickens; orchards raise apples or other fruit, etc. Real working farms are not like “Old MacDonald’s Farm” in which there were many different animals. In Illinois, most farms raise mostly corn and soybeans, and some raise cattle or pigs.
3. Explain to the children that they will make a special necklace that reminds them how important farms are and what can be found on a farm. Demonstrate how they will make their charm by adding a pinch of each item to the bag, then closing the bag and attaching yarn to the bag. Make sure the children understand what a “pinch” of material means (not very much!). Explain that each item added to the bag is a reminder of something they might find on a farm.

4. Have the containers of charm materials lined up on a table with the labeled lids placed near each one. Station an adult at the table to help the children as they assemble their charm. It may help to station a second adult at the end to help attach the yarn to each finished charm.
5. Once all the children have made their charms, close the lesson by challenging them to explain why we need farms. Ask them to name things a farm needs or produces. Encourage them to look at their farm charm for reminders.
6. Closing & Reflection: Once all the children have made their charms, close the lesson by challenging them to explain why we need farms. Ask them to name things a farm needs or produces. Encourage them to look at their farm charm for reminders.

The Farm Charm

Introduction

Farms are the primary source of our food, shelter, and clothing. Farms depend on land, which is a non-renewable resource. Once it is gone it is impossible to obtain more. People that own and work the land—our farmers—are aware that our land is our environment. They strive to protect the land for their families and future generations.

The Farm Charm reminds us of the importance of farms in our lives and the need to protect our environment. Each item in the charm represents something you might find on a farm.

The Activity

Fill a series of containers with the following Farm Charm Contents (listed in parentheses). Label the lids with names of the farm features each item represents. Place or prop the labeled lids near each container during the activity.

Each child will drop a pinch of each item into a small zip-close bag with a hole punched in the top. String yarn through the hole to make a necklace with a “farm charm.”

Materials

- ! Containers with lids
- ! Zip-close bags approximately 3" x 4" in size
- ! Yarn, cut into 26" - 30" inch lengths
- ! Items that represent things found on a farm (listed in parentheses, below)

Farm Charm Contents and Significance

Soil (potting soil) is the basis for growing plants and animals. To remain productive soil must be protected from erosion, over-farming, and too many buildings.

Soil organisms (red shredded paper) are tiny plants & animals such as worms and beetles that live in soil and break down organic matter.

Organic matter (floral moss) is decaying plant & animal matter that improves water absorption & feeds soil organisms.

Water (blue shredded paper) is essential for plant or animal life to exist. Clean water must be conserved for us to have what we need.

Sunlight (gold confetti) supports plant growth and all life on Earth.

Plants (apple/pumpkin confetti) are the crops, trees, or grasses that provide us with food, oxygen, and soil erosion control.

Corn (corn kernels) is an important crop that feeds humans & animals and is made into hundreds of useful and renewable products.

Soybeans (soybeans) are also an important food for humans & animals and are made into many other safe and renewable products.

Fertilizers (rock salt) are plant nutrients, such as nitrogen, obtained from Nature. There is no such thing as a man-made fertilizer.

Crop protectants (flour), or pesticides, ensure healthy plants by controlling weeds or insects. Integrated Pest Management (IPM) & improved chemicals allow farmers to use less, and safer, pesticides.

Animals (farm animal confetti) provide us with food, clothing, medications, and many other products.

How Many Hats Does a Farmer Wear?

Background Information

Though only 2 percent of the American people are needed as farmers today, about 20 percent are involved in the agricultural industry. More than 22 million Americans now work in agriculture and ag-related fields. Here are some agricultural career areas.

Agricultural Production - agronomist, animal breeder, aquaculturist, beekeeper, mushroom grower, peanut producer, rice farmer, tree farmer.

Agricultural Processing/Distribution - Christmas tree grader, food and drug inspector, fruit distributor, grain broker, meat cutter, quality control supervisor, machinery supervisor.

Agricultural mechanics/Engineering - ag construction engineer, diesel mechanic, equipment operator, land surveyor, machinist, parts manager, soil engineer, welder.

Agribusiness - aerial crop duster, ag equipment dealer, animal groomer, computer analyst, farm auctioneer, feed ration developer, fertilizer plant supervisor, field sales representative, kennel operator, poultry hatchery manager, salesperson.

Resource Management - animal ecologist, environmental conservation officer, forest fire fighter, forest ranger, game warden, ground water geologist, soil conservationist, water resources manager.

Agricultural Research/Health Sciences - animal nutritionist, avian veterinarian, biochemist, botanist, entomologist, food chemist, plant geneticist, pomologist, veterinarian.

Horticulture/Forestry - floral designer, forester, golf course superintendent, greenhouse manager, landscape architect, log grader, turf producer.

Ag Specialist - ag accountant, ag corporation executive, ag educator, ag journalist, ag lawyer, ag loan officer, ag market analyst, computer specialist, farm investment manager, rural sociologist.

A farm or ranch background certainly isn't a requirement for any of these careers. Instead, the various careers demand different training, skills, desires, and needs. These professions are so diverse, there's a career to satisfy almost everyone somewhere in agriculture.

Materials

- ☒ Worksheets, pg. 24 & 25, one each for every student
- ☒ Scissors
- ☒ Metal clasps
- ☒ Crayons or markers

How Many Hats Does a Farmer Wear?

Worksheet Instructions:

How Many Hats Does a Farmer Wear?

Photocopy the two pages with three circles for each student. Do not photocopy front and back. Have the students cut out all three circles and fasten them in the center with a brad. Make sure the largest circle is on the bottom and the smallest is on top. The students will be able to spin all three circles separately. Ask the students to find a hat on the middle circle and put it on the farmer's head. Then try to find the words which best describe what the farmer does when wearing that hat. Why is it important for a farmer to have a basic understanding of all these careers? What other careers must a farmer use? Do you know people in your community who specialize in any of these eight career areas?

Answer Key:

Veterinarian - Must be able to recognize early signs of disease in animals; assist at birth of animals; administer medicine to sick animals.

Engineer - Must know how to plan and construct fences and buildings; build irrigation ditches and control the flow of water; use natural resources to grow products useful to man.

Mechanic - Must be able to operate and maintain both simple and complicated machinery; make repairs and keep machines in good working order.

Business Manager - Must be able to balance accounts; sell farm produce to the market; must be responsible for making payments and meeting payrolls; must keep track of equipment, products, and land.

Nutritionist - Must know how to prepare feed rations for best growth and production of livestock.

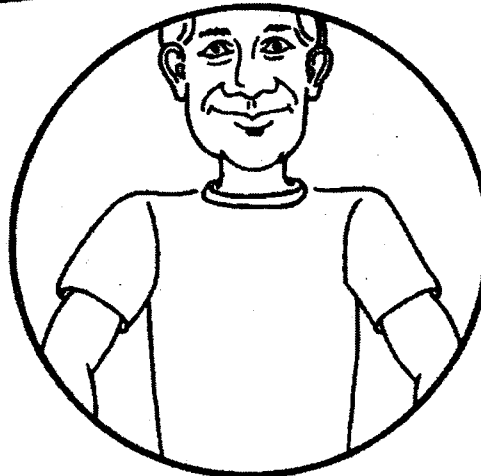
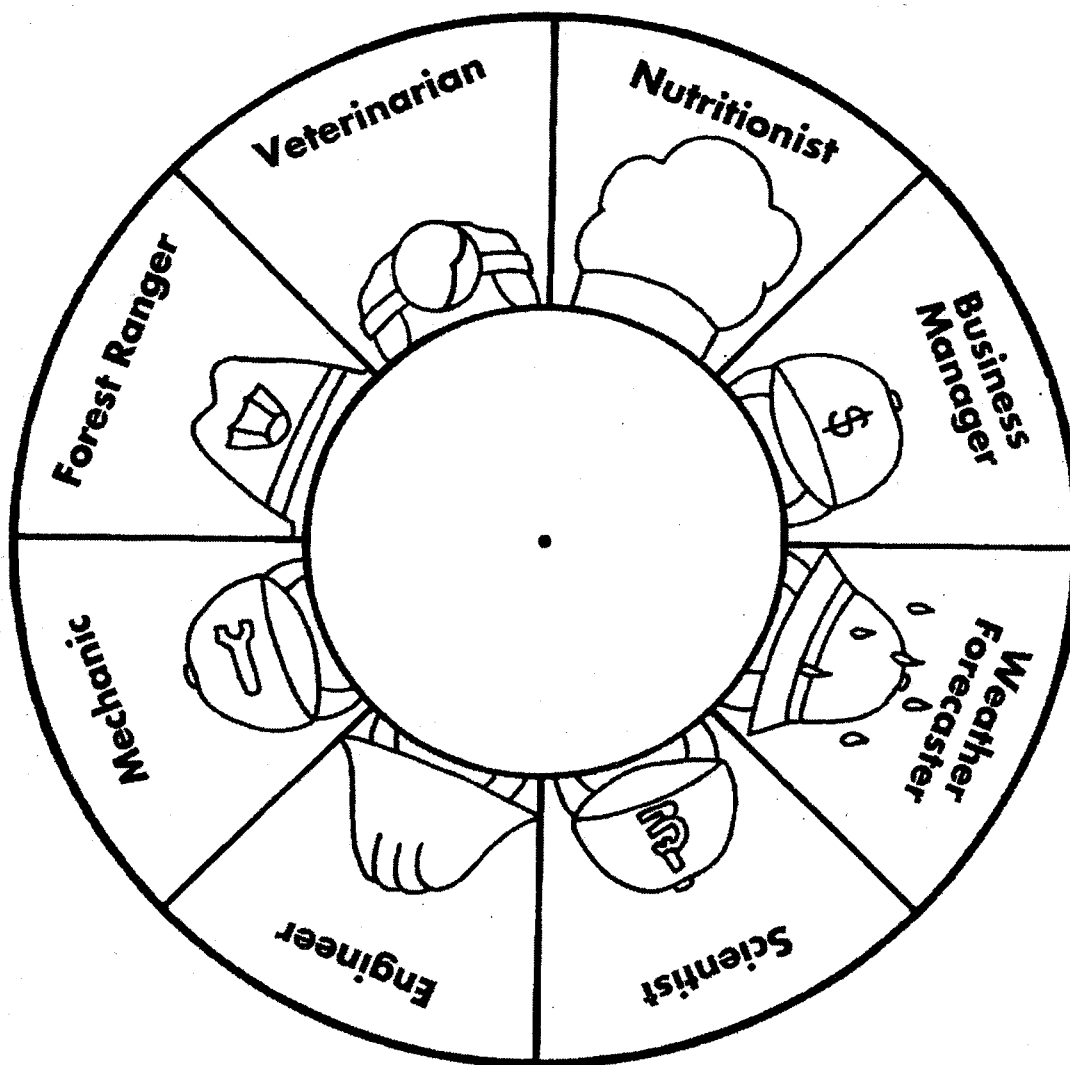
Forest Ranger - Must be able to recognize the various kinds of trees; detect fires and know the methods for controlling them; clear trees from land and prevent soil erosion.

Scientist - Must understand soil composition and determine the best fertilizer and seed for largest production; the effect of chemicals on animal and plant life.

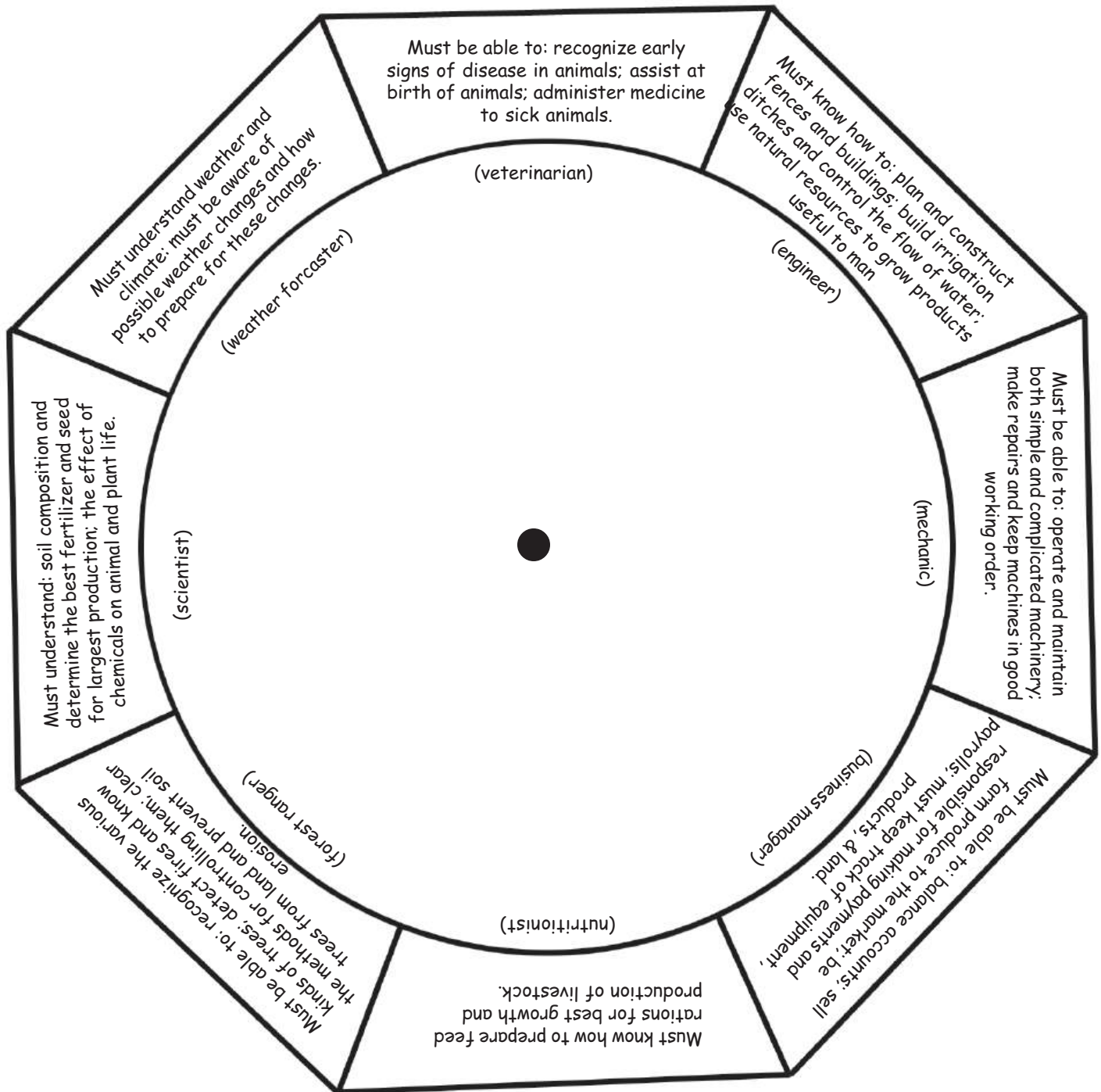
Weather Forecaster - Must understand weather and climate; must be aware of possible weather changes and how to prepare for these changes.



How Many Hats Does a Farmer Wear?



How Many Hats Does a Farmer Wear?



Butter Making



Objective:

Students will learn how to make butter.

Grade Level: K-3

Groupings: Two or three groups, 8-10 students per group

Materials: An old-fashioned butter churn or picture of one. Per group: whipping or heavy cream at room temperature, approximately one cup or a half pint; plastic peanut butter jar or other container that seals securely; two or three marbles; colander; bowl; wooden spoon; butter knife; crackers; small paper cups.

Time Allotment: 20 minutes

Directions:

An hour before beginning this activity, remove the cream from the refrigerator. Cream at room temperature will turn into butter more quickly than cold cream.

1. Tell the students that many food products are made from milk. Ask them to list as many as they can. Explain that you will be reading a few riddles and they need to guess which milk product you are describing.

*Cold and creamy,
A frozen treat,
In a cone or a shake,
It can't be beat! (Ice cream)*

*A thick, tart, custard,
Fruit flavored or plain,
Curdled and cultured,
With a funny name. (Yogurt)*

*Rich, creamy, yellow,
Salted or sweet,
On toast or corn,
It's good to eat. (Butter)*

2. Explain they will get a chance to make their own butter. Ask the students how they think butter is made. What ingredients are needed? Record their ideas. Show them an old fashioned butter churn or a picture of one. How was it used? What did it do?

3. Divide the class into two to three groups of eight to ten students each. Give each group a half-pint of cream, a plastic peanut butter jar and two to three clean marbles. Direct them to add the cream and marbles to the jar and fasten the lid securely. Ask the students why marbles are put in the container with the cream.

4. Now it is time to begin shaking. Have one student in each group shake their jar and ask everyone to



Extensions:

- a. *Do From Farm to You* (page 37) using only dairy products. Have the students use their descriptive words and phrases to make short poems or riddles similar to those used at the beginning of this activity.
- b. Make several flavored butters to sample. Honey butter is made by adding some honey to your butter. Try raspberry butter and add fresh or frozen raspberries and a bit of sugar. Chill them in small crocks and serve with homemade bread or rolls. You can even make bright red tomato butter that tastes great on corn on the cob by mixing 1 tablespoon of tomato paste to 1/4 lb. of butter.
- c. Have the students chill their butter in old fashioned butter molds. Or have them decorate their butter with sprigs of fresh herbs, clover or edible flowers. Invite another class or parents in for a sample.
- d. Try making yogurt or ice cream with your class.

Directions: (continued)

listen to the sound of the cream and marbles in the jar. What do they think will happen to the sound as the cream begins to thicken? Ask the students to predict how long it will take to make butter. Have each group record their predictions and starting time.

5. Since it can take 5-10 minutes to make a batch of butter, teach the class a traditional butter making song to sing while shaking (see **Butter Cake** page 51). Explain that as the butter was passed from child to child they sang this song, changing the name each time. When the next verse begins, the jar is passed to another student who continues the shaking. Or teach the class a more lively modern song, **Shake It!** (page 51), passing the jar after each chorus. Take breaks periodically to listen to the sound of the marbles in the jar. When do they notice a difference in sound? You can also turn the process into a competition to see which group can make butter first.

6. When the students see a lump of butter surrounded by a thin liquid, have them record the finish time. Ask whether they know the name of the liquid that is formed when making butter? (Buttermilk!) Direct the students to place a bowl beneath a colander and carefully pour the buttermilk off. Pour the buttermilk into another container and chill it for tasting later.

7. With the colander over the bowl, have the students wash the butter by pouring cold water over it to rinse off any traces of buttermilk. Direct them to gently press the butter against the side of the colander with a wooden spoon to be sure all the water is out. Then have them place their butter in a small bowl. A half-pint of cream will make approximately a quarter of a pound of butter.

8. Now it's time to enjoy the taste of fresh homemade butter. If the students will be eating the butter on salted crackers, they do not need to add salt. Otherwise, each group can add a pinch of salt and mix it into the butter.



ALL BUTTERED UP

How would you like a cluster of fat globules spread on your breakfast toast? Doesn't sound very appealing first thing in the morning, does it? Yet a piece of buttered toast is just that. Butter is made from cream which is liquid milk high in butterfat. The percentage of butterfat varies among the different types of milk and cream you buy. Whole milk has 4% butterfat, whereas heavy cream has at least 36% butterfat. That's why it's so thick and rich. Butter is made by shaking or churning cream. The butterfat particles in cream are wrapped in a coating or membrane. When you shake the cream, you break the coating around these fat particles, and they start to stick together. As you continue shaking, the particles completely separate from the liquid in the cream and form larger and larger fat clusters. When most of these fat particles are stuck together, you have a lump of butter floating in a sea of buttermilk. Just pour off the buttermilk (chill it to enjoy later), then dip your knife into some fresh creamy butter.

BUTTER CAKE

*Come butter come
Come butter come
(Student's name) is at the garden gate
Waiting for a buttered cake
Come butter come*

SHAKE IT!

(Sung to the tune of the "I Have Something in My Pocket" or the "Brownie Smile Song." Post the verses on the wall for the class to follow.)

*We're going to make some butter,
Rich and creamy too,
With milk from a cow's udder
Before you can say moo.*

Chorus:

*So shake it, shake it, shake it,
Shake it if you can
Shake it like a milkshake,
And shake it once again.*

*Put some cream into a jar,
You can add a marble or two,
Make sure the lid is on tightly,
That's all you have to do.*

Chorus

*We're learning while we're churning,
Hey this is lots of fun!
It's easy to make butter,
Let's eat it when it's done.*

Chorus

*Oh listen very carefully,
It's sounding different now,
Hooray it's finally butter!
Be sure to thank the cow.*

Chorus

Better Butter

Grade Level: K-3

Approximate Length of Activity: 30 minutes

Objectives:

Teacher:

Have children see a natural food source, such as whipped cream, processed into a topping for food, such as butter.

Students:

Observe the process of changing one food form to another, such as a liquid to a solid.

Illinois Learning Standards: 11.A.1a; 12.C.1b; 13.B.1c; 13.B.1d

Introduction:

With just about 1650 dairy farms in Illinois, 122,000 cows provide many dairy products for us to eat. Milk, cheese, yogurt, ice cream, and cottage cheese are items to choose from to get the two to three recommended daily servings of dairy products.

Butter is made from butterfat from the cream and milk of dairy cows. After cows are milked, the milk travels to a refrigerated tank through pipes. An insulated truck comes to the farm and hauls the milk to a dairy plant. After the milk is tested for safety, it is homogenized, pasteurized, and packaged. Milk can also be made into butter, cheese, yogurt, ice cream, or other dairy products. Milk products are stored in a refrigerated room and are then taken to a grocery store for you! Some countries use the butterfat from goats, horses, reindeer, sheep, and other animals to make butter.

Butter used to be made by putting cream into a butter churn. Butter churns were big containers with a pole in the middle. People pulled the pole up and down to churn the cream into butter. Nowadays butter can be made by using various machines. First, cream is pasteurized to kill bacteria and prevent spoilage. Next, the cream is churned, or mixed. Finally, the butter is packaged. Butter is about 80 percent butterfat, 16 percent water, three percent salt, and one percent curd of milk. Products such as butter oil, whipped butter, and cooking oil can be made from butter.

Historians are not sure when butter was first made, but they do know that it was made from water buffalo milk as early as 2000 B.C. The first creamery to make high amounts of butter was in Orange County, New York, in 1856. The use of butter was at its highest during the 1920s and 1930s, before margarine became a popular substitute. The average American today consumes four pounds of butter each year.



Materials Needed:

- Liquid whipping cream
- Clean baby food jars & small ziplock bag (one per group)

Activity Outline:

1. Talk about where milk comes from and how milk is made into many products, such as butter.
2. Go through the safety procedures and importance of cleanliness with students.
3. Group children into twos or fours.
4. Discuss the whipping cream in its liquid form and let the children know that a change will be taking place with the whipping cream.
5. Pour whipping cream into baby food jars until half full.
6. Let the students screw on lids. Before shaking, the teacher should check to make sure the lids are securely closed. For safety, place jar in a ziplock bag and seal.
7. Have the children take turns shaking the jar to “churn” the cream. Have them shake the jars until they can no longer hear the liquid moving. The teacher should check the jars to see if the cream has separated into milky liquid and creamy solid butter.
8. Help the children carefully pour off the liquid. Serve their homemade butter on bread or crackers.

Discussion Questions:

1. Where does milk come from?
2. What other products can be made from the milk/or what other foods have milk in them?
3. Are there other ways of changing food into a different kind?

Related Activities:

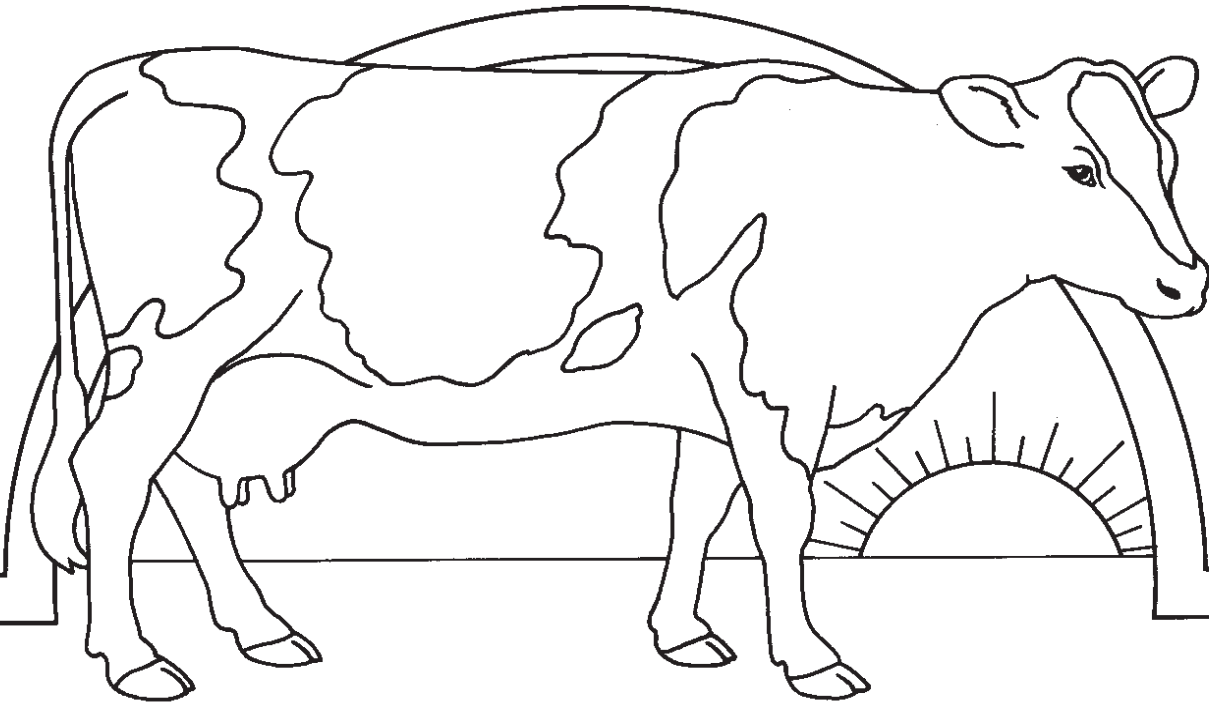
1. Included in this lesson are three handouts/worksheets entitled “Cows Make Milk for You and Me,” “From Farm to You,” and “From Farm to You Activities,” from the American Dairy Association of Illinois. You may copy the pages for use in your classroom.
2. Compare the taste and color of purchased butter, which has salt and sometimes food coloring added, to “better butter.”
3. Show pictures of old churns and new ones.
4. Create a hands-on unit based on dairy products.
5. Teach a lesson about cows and how they can turn grass into an edible product for humans. Cows have four stomachs to help them digest foods we cannot.

Other Resources:

1. *Dairy Foods Fun Book, Swiss Valley Farms*. Wisconsin Milk Marketing Board, Inc. 8418 Excelsior Drive, Madison, Wisconsin 53717. (10 cents each.)
2. *The Calcium Story*, American Dairy Association of Illinois, 1 West Front Street, El Paso, IL 61738. (Free if stated use for in class.)



Cows Make Milk For You and Me



When a cow is born it is called a calf.

A calf weighs about 100 pounds.

A cow weighs about 1500 pounds.

Cows come in all colors: red and white, red, black and white, brown, brown and white, and golden brown.

The black and white cows are called Holsteins.

A cow eats 90 pounds of food each day.

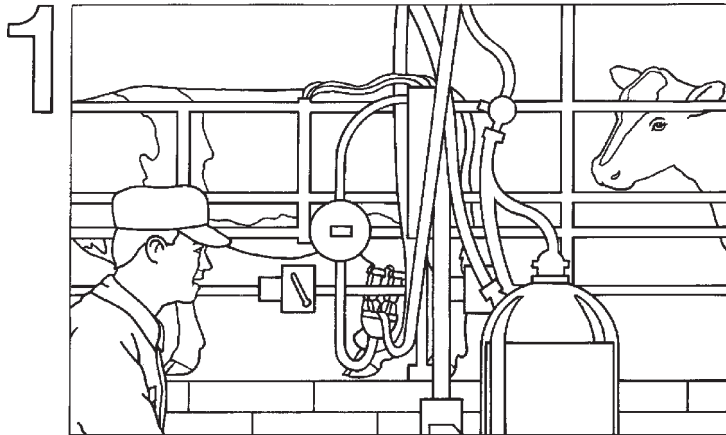
A cow drinks 25 to 50 gallons of water each day.

A cow makes milk from food and water she eats.

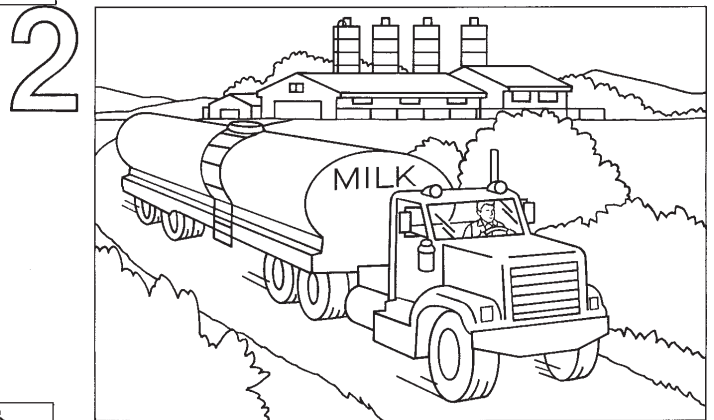
A cow gives 100 glasses of milk each day.



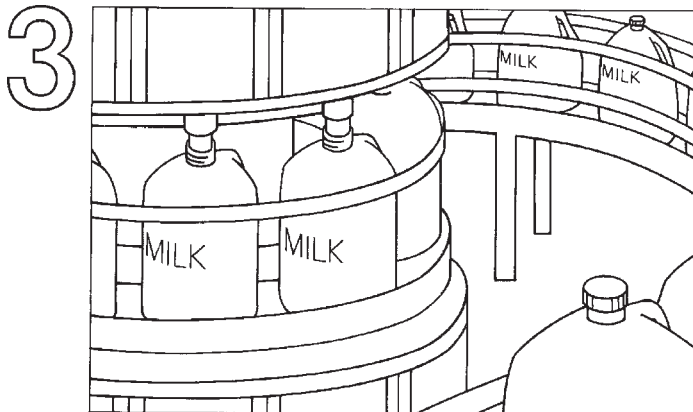
From Farm to You



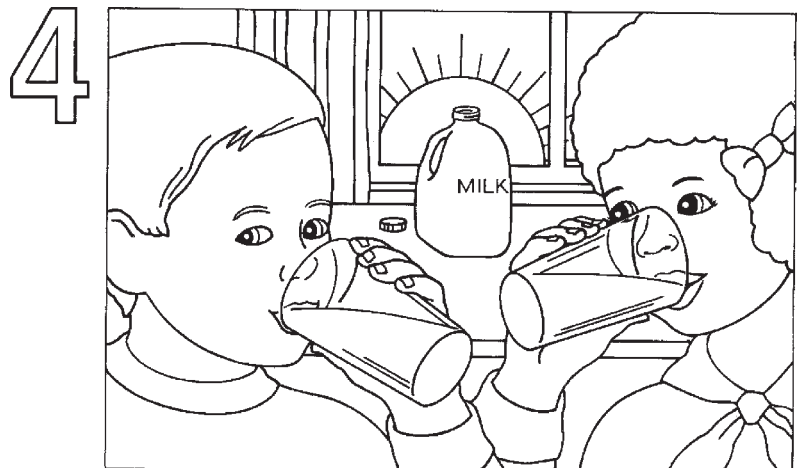
The cow is being milked.



A truck takes the milk from the farm to the dairy plant.



The milk is heated, cooled and placed in containers at the dairy plant.



**Now, the milk is ready for you to drink.
Drink 3 glasses of milk every day.**

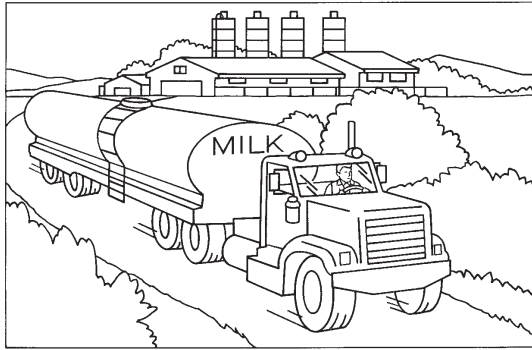


American Dairy Association
of Illinois

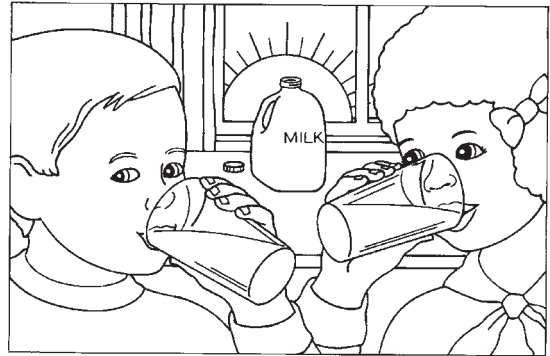
From Farm to You Activities

How do you get milk to drink?

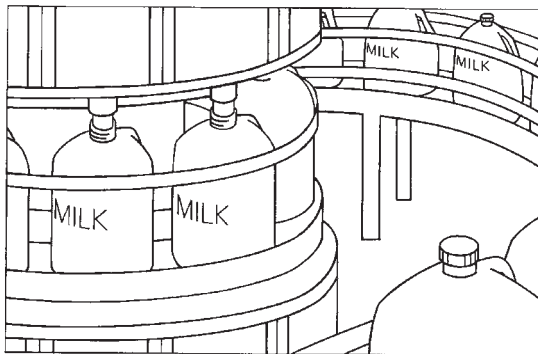
Number the pictures in order 1, 2, 3, and 4.



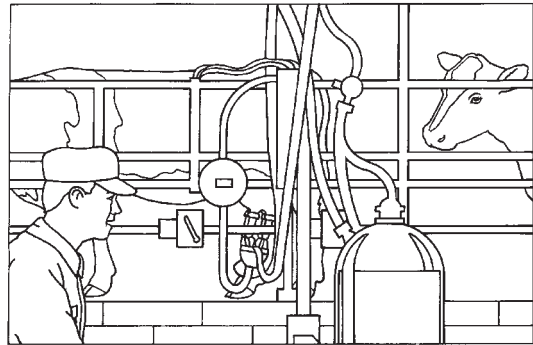
From farm to dairy plant



Milk for you

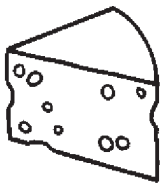


Dairy plant



Milking

These foods are made from milk. Fill in the vowels to name the foods.



ch__s__



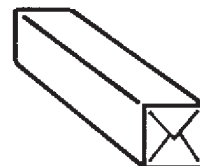
c__t__g__
ch__s__



y__g__rt



c
cr__m



b__t__r



Farm Equipment

Grade Level: K-3

Approximate Length of Activity: 45 minutes

Objectives:

Teacher:

1. Provide information about types of farm equipment.
2. Emphasize how farm equipment makes farmers' jobs easier.
3. Encourage creativity in inventing a new type of farm equipment.

Students:

1. Learn how farm equipment helps farmers.
2. Learn how different types of equipment work.
3. Describe what farm life would be like without modern machinery.
4. Invent a new type of farm equipment.

Illinois Learning Standards: 11.B.1b; 13.B.1c; 13.B.1d; 17.C.1a; 17.C.1b

Introduction:

Farmers use many types of machinery and equipment to help them with their job. Some of the equipment and machinery that farmers use are tractors, combines, planters, mowers, tractor loaders, hay balers, and spreaders. These are not all of the pieces of equipment/machinery that some farmers need. The type of farming that a farmer does will determine what type of equipment and machinery he or she needs. The equipment and machinery used today help grain and livestock farmers produce better quality products in larger amounts. This means that one farmer can feed more people now than ever before.

Here are some of the pieces of equipment or machinery that farmers might need:

Plow/Disk Harrow – Plows, disk harrows, and cultivators can be used to prepare soil for planting. They dig, or till, the soil so the soil may receive adequate air and water.

Combine - Since the 1930's farmers have used machines called combines to pick the grain from the fields, also known as harvesting. A combine is a machine that separates grain from stems as it cuts a crop in the field. As combines cut the grain out of the field, it also removes the corn kernels from the cob and the soybeans from the pods. Then the combine stores the crop in a big tank that is part of the combine. When this tank gets full, the auger, which is a long arm on the side of the combine, moves the crop from the storage tank and dumps it into a truck or wagon.



Irrigation System – Irrigation systems give crops extra water when there is not enough rainfall to produce the best crops. One type of irrigation is surface irrigation which carries water through canals from bodies of water to holding ditches to the crops. Another type of irrigation is sprinkler irrigation, which pumps water from a well into a sprinkler that waters the crops.

Spreader – A spreader is a piece of equipment that spreads fertilizer onto the crops. Fertilizer contains nutrients that help crops grow.

Hay balers – A hay baler is a machine that rakes the straw or hay and packs it together into round or square shapes. Hay balers also put twine around the bale and drop it back onto the ground in the field.

Feeders – Automatic feeders have made feeding animals easier. The feed is mixed by a grain-O-vator and then sent to the animals on a conveyor belt. Some large feed mixers can weigh two tons when they are full. Automatic feeders are used for feeding chickens. The feeders have windows that automatically open to feed pans and allow the chickens to eat.

Sprayer – Sprayers spread liquid crop protection products to reduce insects and weeds. Sprayers usually have booms, which are arms that spray the crops. Some sprayers have booms that are 60 feet wide!

Milking Machine – Milking machines are used by dairy farmers. The machines milk the cows using a suction system and transport the milk to the bulk milk cooler through pipes. Milking by hand, a farmer would spend 2 and a half hours milking 20 cows. With milking machines, a farmer spends only 15 minutes milking 20 cows.

Grain Tank – These tall metal tanks hold animal feed and keep it fresh for a long period of time. Most grain tanks today can be activated to drop feed onto a conveyor which feeds the animals.

Bulk Milk Cooler – Bulk milk coolers keep milk cold until the dairy company comes to transport it to the dairy plant. Some milk coolers can hold up to 8000 gallons of milk.

Tractor – A tractor does many things on a farm. A tractor is used to plow, plant, cultivate, pull heavy loads, such as wagons filled with grain, and much more. Tractors can pull these heavy machines and equipment because they have powerful engines. In fact, tractor engines are so powerful that they equal the same power as 200 horses would have. Tractors also have huge tires to keep them from getting stuck in muddy places.

Silo – Silos are structures which store chopped plants and grains called silage. Silage is fed to cows, and silos keep the feed dry and fresh. Most silos are round and above ground. Some other types are the trench, bunker, and box silos. Silos are filled at the top by machines and the silage is packed tightly as it fills the silo. Silage can be unloaded from the bottom. A large silo can hold seven million pounds of silage. Silos can be made with stone, brick, clay tile, sheet metal, concrete, wood blocks, or fiberglass-lined steel.



Planter – A planter is a piece of equipment used to plant seeds in the fields. Planters will put the seeds in the soil and cover the seeds with more soil. Planters have tanks to hold the seeds that will be planted. There are feed meters on the planters to drop the right amount of seeds into the soil. There is a row of wheels on the planters to then cover the seeds with soil once they are dropped into the field. There are different types of planters that plant different crops. Farmers use corn planters to plant corn. To plant soybeans most farmers use a planter that is also known as a drill. A drill plants the rows of soybeans closer together than a planter would plant corn rows. Since corn stalks grow much bigger than soybean stalks, corn needs to be planted in wider rows. Soybeans can be planted in narrower rows, which also helps a farmer plant more rows of soybeans in one field.

Cultivator – Cultivators are used to loosen soil and dig out weeds.

Materials Needed:

- “Magnificent Machinery” pictures
- “Farm Equipment” worksheet

Activity Outline:

1. Read *Fun Facts About Farm Equipment* by Ray H. Miller or another farm machinery book to your class. (If you are unable to obtain a book, use the introduction information and the “Magnificent Machinery” pictures to introduce students to farm equipment.)
2. Give each student a “Magnificent Machinery” picture. These pictures will help students learn what each piece of equipment looks like.
3. Give each student the “Farm Equipment” worksheet. This worksheet is an activity that asks students to match the description of a piece of equipment with the name of a piece of equipment.

Discussion Questions:

1. Describe what farm life would be like without modern machinery.
2. If you could invent a piece of farm equipment, what would it be?
3. Why are tractors important on farms?

Related Activities:

1. Think of simple machines (gears, pulleys, etc.) which might be part of different types of farm equipment.
2. Have groups of students invent a machine. Each student should act out a part of a machine while making a noise with the action. Have other group members join the first and become other parts of the machine while making their own noises. As the group works together, with each person performing an action and a sound, they become a machine.



To be used with:
Farm Equipment

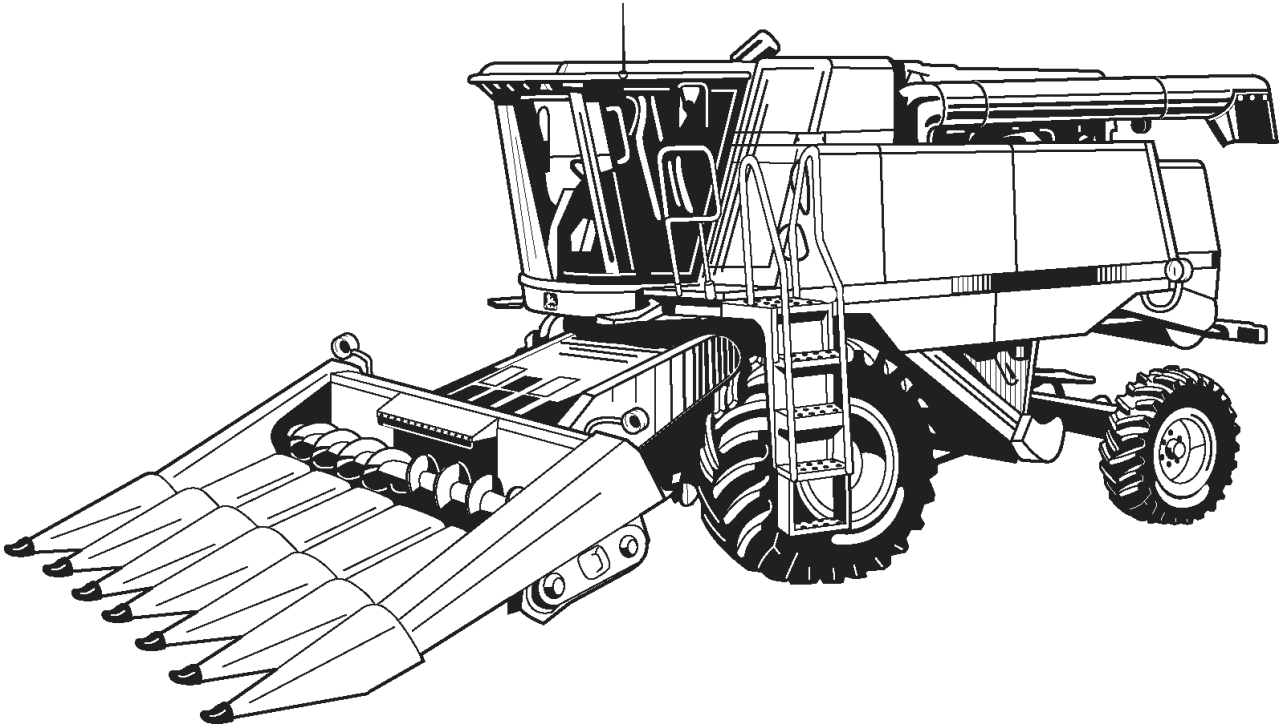
Magnificent Machinery



Plow

To be used with:
Farm Equipment

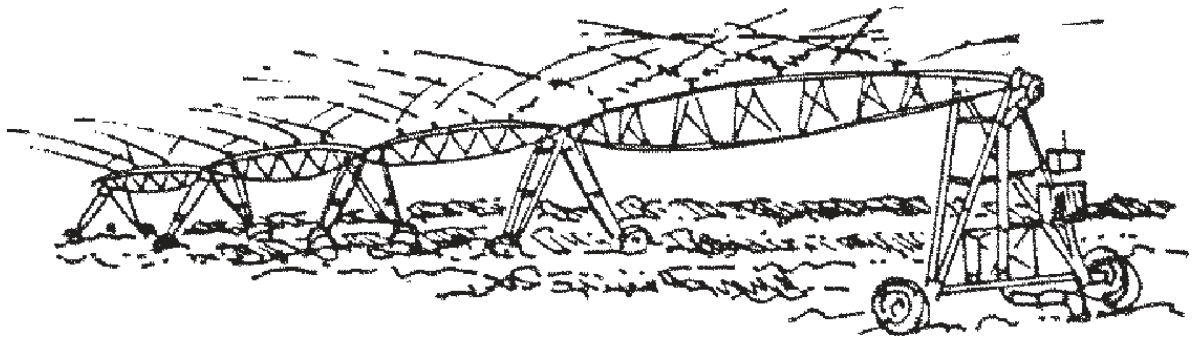
Magnificent Machinery



Combine

To be used with:
Farm Equipment

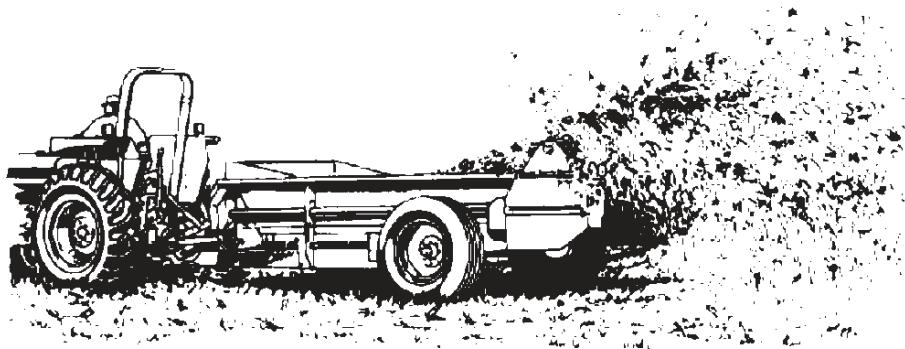
Magnificent Machinery



Irrigation System

To be used with:
Farm Equipment

Magnificent Machinery



Spreader

To be used with:
Farm Equipment

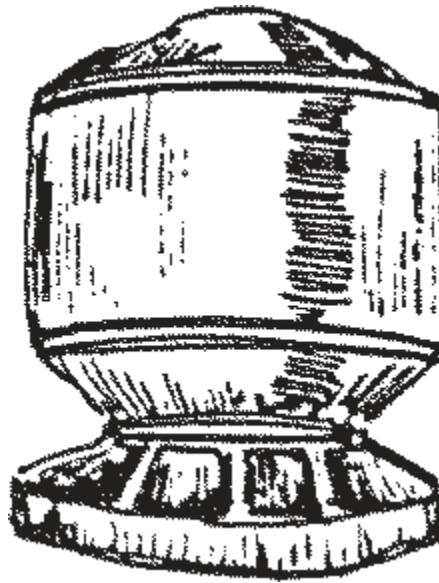
Magnificent Machinery



Hay Baler

To be used with:
Farm Equipment

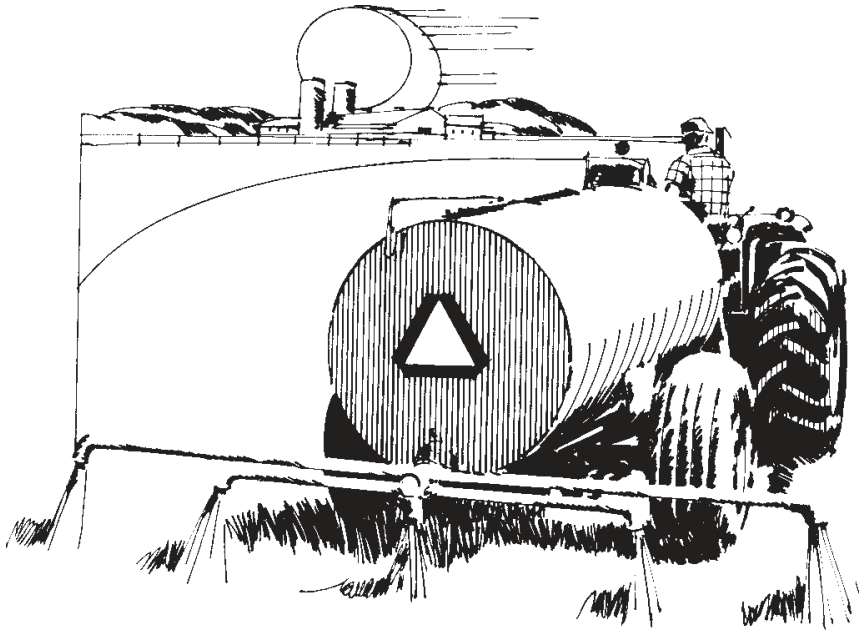
Magnificent Machinery



Feeders

To be used with:
Farm Equipment

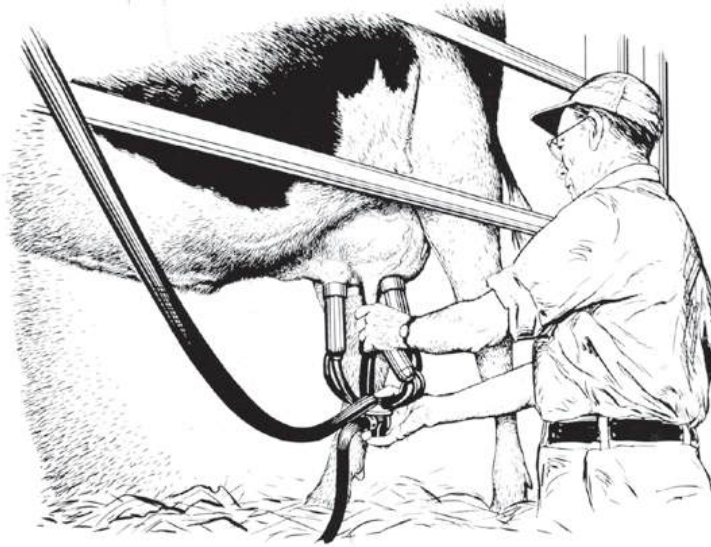
Magnificent Machinery



Sprayer

To be used with:
Farm Equipment

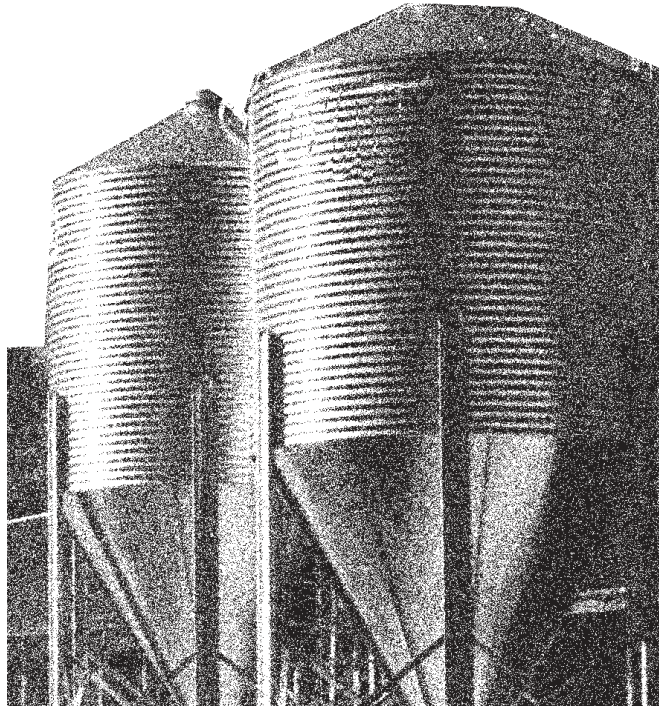
Magnificent Machinery



Milking Machine

*To be used with:
Farm Equipment*

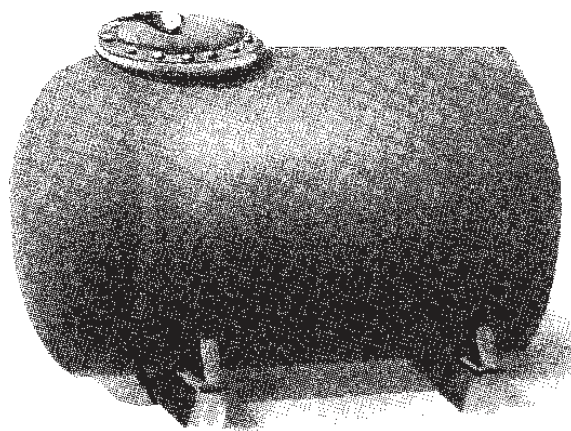
Magnificent Machinery



Grain Tank

To be used with:
Farm Equipment

Magnificent Machinery



Bulk Milk Cooler

*To be used with:
Farm Equipment*

Magnificent Machinery



Tractor

To be used with:
Farm Equipment

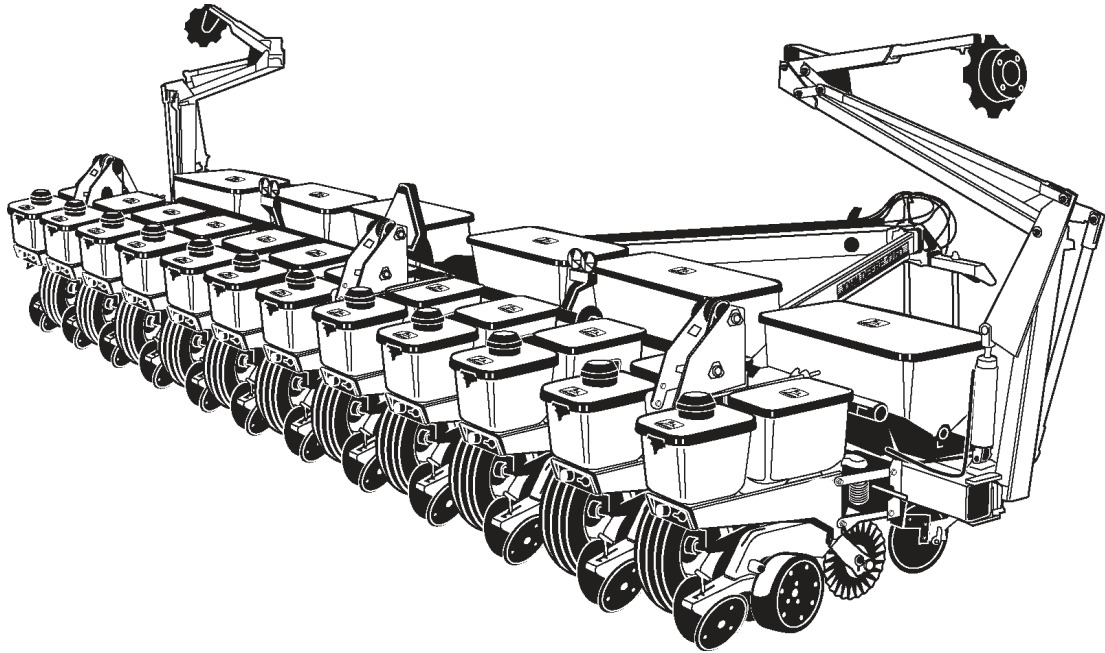
Magnificent Machinery



Silo

To be used with:
Farm Equipment

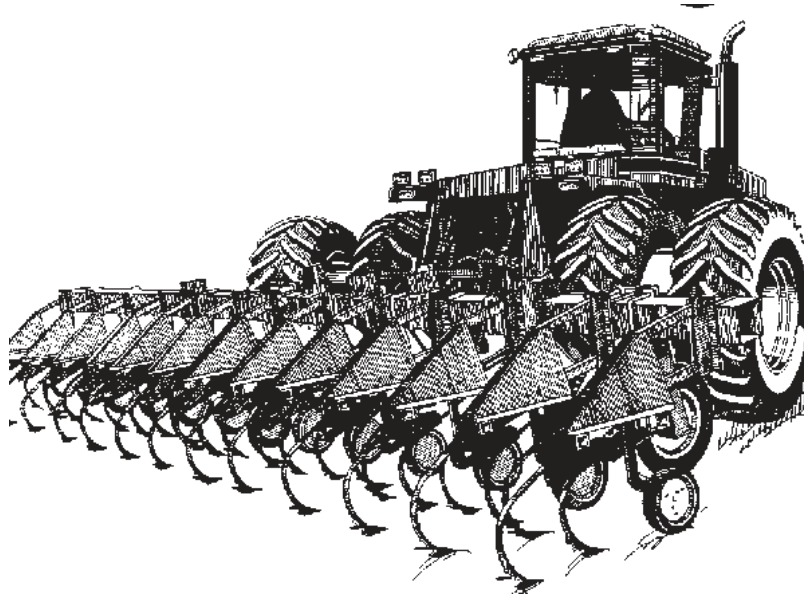
Magnificent Machinery



Planter

To be used with:
Farm Equipment

Magnificent Machinery



Cultivator

Farm Equipment

Directions: In each box, write the name of a piece of farm equipment that fits the description. Use the equipment at the bottom of the page.

Pulls a heavy load	Has a suction system to pump milk	Spreads fertilizer	Holds feed for animals
Gives crops extra water	Tills (or digs) soil	Loosens soil and digs out weeds	Holds silage for cows
Has a tank to hold seeds to plant	Sprays for weeds and insects	Harvests crops such as wheat and corn	Keeps milk cold
Has a rake to gather hay	Automatically feeds animals		

Farm Equipment Bank			
Plow	Combine	Cultivator	Irrigation System
Spreader	Hay Baler	Feeders	Sprayer
Milking Machine	Grain Tank	Bulk Milk Cooler	Tractor
	Silo	Planter	

Farm Equipment

Directions: In each box, write the name of a piece of farm equipment that fits the description. Use the equipment at the bottom of the page.

Tractor	Milking Machine	Spreader	Grain Tank
Pulls a heavy load	Has a suction system to pump milk	Spreads fertilizer	Holds feed for animals
Irrigation System	Plow	Cultivator	Silo
Gives crops extra water	Tills (or digs) soil	Loosens soil and digs out weeds	Holds silage for cows
Planter	Sprayer	Combine	Bulk Milk Cooler
Has a tank to hold seeds to plant	Sprays for weeds and insects	Harvests crops such as wheat and corn	Keeps milk cold
Hay Baler	Feeders		
Has a rake to gather hay	Automatically feeds animals		

Farm Equipment Bank			
Plow	Combine	Cultivator	Irrigation System
Spreader	Hay Baler	Feeders	Sprayer
Milking Machine	Grain Tank	Bulk Milk Cooler	Tractor
	Silo	Planter	

Mighty Machines

Grade Level: K-3

Approximate Length of Activity: One to two class periods

Objectives:

Teacher:

1. Introduce students to various pieces of farm equipment and machinery.
2. Show students what the equipment/machinery looks like.
3. Help students work on memory skills.

Students:

1. Learn about various pieces of farm equipment and machinery.
2. Identify pieces of equipment/machinery.
3. Improve memory skills by playing a game focusing on farm equipment.

**Illinois Learning Standards: 13.B.1c; 13.B.1d; 15.C.1a; 16.A.1c;
16.C.1a(w); 17.C.1a; 17.C.1b**

Introduction:

Farmers use many types of machinery and equipment to help them with their job. Some of the equipment and machinery that farmers use are tractors, combines, planters, mowers, tractor loaders, hay balers, and spreaders. These are not all of the pieces of equipment/machinery that some farmers need. The type of farming that a farmer does will determine what type of equipment and machinery he or she needs. The equipment and machinery used today help grain and livestock farmers produce better quality products in larger amounts. This means that one farmer can feed more people now than ever before. In 1940 one farmer was able to feed almost 19 people. In 1995 one farmer was able to feed 129 people.

Here are some of the pieces of equipment or machinery that farmers might need:

Combine - Since the 1930's farmers have used machines called combines to pick the grain from the fields. A combine is a machine that separates grain from stems as it cuts a crop in the field. As combines cut the grain out of the field, it also removes the corn kernels from the cob and the soybeans from the soybean pods. Then the combine stores the crop in a big tank that is part of the combine. When this tank gets full, the auger, which is a long arm on the side of the combine, moves the crop from the storage tank and dumps it into a truck or wagon.



Tractor – A tractor does many things on a farm. A tractor is used to plow, plant, cultivate, and pull heavy loads, pull wagons filled with grain, and much more. Tractors can pull these heavy machines and equipment because they have powerful engines. In fact, tractor engines are so powerful that they equal the same power as 200 horses would have. Tractors also have huge tires to keep them from getting stuck in muddy places.

Tractor Loader – A loader is a piece of equipment that gets attached to the front of a tractor. A loader is like a big, wide shovel. Farmers use tractor loaders to haul things and move things. A farmer can use it to move hay, grain, gravel, or many other types of things around the farm.

Mower – A mower is a piece of equipment that cuts grass. Some mowers used on the farm are much bigger than the push mower people use to cut their lawns. Most farmers have big, wide mowers that attach to the back of the tractor.

Planter – A planter is a piece of equipment used to plant seeds in the fields. Planters will put the seeds in the soil and cover the seeds with more soil. Planters have tanks to hold the seeds that will be planted. There are feed meters on the planters to drop the right amount of seeds into the soil. There is a row of wheels on the planters to then cover the seeds with soil once they are dropped into the field. There are different types of planters that plant different crops. Farmers use corn planters to plant corn. To plant soybeans most farmers use a planter that is also known as a drill. A drill plants the rows of soybeans closer together than a planter would plant corn rows. Since corn stalks grow much bigger than soybean stalks, corn needs to be planted in wider rows. Soybeans can be planted in narrower rows, which also helps a farmer plant more rows of soybeans in one field.

Hay balers – A baler is a machine that packs hay together into round or square shapes. Hay balers also put twine around the bale and drop it back onto the ground in the field.

Spreader – A spreader is a piece of equipment that spreads fertilizer onto the crops. Fertilizer contains nutrients that help crops grow.

Milking Machines – Farmers use milking machines to milk their cows. Farmers milk their cows twice a day, but it is a much easier process than it used to be. The farmers attach suction cups to the teats of a dairy cow. This suction system pumps milk from the cow and into a storage tank. The storage tank keeps the milk fresh and cool. When farmers had to milk by hand, it used to take two people about two-and-one-half hours to milk 20 cows. Today, the milking machine and one farmer can milk 20 cows in about 15 minutes!

Grain Truck and Wagons – Farmers use grain trucks and wagons to haul grain from their farm to the grain elevator. When farmers harvest their crop with a combine, the combine fills up with grain. When the combine is full, the farmer pulls his/her grain trucks and wagons alongside the combine. The combine extends its auger (like an arm) and dumps the grain into the back of the truck and into the wagons. Farmers have to do this many times during the harvest season. When the truck and wagons are full of grain the farmer hauls them to a storage bin on his/her farm or to a grain elevator that stores the grain for the farmer.



Materials Needed:

- “Farm Equipment Match-Up” worksheet
- “Farm Equipment Pictures”
- “Farm Equipment Match-Up Game” pieces
- Dice

Activity Outline:

1. Begin with a class discussion on farm machinery. Discuss the various pieces of equipment or machinery from the introduction. Hold up each picture of the farm equipment/machinery as you talk about the piece. Pass around the pictures so the students become familiar with them.
2. Make copies of the “Farm Equipment Match-Up Game.” Cut the cards apart on the lines. The students can play with the copies or you can laminate them to use them again and again. Make enough copies so the class can split into pairs and each pair of students will have a set to play with.
3. Split the class into pairs or let them pick a partner. Give each pair of students a set of “Farm Equipment Match-Up Game” cards.
4. Explain to the students that this game is similar to the game Memory®. The students should turn the cards over and mix them up well. Place the cards face down on the floor or desk and spread them out. Have each pair of students roll one die. The student who rolls the highest number goes first.
5. Have the first student flip over a card. Then they should flip over another card. If these two cards match, the student can keep them and go again. If they don’t match, the students should flip the cards back so they are face down again; then it is the other student’s turn. Have the students continue trying to match pairs until all cards are matched.
6. When all matches have been made, have each student turn their matches right side up in front of them. The teacher should go around and have each student tell you what each piece of machinery or equipment is that they matched up. When the student tells you the correct name, they can keep the match, if they tell you the incorrect name then that match is discarded. After the students have identified what their own matching cards are, the student with the most matches left wins. If you have time, let the students play again.
7. For older grades, give each student a copy of the worksheet “Farm Equipment Match-Up.” Have him/her use the words at the top of the worksheet to fill in the blanks under the pieces of machinery.



Discussion Questions:

1. What does a farmer use to plant corn or soybeans?
2. What does a farmer do when hay is ready to be cut in the field?
3. What has four wheels and an engine and is used to run many types of farm equipment?
4. What piece of equipment cuts grass?
5. When a farmer needs to move a load of grain, what does he or she use?
6. What types of jobs does a combine do?
7. What does a spreader do?

Related Activities:

1. The Illinois Farm Bureau® has produced an educational magazine entitled *Ag Mag* 15 “Safety Sleuths” to teach students about farm safety. Contact your county Farm Bureau® to receive free copies for your classroom.
2. Research an inventor of farm equipment.
3. Invite an implement dealer to your classroom or visit one.

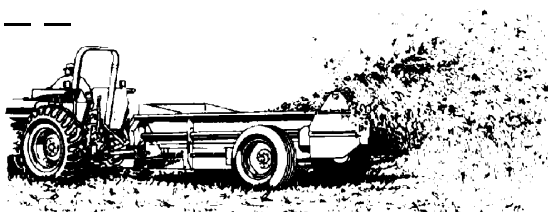
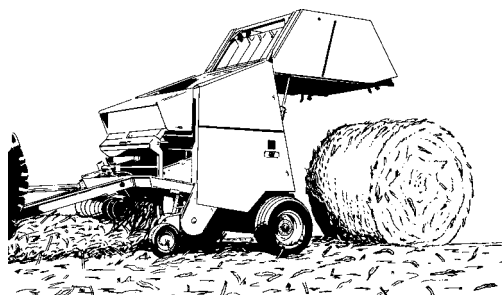
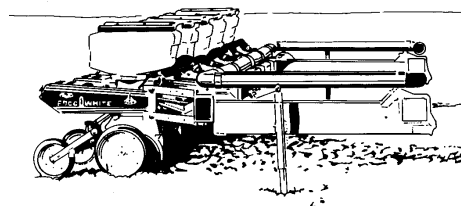
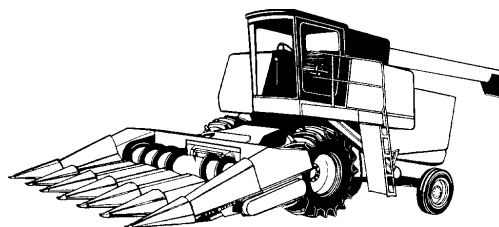
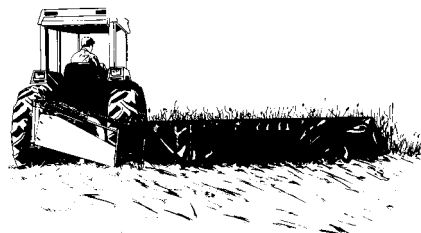
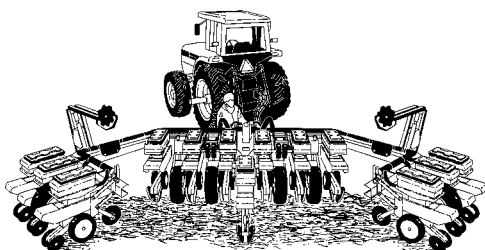


Farm Equipment Match-Up

Match the following words to the pieces of equipment. Write the name of the equipment under the picture.

Combine
Spreader
Baler
Soybean Drill

Tractor Mower
Tractor Loader
Corn Planter
Tractor

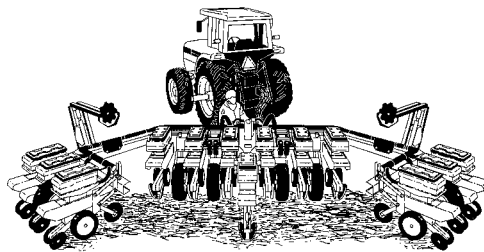


Farm Equipment Match-Up

Match the following words to the pieces of equipment. Write the name of the equipment under the picture.

Combine
Spreader
Baler
Soybean Drill

Tractor Mower
Tractor Loader
Corn Planter
Tractor



Corn Planter



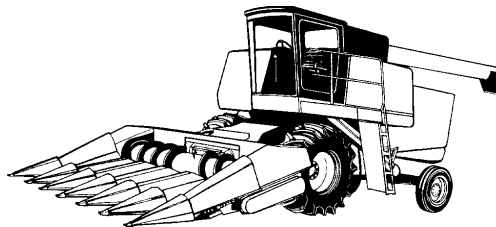
Tractor Loader



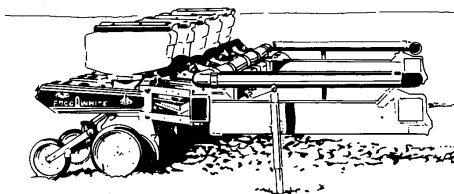
Tractor



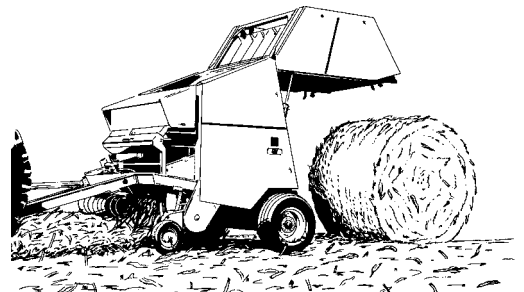
Tractor Mower



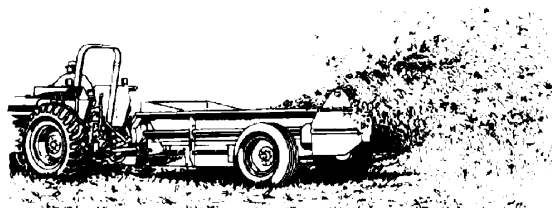
Combine



Soybean Drill

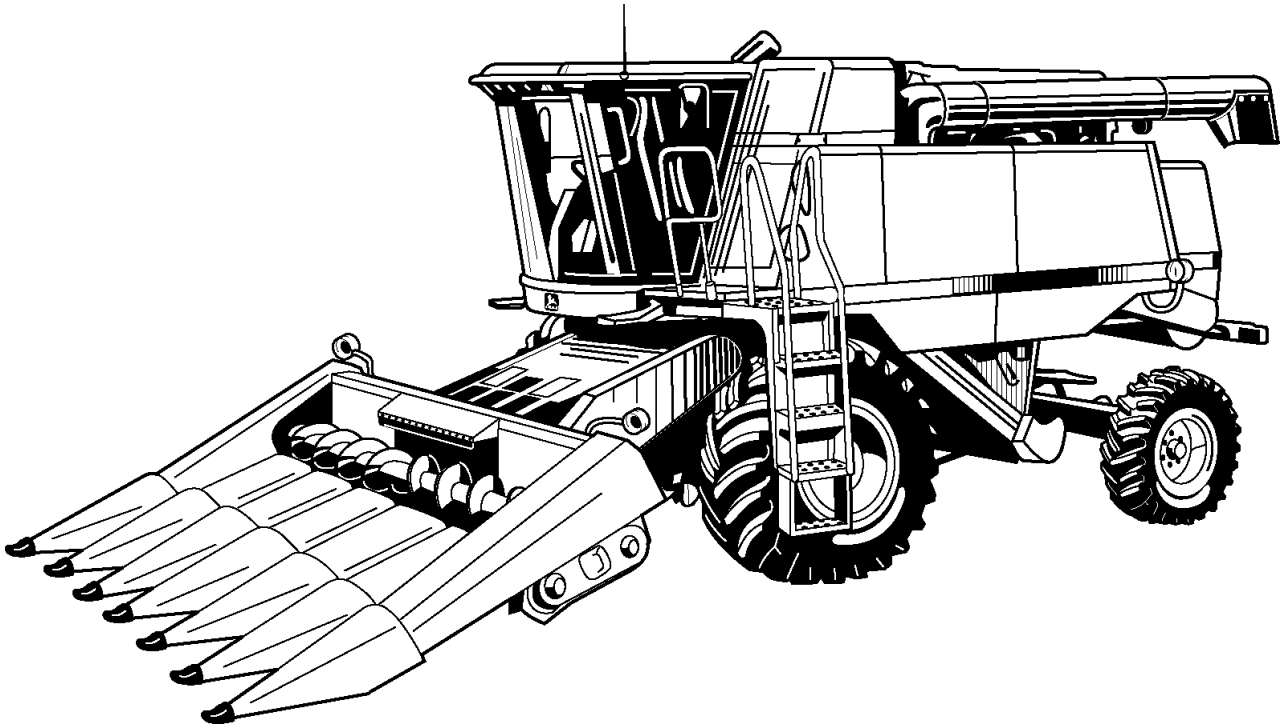


Baler



Spreader

Farm Equipment Pictures



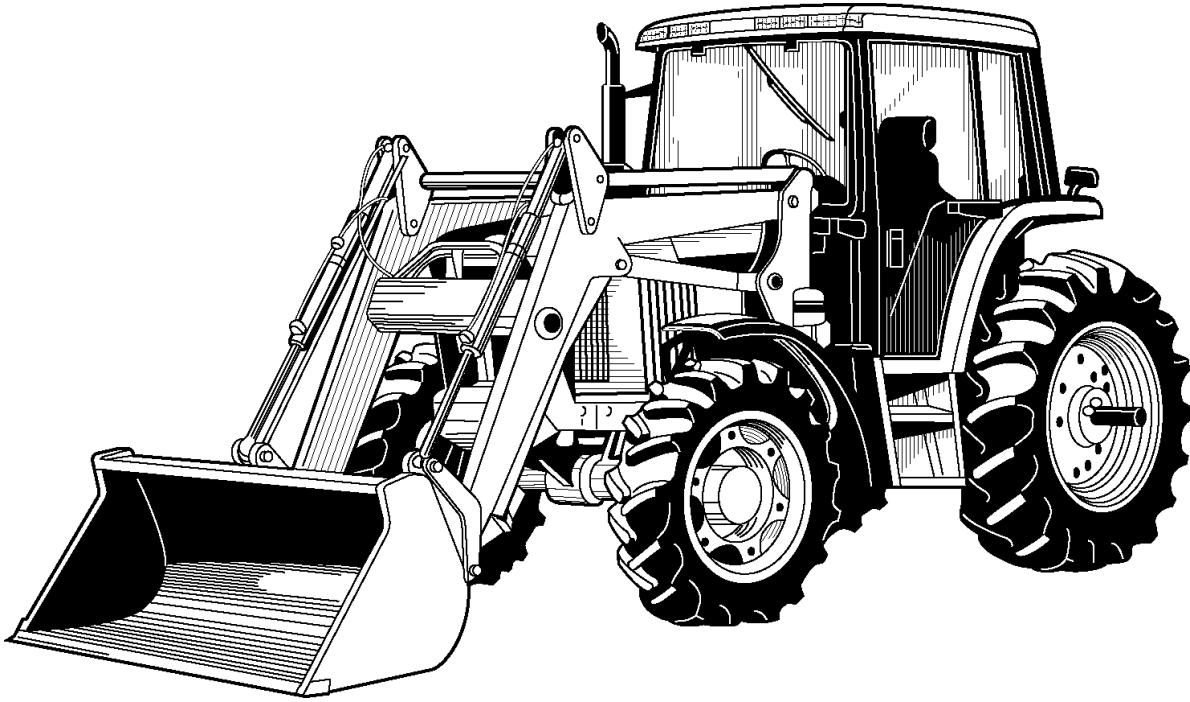
Combine

Farm Equipment Pictures



Tractor

Farm Equipment Pictures

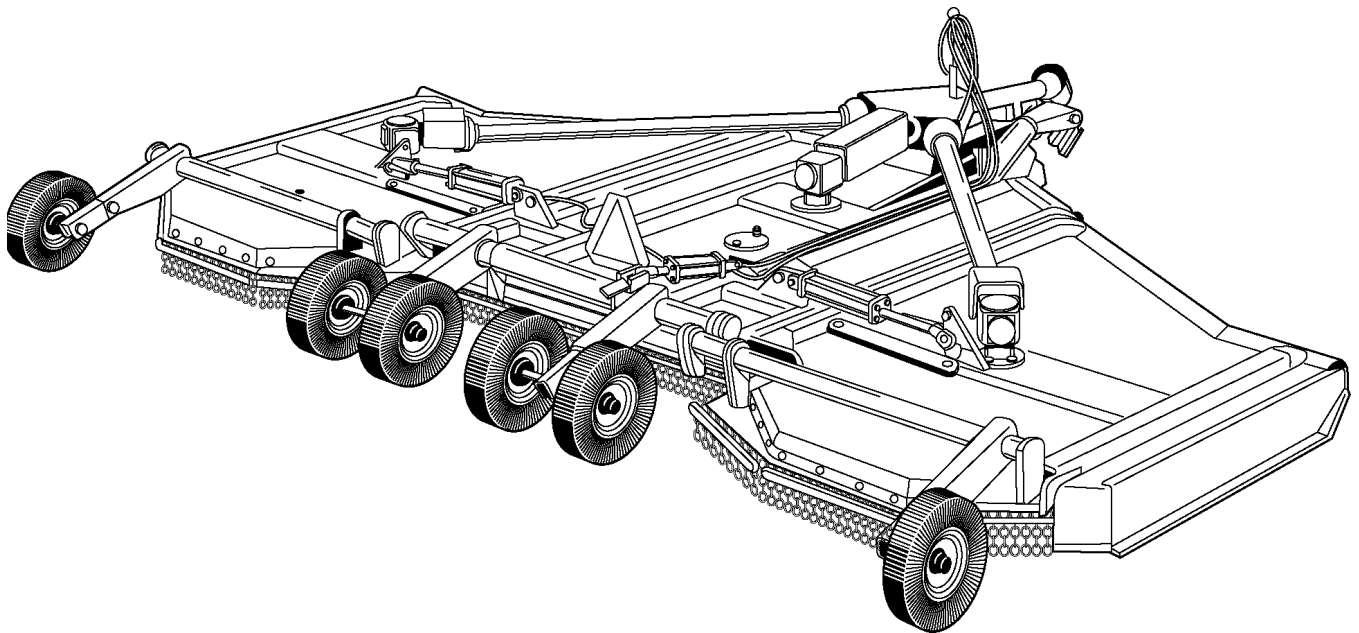


Tractor Loader

To be used with:
Mighty Machines

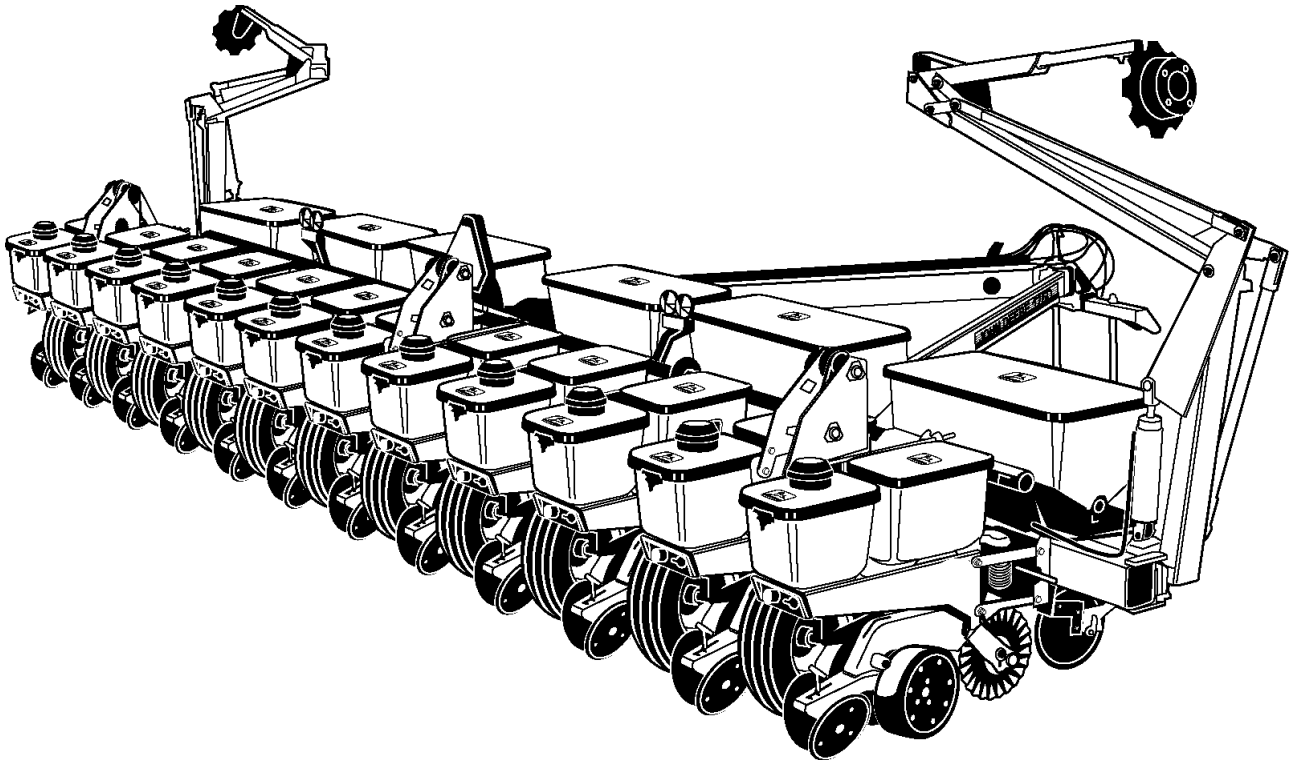
Name: _____

Farm Equipment Pictures



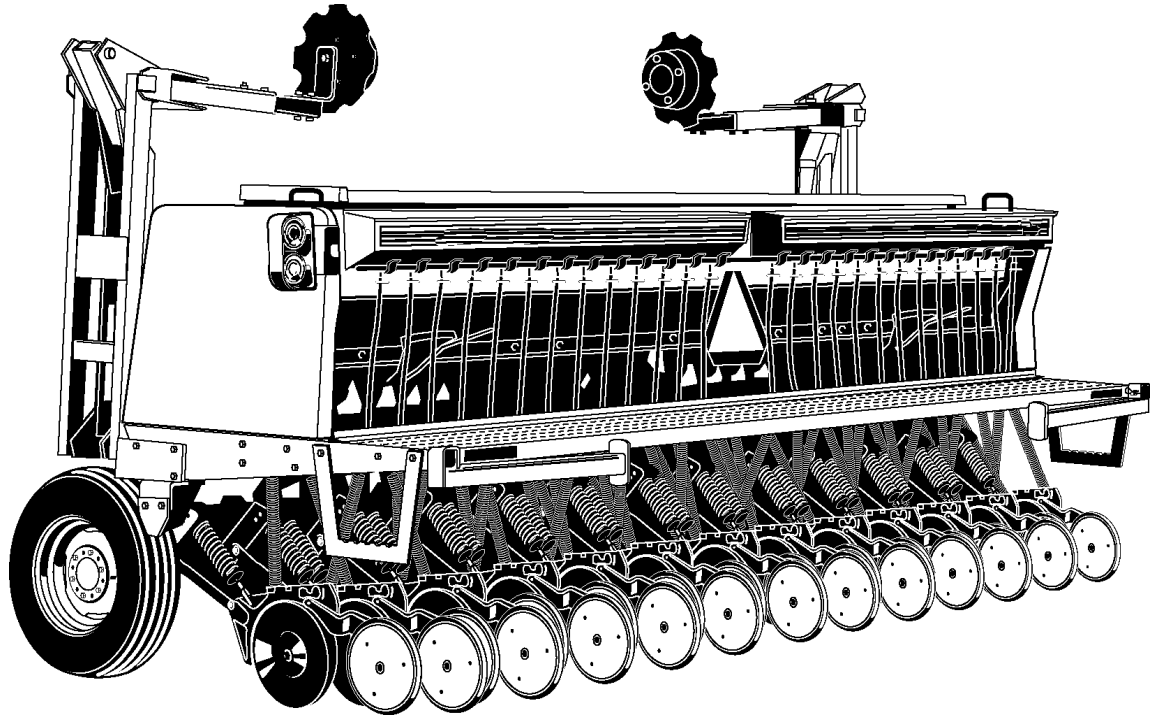
Mower

Farm Equipment Pictures



Corn Planter

Farm Equipment Pictures



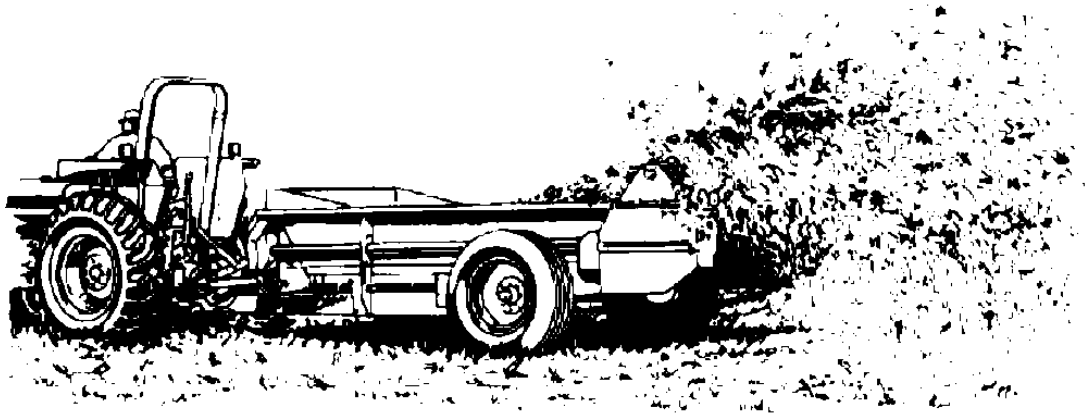
Soybean Drill

Farm Equipment Pictures



Hay Baler

Farm Equipment Pictures



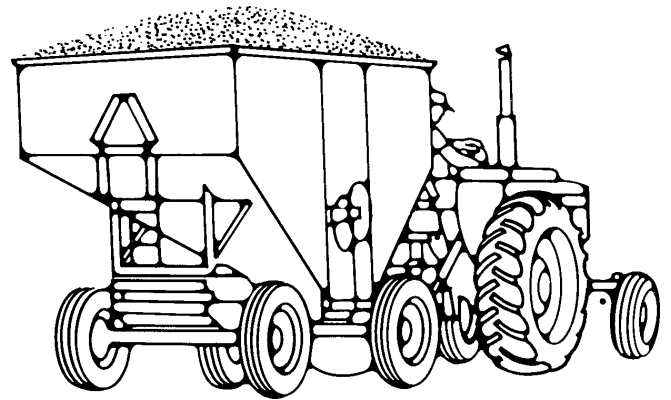
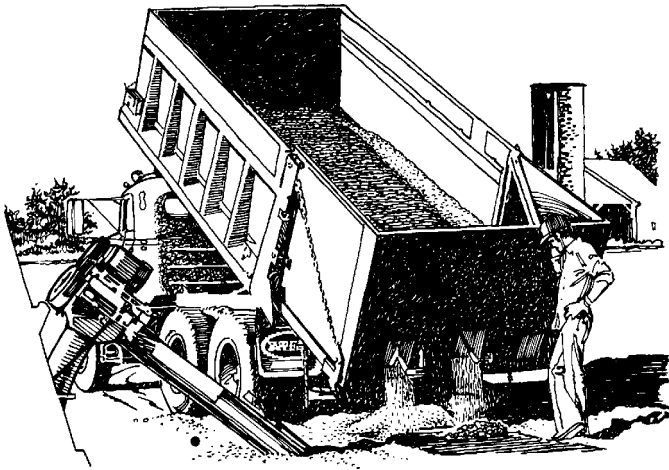
Spreader

Farm Equipment Pictures



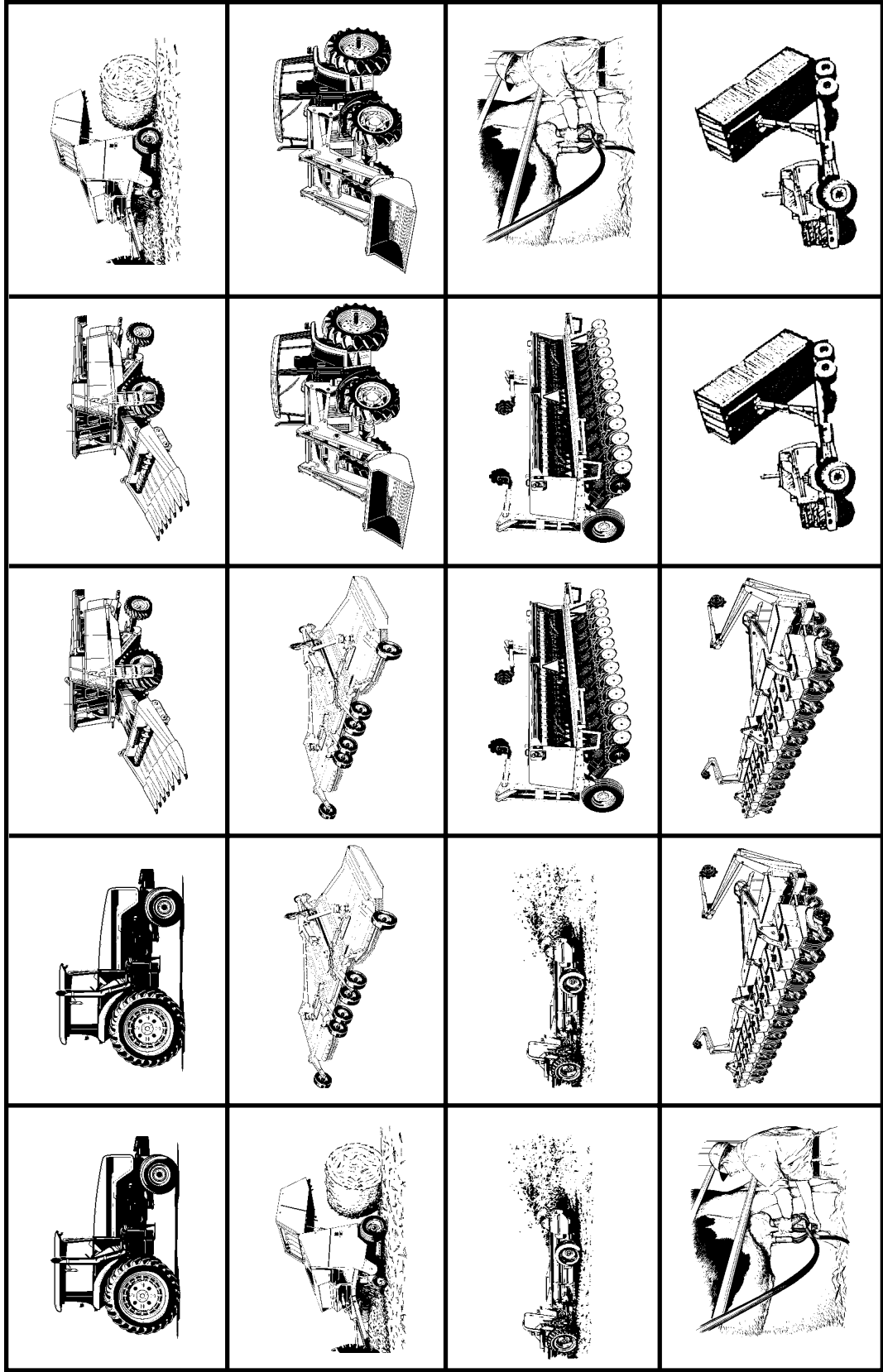
Milking Machine

Farm Equipment Pictures



Grain Truck and Wagon

Farm Equipment Match-Up Game



Now You Have It, Now You Don't

Grade Level: K-3

Approximate Length of Activity: One class period

Objectives:

Teacher:

1. Make students aware of scientific discoveries.
2. Help make our environment pollution-free by the use of biodegradable products.

Students:

Learn how new products can help our environment.

Illinois Learning Standards: 12.E.1c; 13.B.1d; 13.B.1e

Introduction:

Corn is a tall member of the grass family of plants. Other plants in the grass family are wheat, oats, sorghum, foxtail, and bluegrass. Unlike many types of grasses, corn is an annual plant, meaning that it cannot survive the winter and must be planted again each year. Because we can plant the corn seeds whenever we need corn, we call it a renewable resource.

Corn has a strong, solid stem and long, narrow leaves. Corn leaves encircle the stem and are attached alternately on opposite sides of the stem. Corn plants usually have an extensive root system. Their flowers are small and grow in dense spikes or open, branching clusters called panicles.

Corn is one of nature's most amazing energy-storing devices. A corn seed weighs about one-hundredth of an ounce. Yet this tiny seed can produce a corn plant that will grow seven to 10 feet tall and produce between 600 and 1000 seeds like the one from which the plant started. The "seeds" are commonly known as corn kernels on an ear of corn. The kernels are arranged in rows along the ear. An ear of corn may have as few as eight or as many as 36 rows, but the number of rows is always even. The kernels that you find on an ear of corn will become corn seeds to plant for the next year.

The corn seed (kernel) is composed of three main parts: the seed coat or pericarp, the endosperm, and the embryo. Each of these three parts has a role to play in producing a new corn plant. The pericarp is a hard, outer coat that protects the seed both before and after planting. It prevents bacteria and fungi from entering and destroying the seed. The endosperm makes up about four-fifths of the kernel's weight. Its chief function is to provide food energy for the young plant until the plant's roots have grown enough to make food energy on its own. The embryo of the corn seed has two main parts: the tiny plant itself and the cotyledon.



Illinois and Iowa are the major corn producing states in the United States. American farmers use more land for corn than any other crop, and corn provides more food for people than any other crop grown. Altogether, about 4000 of the products in a typical supermarket contain some product or byproduct of corn.

In autumn, corn is harvested with combines. Combines are machines which pick, shuck, and shell the ears of corn right in the field. The corn is unloaded from the combine into a truck or wagon with an unloading auger. When the trucks and wagons are filled with corn, the corn is taken to a grain elevator or unloaded into a storage bin on the farmer's farm. A grain elevator is a cylinder made out of poured concrete. When a truck or wagon with grain arrives at the elevator, it is weighed. The clerk at the elevator office subtracts the weight of the wagon or truck from the total weight to determine the weight of the corn. The clerk at the elevator also measures the moisture content and weight of the corn using a sample. Next, the trucks and wagons go to the elevator storage area. Here the corn is dumped into a pit and then drawn into the elevators with augers in a pipe system. Most corn is used for livestock feed. The corn that is not fed to livestock may be processed in mills, used for by-products, or exported.

Packing peanuts made with corn are similar to packing materials made with styrofoam. However, packing peanuts made from corn are biodegradable and therefore more environmentally friendly. These packing materials are used to protect fragile items during shipping. Another environmentally friendly use of corn can be found in fuel. Ethanol, a corn based product, is being used more and more to replace petroleum based fuel. Petroleum based fuels pollute the air when burned, but ethanol burns clear and does not give off poisonous gases. Plus the oil used for petroleum-based fuels is a non-renewable resource. Ethanol will never be limited in supply because corn is a renewable resource, which means it can be grown whenever needed. This lesson will show how the corn-based packing peanuts are much more valuable to our environment than the styrofoam packing material.

Materials Needed:

- "Agriculture Products of Illinois" handout
- "Look What Grows on Illinois Farms!" worksheet
- Corn-based shipping peanuts (Contact Illinois Corn Growers Association at 309-557-3257 or contact your county Farm Bureau® office)
- Bowl or sink with water
- Styrofoam™ peanuts

Activity Outline:

1. Review what products are made in Illinois using the "Agriculture Products of Illinois" handout.
2. Ask students to complete "Look What Grows on Illinois Farms!" worksheet.
3. On an individual basis or in very small groups, give students a few pieces of the corn-based peanuts to wash thoroughly. As students try, the peanuts dissolve.
4. Give the students some more and ask them to wash more carefully. Discuss how a product can be made both useful and environmentally safe.



5. After several or all the students have tried to wash the corn-based peanuts, teach what the shipping peanuts are used for.
6. Show the Styrofoam™ shipping peanuts and compare what happens to them in water.

Discussion Questions:

1. Why is it so important for scientists to keep working on ways for items to be disposed of easily?
2. What other products are made with Styrofoam™?
3. Is it possible to use the new corn-based product in place of all the Styrofoam™ products?

Related Activities:

1. Extended Classroom — Trip to a landfill.
2. Write to companies asking them to ship their products in corn-based peanuts.
3. Introduce a unit on corn and corn byproducts.

Other Resources:

1. The Illinois Farm Bureau® Ag In The Classroom program has developed an educational newspaper called *Ag Mag* 11 that offers additional information about corn. Please contact your county Farm Bureau® for information about receiving copies for your classroom.
2. Books:
Environmental Atlas for Children, Unicef.
Children's Atlas of the Environment, Rand McNally.
Rescue Mission Planet Earth, United Nations Agenda 21.
This Planet Is Mine, Scholastic.
Environmental Education, Frank Schaffer Publications.
EarthSearch, John Cassidy, Klutz Press.
Science in Your Shopping Cart, United States Department of Agriculture, call (202) 720-2791.
3. Videos:
The Rotten Truth #121-VC, Ages 5-12, 30 minutes and *Zorts Sorts*, #93-VC, Ages 5-12, 15 minutes. Available from Illinois Power, call (217) 424-6600.
4. Web Sites:
Illinois Corn Growers Association: www.ilcorn.org
National Corn Growers Association: www.ncga.com



To be used with:

“Now You Have It, Now You Don’t”

Name: _____

Agriculture Products of Illinois

Corn

Baby foods
Processed cheese products
Vegetable oil
Margarine
Fruit juice drinks
Cleaners
Detergents
Sandpaper
Charcoal briquettes
Photographic films
Chewing gum
Glues & adhesives
Cereals
Sweeteners
Chocolate Products
De-icers for roads
Ethanol-blended fuels
Antibiotics
Potato chips
Shortening
Thickening agent
Soft drinks
Plastics
Cosmetics
Wall coverings
Rubber tires
Paints & varnishes
Degradable diapers
Degradable plastic trash bags
Rayon
Dry cell batteries
Crayon and chalk (as a binder)
Surgical dressings
Catsup, chili sauce
Plywood (interior)
Printing ink
Ceiling tiles
Shoe polish
Aspirin

Cattle

Beef
Dairy products
Marshmallows
Piano keys
Floor wax
Cake mixes
Photographic film
Insulin
Vitamins
Chewing gum
Cosmetics
Boots & Shoes
Perfumes
Ceramics
Soaps
Plastics
Textiles
Pet foods
Candles
Pharmaceuticals
Glue
Bandages
Shaving cream
Sutures
Luggage
Shoe polish
Insecticides
Oleo margarine
Pasta
Mayonnaise
Flavorings
Deodorants
Detergent
Linoleum
Paints
Leather sporting goods
Wallpaper
Sheet rock
Combs
Artist’s paint brushes

Soybeans

Cooking oils
Mayonnaise
Pharmaceuticals
Caulking compounds
Disinfectants
Electrical insulation
Insecticides
Herbicides
Printing inks
Soap
Wallboard
Glue
Animal feeds
Paint
Candy
Plywood
Chocolates
Pet foods
Detergent
Cosmetics
Bakery goods
Salad dressings
Vegetable shortening
Margarine
Coffee creamer
Cereals
Infant formula
Baby food
Soy sauce
Environ™ building material
Diesel fuel
Pesticides
Vinyl plastics
Rubber
Fabrics
Tofu
Frozen pizza
Adhesives
Hypo-allergenic milk
Antibiotics

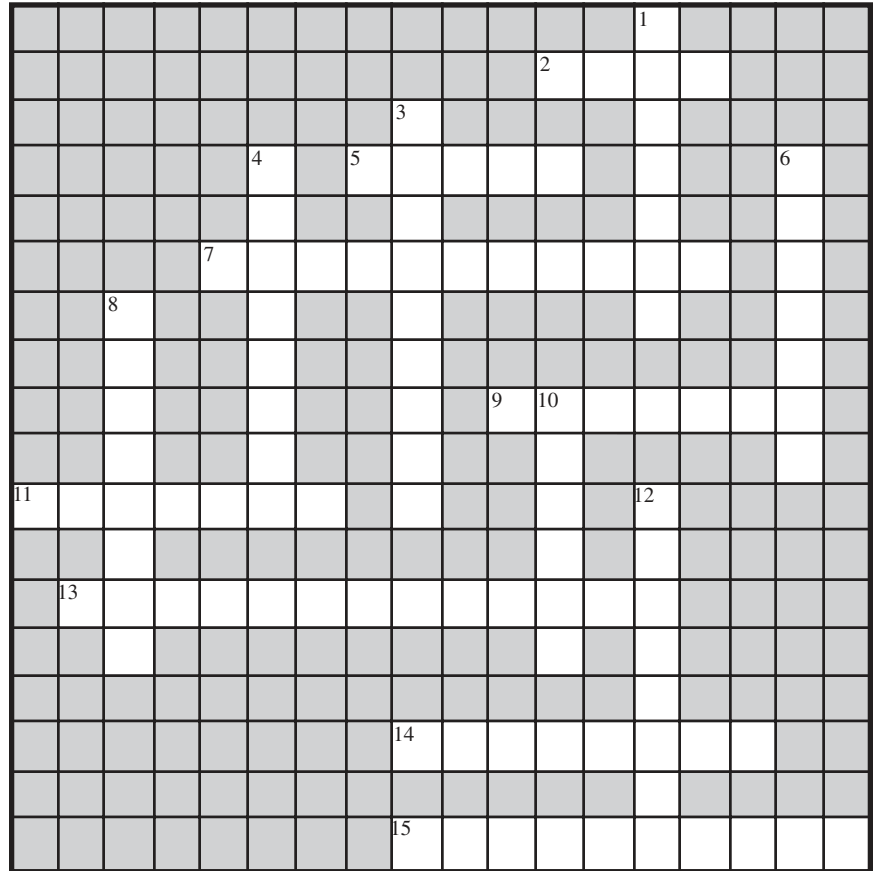
Hogs

Pork chops
Roasts
Ham
Antifreeze
Plywood adhesive
Fabric dye
Glue
Glass
Water filters
Lubricants
Crayons
Heart valves
Cosmetics
Plastics
Pet foods
Upholstery
Paint brushes
Gelatin
Fabric softeners
Wood putty
Furniture polish
Insecticide
Rubber gloves
Chalk
Bacon
Spareribs
Cement
Floor wax
Insulation
Gloves & leather
Sausage casings
Chewing gum
Combs
Buttons
Fertilizer
Thyroid extract
Insulin
Burn dressings
Cortisone
Plasmin

Look What Grows On Illinois Farms!

ACROSS

2. These come in a pod, are deep green, loaded with vitamins and roll around your plate until you eat them.
5. These strange looking animals are distant cousins to the camel, but are more at home in the mountains of South America. Their hair is valuable for weaving into cloth.
7. Long white root that might make you think of the Kentucky Derby. Illinois produces more than any other state.
9. People enjoy this snack food at the movies and at home.
11. You will find this vegetable mostly in pies, but sometimes they have a scary face in the fall.
13. These plants are grown so you can buy them and plant them in your garden.
14. People like these mashed, french fried, baked, and boiled.
15. This relative to pumpkins and gourds is deep red, juicy, and sweet on the inside with a hard rind on the outside.



DOWN

1. This animal may look like it has whiskers, but would rather swim in a pond or river.
3. This delicious fruit is grown in a bog, but you might enjoy them in a muffin.
4. This dark-green vegetable is a surprisingly good source of vitamin C and even protein. It's a member of the cabbage family, but looks much different.
6. This root is prized in the Orient and is sometimes shaped like a human body.
8. A pickle gets its start in the farmer's field and is called by this name.
10. You might cry a little when you cut up this vegetable.
12. Grown in the dark, this food product might end up on your pizza.

Bedding Plants
 Blueberry
 Broccoli
 Catfish
 Cucumber
 Ginseng
 Horseradish
 Llama
 Mushroom
 Onions
 Peas
 Popcorn
 Potatoes
 Pumpkin
 Watermelon

2. These come in a pod, are deep green, loaded with vitamins and roll around your plate until you eat them.
5. These strange looking animals are distant cousins to the camel, but are more at home in the mountains of South America. Their hair is valuable for weaving into cloth.
7. Long white root that might make you think of the Kentucky Derby. Illinois produces more than any other state.
9. People enjoy this snack food at the movies and at home.
11. You will find this vegetable mostly in pies, but sometimes they have a scary face in the fall.
13. These plants are grown so you can buy them and plant them in your garden.
14. People like these mashed, french fried, baked, and boiled.
15. This relative to pumpkins and gourds is deep red, juicy, and sweet on the inside with a hard rind on the

1. This animal may look like it has whiskers, but would rather swim in a pond or river.
3. This delicious fruit is grown in a bog, but you might enjoy them in a muffin.
4. This dark-green vegetable is a surprisingly good source of vitamin C and even protein.
It's a member of the cabbage family, but looks much different.
6. This root is prized in the Orient and is sometimes shaped like a human body.
8. A pickle gets its start in the farmer's field and is called by this name.
10. You might cry a little when you cut up this vegetable.
12. Grown in the dark, this food product might end up on your pizza.

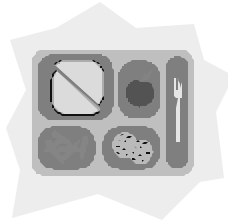
[illegible]

WS- 108

Where does food come from?



Grocery or discount store?



Cafeteria ?



Restaurant?



Unknown source?

While food passes through these locations, it does not start there. Where does it originate? What is the source? How did it get to me?

It all starts with agriculture! Agriculture is the science of growing crops and raising livestock to produce food, clothing, and other products useful and necessary to mankind. Almost everything you eat comes from either a plant or an animal. Fruits, vegetables, nuts and grains all come from plants. Meat, fish, eggs and dairy foods are all animal products. Practically all of these foods come from farms. Plants use nutrients from the soil, water, air and light to make their own food. We receive nourishment when we eat plants from the substances they contain, including sugars, starches, vitamins and minerals. Animal products provide nutrients such as protein, minerals and vitamins.

Thanks to the 22 million people in America employed by the agriculture industry, we have a safe, abundant food supply. We also have many other products that we use everyday. In some way, agriculture has touched your life today. Agriculture is a part of our everyday lives!

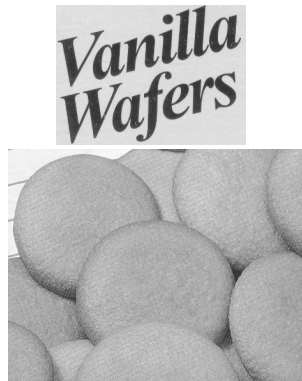
People working in agriculture grow or raise what we need, change it to products we can use, and get those products into our hands. Agriculture includes:

- ◆ production - growing crops or raising livestock
- ◆ processing - changing the product into another usable form
- ◆ marketing - displaying, advertising, selling
- ◆ distribution - moving products from one place to another
- ◆ consuming - eating or using the product

Questions to think about:

- How has agriculture touched your life today?
- Do any of your family members or friends of your family have a job in the agriculture industry? Please list and describe what they do.

What is the source? Who is involved?



INGREDIENTS: ENRICHED WHEAT FLOUR (WHEAT FLOUR, NIACIN, REDUCED IRON, THIAMIN MONONITRATE, RIBOFLAVIN AND FOLIC ACID), SUGAR, PARTIALLY HYDROGENATED VEGETABLE OIL SHORTENING (CONTAINS ONE OR MORE OF THE FOLLOWING: SOYBEAN OIL, COTTONSEED OIL), CORN SYRUP, CORN STARCH, WHEY, BUTTER (PASTEURIZED CREAM, SALT AND NATURAL COLOR), SALT, EGGS, SOY LECITHIN, NONFAT MILK, ARTIFICIAL FLAVOR, SODIUM BICARBONATE, VANILLIN (AN ARTIFICIAL FLAVOR) AND MONOCALCIUM PHOSPHATE.

Read the ingredient label (above) and complete the following chart by listing each of the main ingredients, its source, and careers involved in each. Try to think of different careers for each ingredient.

<u>Ingredient</u>	<u>Source</u>	<u>List 3 careers involved</u>
Example: flour	wheat	grain farmer, miller, trucker

Questions to think about:

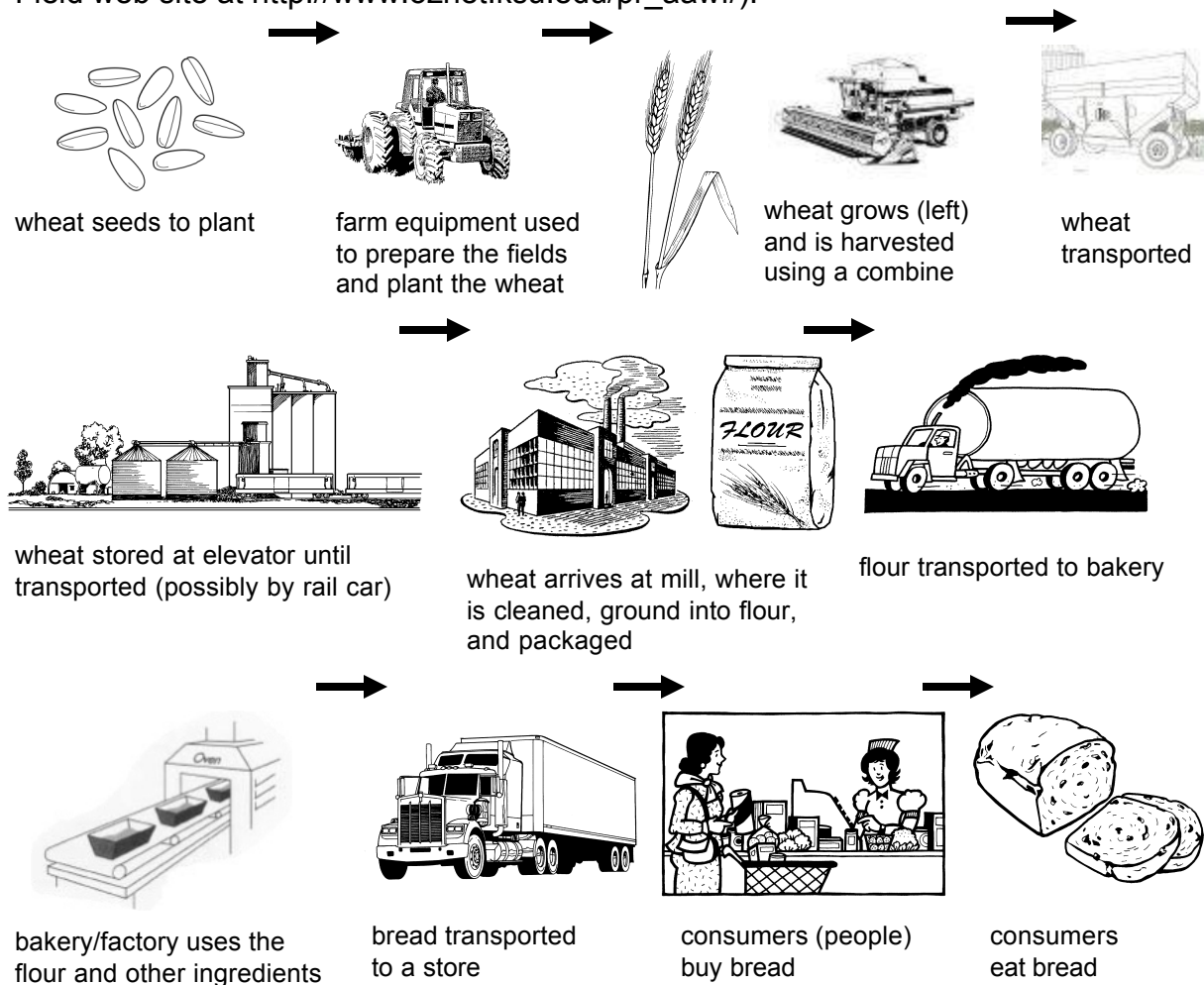
- Why are the ingredients on the label listed in the order they appear?
- What role would a food scientist play?
- What are some related businesses that would play a role in providing our food? One example is a bank, which might provide a loan for the farmer or miller to buy equipment.
- How is the U.S. Food and Drug Administration involved in food packaging?

Farm to Table Process

As you think about a meal you recently ate, please write down what you had. Then describe the process of the items from farm to table. Start with the source (which plants and/or animals). Then trace the steps it took to reach your table. Show the steps in a creative way! Write them into a story, draw and label a flow chart, create a concept map or web, or explain them in a comic strip.

As you create your project, make a list of the different jobs involved in each step of the process. Depending on how you have designed your project, this information could be incorporated. When you have finished, please share it with your family and other classmates.

Example - One common item in many meals is some form of bread. Here is a brief flowchart showing the farm to table process for bread. (To see this through actual pictures showing the seed growing on the farm, ground into flour at the mill, and baked into bread at the bakery/factory, please visit Kansas State University Adopt a Wheat Field web site at http://www.oznet.ksu.edu/pr_aawf/).



Questions to think about

- ◆ What other products are made from agricultural sources? Think about some of the items you use everyday.
- ◆ What make it possible for us to buy most kinds of produce (fruits & vegetables) at anytime of the year even if they are not grown locally?
- ◆ What causes food prices to fluctuate, or go up and down?
- ◆ Did you think about the inspection process our food goes through to ensure quality and safety?
- ◆ How many times was some form of transportation involved in the farm to table process?
- ◆ Describe some of the strategies used by those in marketing to encourage consumers (us) to buy the product.
- ◆ Why are certain food items packaged in a cans, rather than a bag or box?
- ◆ Why are foods arranged the way they are in the store? For instance, the next time you are in the cereal aisle of the store, notice where the cereal children like to eat is located versus where the cereal adults usually eat is located.

Further exploration

- ⇒ Visit a farm.
- ⇒ Tour a processing facility.
- ⇒ Visit with someone who has a career in agriculture that may be of interest to you.
- ⇒ Ask and possibly take a behind the scenes tour at a supermarket, bakery, meat locker, etc.
- ⇒ Expand more on the farm to table process.
- ⇒ Research an agricultural career.
- ⇒ Check out the agricultural books at local library.
- ⇒ Explore the products and processes chart on Archer Daniels Midland web site at <http://www.admworld.com/naen/process/swf/process.asp>
- ⇒ Explore more about agriculture at <http://www.agclassroom.org>
- ⇒ Explore more about plants and corn at <http://www.urbanext.uiuc.edu>

Adventures Around the Farm

Social Studies

Lessons with standard and brief synopsis

1. My Farm Web – 15.A, 15.C, 17.C.
Using graphic organizers, students explore what agriculture means.
2. Source Search - 15.A, 15.B, 15.C, 16.E, 17.C.
Students identify the source of many products we use everyday and categorize them.
3. Agriculture in your Life - 15.A, 15.C, 17.B, 17.C.
Students identify the source of many products and explore people who work in the agriculture industry.
4. Illinois Lunchables - 15.C, 17.C.
As students develop an awareness of Illinois agricultural products, they will taste and experience the products by creating a sack lunch. They will also discuss climate and weather impacts on agricultural products.
5. Career Bingo - 15.A, 15.C.
Students become familiar with agricultural jobs.
6. From Tassel to Table Chain – 15.A, 15.D.
Students learn the process involved in making corn into cereal.
7. Growing with Technology - 15.C, 16.A, 16.C, 17.C.
As students learn about changes in farming methods through the years, they will compare the old way versus the new way of doing various jobs.
8. Where Does It Come From – 15.A, 15.C, 17.B, 17.C.
As students interpret USDA NASS data, they will discover where the agricultural commodities used in some common snacks were grown.
9. Back to the Farm – 16.A, 16.C, 16.E, 17.C.
Students trace their family history to find family members with farming backgrounds.

*****NOTE: Many of the lessons in other disciplines also align with the Social Studies standards.**

Illinois State Goals

- 15: Understand economic systems, with an emphasis on the United States.
- 16: Understand events, trends, individuals and movements shaping the history of Illinois, the United States and other nations.
- 17: Understand world geography and the effects of geography on society, with an emphasis on the United States.
- 18: Understand social systems, with an emphasis on the United States.

Illinois State Learning Standards

- 15.A. Understand how different economic systems operate in the exchange, production, distribution and consumption of goods and services.
- 15.B. Understand that scarcity necessitates choices by consumers.
- 15.C. Understand that scarcity necessitates choices by producers.
- 15.D. Understand trade as an exchange of goods or services.
- 16.A. Apply the skills of historical analysis and interpretation.
- 16.C. Understand the development of economic systems.
- 16.E. Understand Illinois, United States and world environmental history.
- 17.B. Analyze and explain characteristics and interactions of the Earth's physical systems.
- 17.C. Understand the relationships between geographic factors and society.
- 18.C. Understand how social systems form and develop over time.

My Farm Web

Integrated K-2 & Social Studies Core



Time: 30 - 50 minutes

Grade Levels: K-6

K-2 Standard 2:

Students will develop a sense of self in relation to families and community.

Objective 2

Examine important aspects of the community and culture that strengthen relationships.

- Relate goods and services to resources within the community.
- Identify goods and services and where they come from.
- Differentiate between wants and needs of consumers.

K-2 Standard 3:

Students will develop an understanding of their environment.

Objective 1

Investigate relationships between plants and animals and how living things change during their lives.

- Observe and describe relationships between plants and animals.
- Describe the life cycle of local plants and animals using diagrams and pictures.
- Create pictures and stories about real animals and compare them to make-believe stories about animals.

Grade 3 Standard 4:

Students examine how government and economies develop as the indigenous community develops.

Objective 2

Identify the factors that determine economic development.

- Identify natural resources within environments that provide for community development.
- Trace the emergence of occupations relative to available natural resources.
- Identify producers and consumers in local communities.
- Identify the relationship between producers and consumers, supply and demand.

Materials

- ◆ Book: *If it Weren't for Farmers* by Allan Fowler (ISBN 0516460099)
- ◆ Book: *Heartland* by Diane Siebert (ISBN 0690047304)
- ◆ Book: *Harvest Year* by Cris Peterson (ISBN 1563975718)
- ◆ Copy of "My Farm Web" 3-inch pictures (30), available on www.agclassroom.org/ut > > Elementary Teachers > > Social Studies
- ◆ 12 inch pieces (29) of yarn or string

Background

How do you define the word agriculture? Merriam-Webster's Dictionary states that it is the "science, art, or practice of cultivating the soil, producing crops, and raising livestock and in varying degrees the preparation and marketing of the resulting products." An accurate definition, but this definition doesn't impart the integral nature or importance of agricultural products—food, clothing and shelter—in our daily lives. Surely there is a better way to define agriculture!

Graphic organizers are a research-based teaching strategy that facilitates learning and student achievement. The strategy meets the needs of most learners, especially visual learners. How do graphic organizers work? By relating new concepts to the learners' preexisting understandings, which cause them to recognize new relationships among concepts. These associations help students to retain what they have learned. In addition, graphic organizers may be used to access student knowledge and help to identify student misconceptions.

One type of graphic organizer is the concept map. **Concept mapping** is a technique for visualizing the relationships between different concepts. A concept map (also referred to as a concept web) is a diagram showing the relationships between concepts. Concepts are connected with labeled arrows, in a downward-branching hierarchical structure. Concept webs can be created by using words or pictures. The relationship between concepts is articulated in linking phrases, e.g., "gives rise to," "results in," "is required by," or "contributes to." Other words that could be added on the line linking the words are simple words or phrases, such as "are," "can be," or "are part of." Finally words or pictures should be cross-linked to other relevant relationships—often drawing lines going across to other group maps. (For more information on concept mapping or webs visit this website <http://library.usu.edu/instruct/tutorials/cm/CMInstruction1.htm>.)

Agriculture is a big "umbrella" term that includes so many concepts—from farm-to-fork and field-to-fabric—not to mention all the other industrial uses of agricultural products such as linseed oil for paint and corn for fuel. Older students working in groups using pencil and paper or marker and dry-mark board, can create a concept web with the 5-Fs of agriculture; farming, food, fabric, forestry, and flowers (see explanation on last page). This lesson plan has been designed for young learners who

will focus on one aspect of agriculture—farming. Instead of words, these young learners will use pictures and yarn to create a simple concept web and the relationships, or “linking phrases,” will be discussed as a class while the concept web is completed.

Activity 1: Preparation (Concept “Picture Web,” K-6)

Begin by downloading from www.agclassroom.org/ut the images you need for this activity (see “My Farm Web” master on the last page of this lesson). When you get to the website, click on “Elementary Teachers” and then look for this lesson plan title “My Farm Web” under “Social Studies.” This lesson plan will open, complete with 30 four-inch color images you can laminate and use for this activity. You may decide to mount the pictures on colored card stock and keep the web grouping in the same color; this will make the activity easier for very young students. For example, mount the pictures of dairy cows, milk, ice cream, and cheese on one color. This activity may be conducted inside or outside; either way, you’ll need about 10 square feet of floor space.

With very young students, it will be easier to place the yarn in the appropriate location and then have them identify where the picture will go. Older students might prefer placing a picture and then the connecting yarn.

Activity 1: Procedures

Tell your students that they are going to learn about some of the “things they use every day.” Ask them “What things do you use every day?” You should get answers like food, clothes, books, paper, computers, balls, water, TV, etc. Discuss with the students that the items we use everyday are either grown or mined (with a few exceptions, like the sun!). If the item is grown specifically for people, it is a product of agriculture. Ask students “Where do we get the things we use everyday?” “Most will say, “at the grocery store!” Some might say, “a factory.” Tell students that the store is a distribution center where we buy things and that the factory is a place where “raw” ingredients, grown for us (wheat for bread) or provided by nature (petroleum for fuel or plastic), are put together to make a product that ends up in the store.

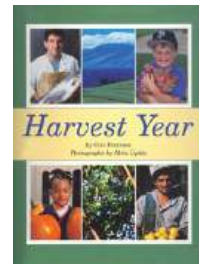
Tell students that agriculture begins on a farm and that there all kinds of farms. Cattle ranches, for beef and leather; dairy farms for milk and all the things that come from milk, orchards that grow apples to make juice and apple pies; pig farms for pepperoni, bacon, and ham; grain farms that grow corn for fuel or corn syrup for soda and wheat for bread; cotton farms for blue jeans; and tree farms for paper and landscaping. In fact, there is a different kind of farm for nearly every type of product. Farms specialize in what they grow based upon their location (climate and soil) and farmers choose only a few crops because the type of equipment used to plant and harvest each crop is very specific and expensive.

Inform students they are now going to create a “farm web” to help them understand agriculture and where the things they use every day come from. Agriculture begins in the soil on the farm. Place the farm picture in the center of the floor. Mix up the remaining pictures and either put them in a pile or pass a picture to each student. Ask the students which pictures will go closest to the farm picture? Answer: the pictures of things that are grown or raised on a farm. Students with products should place their pictures onto the web after the farm-raised item is placed. Ask each student to place his or her picture into the right place on the

Recommended Books

Harvest Year

“When it’s cold in the northern states, crunchy carrots are dug from the ground in Texas...Grapefruit as big as softballs hang on the citrus trees of sunny Florida, ready to be picked.” The text is clear, with well-chosen details about crops and modern technology. The photographs are consistently excellent throughout. They not only illustrate the huge variety of commercially raised plants and animals in the U.S., but also reflect the great diversity of people, landscape, and weather found around the country. Author: Cris Peterson. ISBN: 1563975718



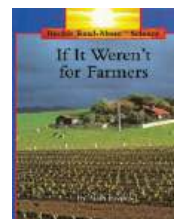
Heartland

Strong, assured verses and paintings create a vital celebration of the American midwest in its many faces, from farmland to town to cityscape. The “patchwork quilt” of fertile fields is dotted with storefronts and grain elevators; in turn, “farm and city rhythms merge” in the mills, stockyards and skyscrapers that rise out of the plains. Author: Diane Siebert. ISBN: 0690047304

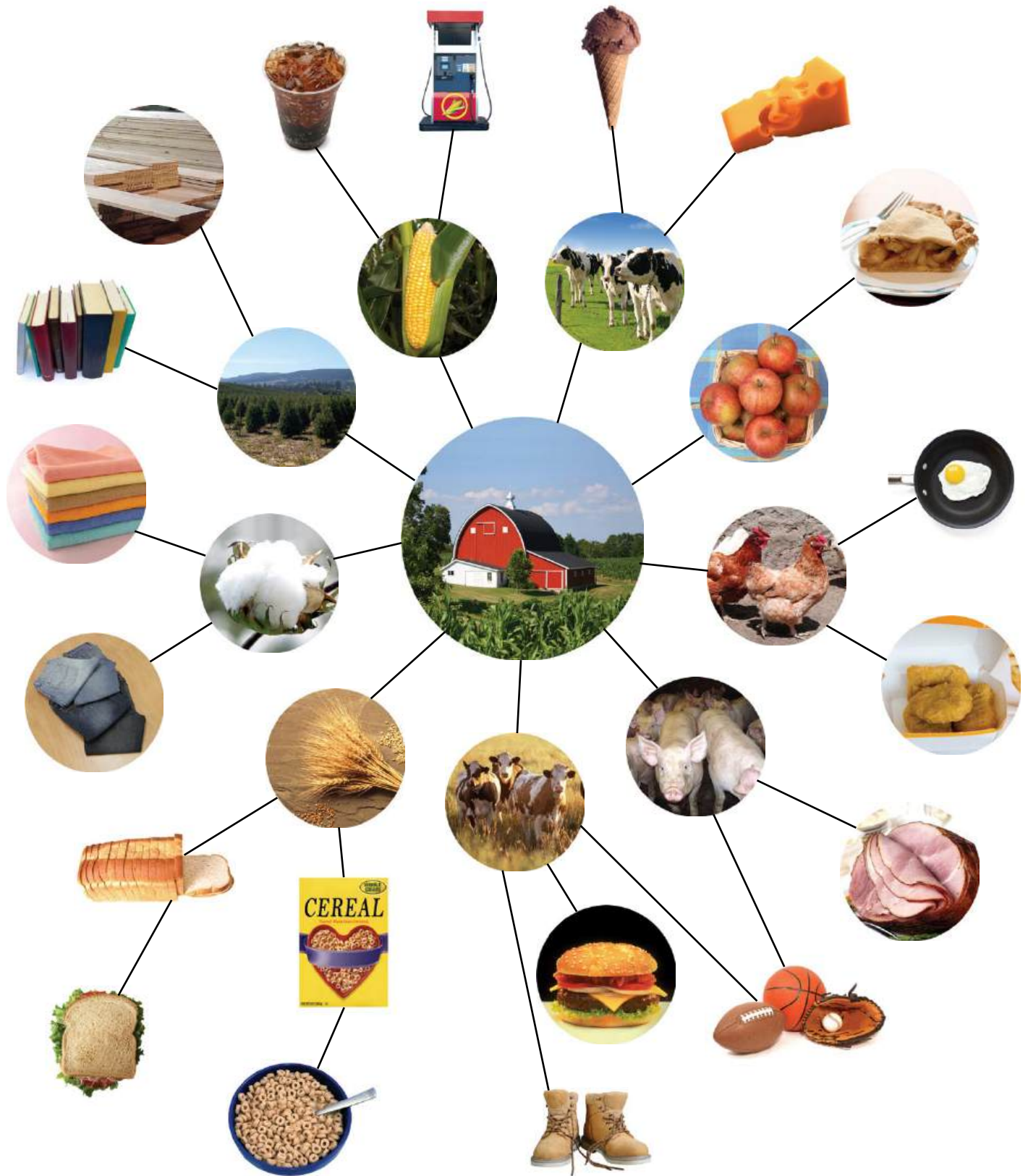


If It Weren't for Farmers

This book briefly describes some of the work that is done on different kinds of farms and the foods that are produced there. Author: Allan Fowler. ISBN: 0516460099



“My Farm Web” Master



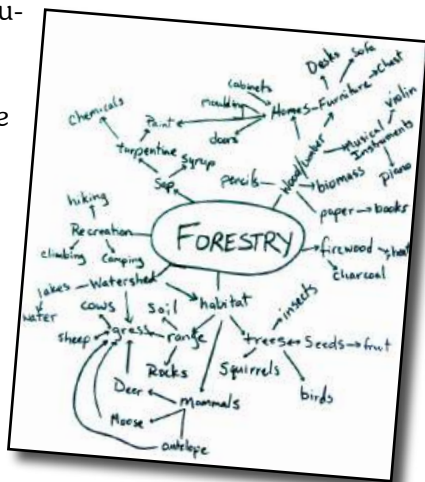
The entire lesson plan and larger 4-inch images of each picture can be printed from this link:
<http://extension.usu.edu/aic/teachers/pdf/lesson/farmweb.pdf>

web and discuss or use “linking phrases” such as “dairy cows make milk” after each picture is placed (the word “make” is the linking word). When all the pictures have been correctly placed, review the linking phrases and ask students if they think other pictures could be added to the web.

As a conclusion to the activity, read aloud one or more of the recommended books and ask students where the products mentioned in the books would fit into their “Farm Web.”

Activity 2: Preparation (Concept “Word” Web)

For upper elementary students, “Activity 1” can be extended or evaluated by defining agriculture further using the 5-Fs of agriculture (see the 5-Fs of Agriculture sidebar). To make sure students understand concept maps and the content, ask students to create a concept web with words on paper or on the dry-mark board (kids love to have an opportunity to write on the board!). Divide your students into five groups. Give each group a sheet of flipchart paper or disperse them along the dry-mark board (draw a large rectangle, the size of the flipchart paper, for each group); write one of the 5-F words (farm, food, fabric, forestry, flowers) in the center of each paper or rectangle. For a large class, make two more groups and add the words “fuel” and “fish.”



Ask students to create a concept map around their group’s word by thinking about products they can associate with the word. Give them about 5 minutes. Next, ask them to create “linking phrases.” Ask each group to share their web with the class and explain their concept web. (Paper maps should be posted on the wall.) Conclude the instruction by announcing that the students have visually created a definition of agriculture.

Additional Activities. What’s Next?

- In addition to the products students thought about with the 5-Fs, ask students to try to identify careers with the new word links they have created. For example, if they have listed the word “yogurt” on “FOOD,” they should now link the word to milk processing plant worker, and then to dairy farmers, and then to dairy computer programmers, and milk-hauling truckers, etc. Again, give the students 5 minutes to see if they can get 20 new career links. Or, make it a contest to see which group can link and list the greatest number of careers.
- After careers have been identified and written on the concept web, ask students to note the natural resources used to produce each product such as fuel (oil), water, soil, etc.
- Leave the concept maps up on the board or on the wall and encourage other groups to help add to each other’s maps. It’s important to add words showing the relationship between linked concepts if a step or stage is missing.

5-Fs of Agriculture

Farming: The production of food and fiber derived from plants and animals. Farmers must understand economics, business, mathematics, and the science involved in getting their crops and animals to market. The science involved in agriculture includes the knowledge of ecosystems, soil, water, weather, chemistry, and plant and animal biology.

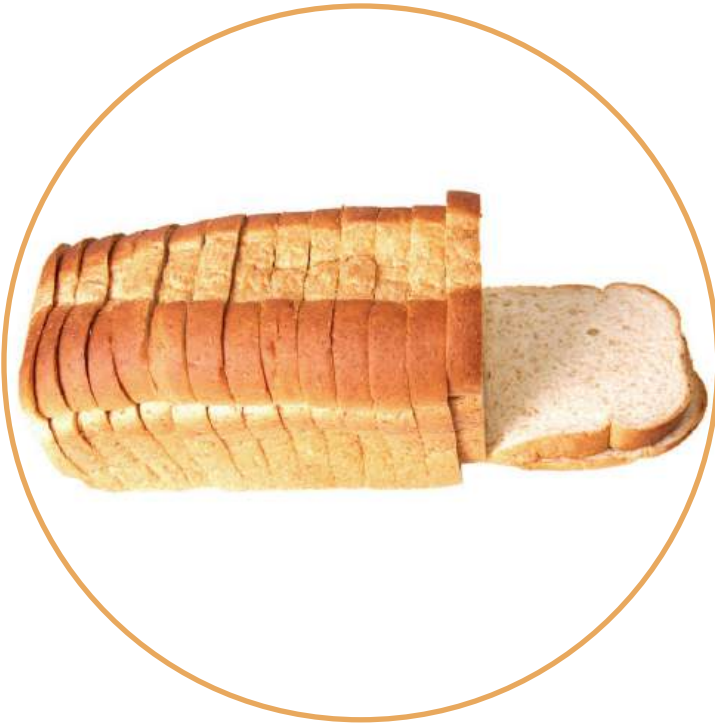
Food: Made from the raw products taken from the farm. Some products, like corn, may be consumed in their “raw” state or processed into an entirely different product like corn chips, soda, peanut butter, detergents, or medicines. Some of our farm “raw” food products need to be processed into a more palatable and digestible form before they can be eaten. Wheat, for example, is the most important grain in the U.S. We would have to eat hundreds of “raw” or whole-wheat seeds to get the same nutrition we can get more easily from processing the wheat into flour and then baking bread. Bread is a more palatable way to eat wheat. Flour, of course, is used in hundreds of other products: tortillas, pastas, doughnuts, muffins, pancakes, cookies, pie crusts, and pretzels, just to name a few. The food industry is the processing and distribution of food.

Fabric: Natural fibers are produced on the farm; the two most important fibers are wool and cotton. These fibers are made into thread or yarn and then knitted or woven into fabric or cloth, then finally made into gloves, socks, suits, coats, and other products including blankets, carpets, and curtains.

Forestry: Many forests are cultivated. Agriculturally, many private forests are grown to provide paper and other wood products.

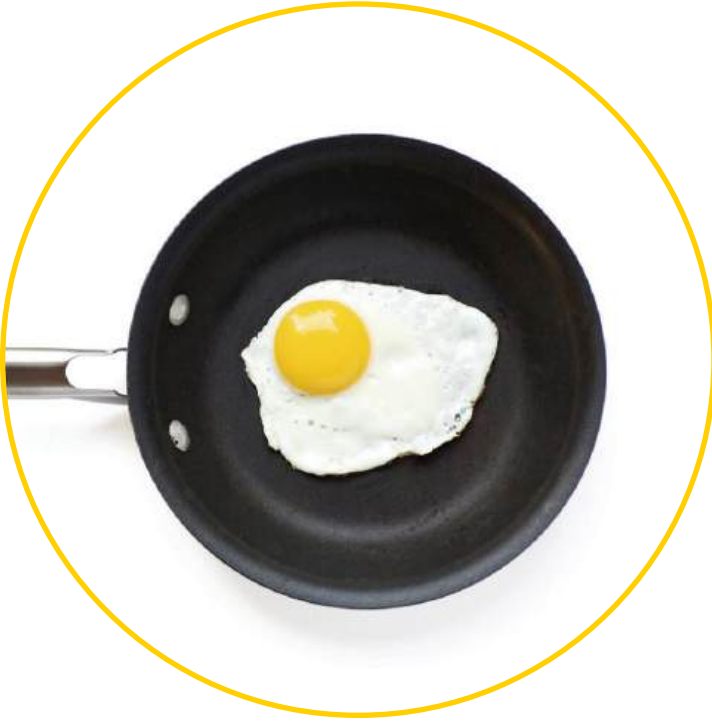
Flowers: Flower and nursery crop production are part of the “green industry” which includes turf. The primary use of these “crops” is for aesthetics or beauty.

















Source Search

Social Studies and Economics



Materials

- ◆ Four boxes labeled "Store," "Factory," "Farm," and "Natural Resources"
- ◆ Poster board (for mounting product pictures)
- ◆ Glue

Background

Many people have the misconception that farms simply provide us with raw produce and other foods. In reality, agriculture also provides us with a wide variety of raw materials from which we are able to make clothes, books, cosmetics, medicines, sports equipment, and much more.

Students may not realize that the items they use every day come from resources that are found in the environment. These resources are either extracted from the natural world through industries such as mining, or they are used in agricultural production. Most students don't recognize the origins of the products, and they think of the sources of these products as factories or stores. It is important for students to understand that before an item ever leaves a factory or enters a store, it began as a resource or product of the natural world.

Preparation

Cut out the attached pictures (40) of common products we see or use every day. Randomly divide the pictures into two groups. Use two colors of poster board (or card stock) and glue the pictures onto the poster board. Cut out the poster board around the pictures leaving a ¼ - ½ inch border. Laminate the pictures for future use.

If you prefer to get your students involved in the preparation stage (and have time), gather a variety of magazines or slick ads from the Sunday newspaper. Instruct your students to cut out pictures that represent items they use regularly (food, cars, soap, clothes, computer, etc.; avoid duplication). Glue these pictures onto poster board and laminate them.

Obtain four containers (boxes, plastic tubs or paper grocery bags) and label each with one of the following: "Store," "Factory," "Farms" and "Natural Resources." Identify a location for a relay race outside, wide hallway, or gymnasium.

Activity Procedures

Ask students what they did to get ready for school. Make a list of the common items used and foods eaten by the students. Discuss with students the types of items they use or eat everyday.

Time: 30 minutes

Grade Level: K-6

Standards

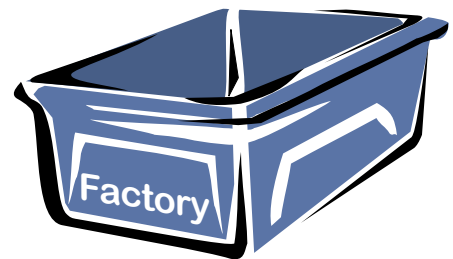
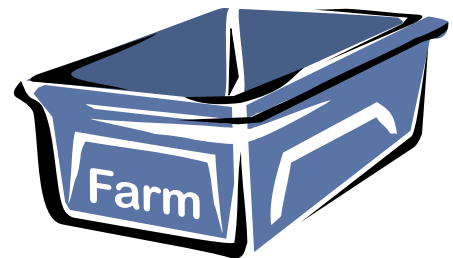
- Identify goods and services and where they come from.
- Identify the sources of goods and services in the community.
- Differentiate between wants and needs of consumers.

Divide the class into two teams. Divide the laminated pictures by color. If you have used red and blue poster board, you have a red and blue team. Be sure you have the same number of pictures in each pile. This lesson comes with 40 pictures to accommodate large classes but you may not need them all. If you have 26 students you will only use 26 pictures, 13 in each pile. Each student will take only one turn in the relay. If you have 25 students, you will still need 13 pictures in each pile; it is just that someone will be taking two turns. This will keep the relay fair. Tell the students where they are going for the “relay race” and that they will need to line up behind one another. Their task will be to sort the pile of pictures placed in front of each team into one of the four tubs. Be sure to have all the pictures face down. Locate the tubs 20-50 feet away from the first person in each line.

Give students the following instructions: This is the source relay; your job is to place each picture in the tub that is the source for the items we use everyday. When you are in the front of the line, pick up a card, look at the picture, then run to and place the picture in the correct tub based on the product’s “source”– either “Store,” “Factory,” “Natural Resources,” or “Farm.” You are looking at the product, not the packaging. The next person in line goes when the person in front of them returns, crossing over the start line or hand-tagging the person now in front of the line. The returning player should go to the end of the line. Continue the “relay race” until all of the pictures have been sorted. The first team done with the sort wins! Or do they? Now it is time to see if the pictures were sorted correctly.

Ask the students to gather around you as you go through the pictures in each box. As you hold up each picture, the students can show whether they agree or disagree with the sort. Begin with the “Farm” container. If the item contains ingredients or raw products from a farm, the item is in the correct box. Examples would be any food items such as cereal, cookies, and milk, or any clothing item made out of a natural fiber such as cotton (jeans) or wool (coat). Some items from a farm that are not eaten or worn would be paint (this contains linseed or soybean oil), or fuel such as ethanol. The “Farm” container will typically have only a few items in it. Next, look at the “Natural Resources” tub; it will only have a few items in it as well. Items in this tub should be products we get from the ocean, from plants or animals that occur naturally without management from humans, or from mining. Examples of items that should be in this box are: fish or shrimp (wild; however, fish and shrimp are also farmed), cars, salt, water, plastic (starts as oil, which is mined) synthetic fabrics (polyester, petroleum or oil products), computers, cell phones, any metallic items. Wood products may be in this box, but many wood products are from timber grown on farms. Let the class decide how to divide these. You might decide to “split the difference;” put one (the fish) into the “Farm” box and the wood into the “Natural Resources.”

Remind your students that this is the “source” search. What is the “real” source of the things we use everyday? Nearly all are grown or mined – farmed or extracted from the natural world. With this



concept in mind, you are ready to take a look at the “Factory” box. A factory is a place where raw ingredients are changed into the useful items we need or want; wood into furniture, ore into steel for cars, wheat into bread, and potatoes into chips. A factory assembles items for sale in a distribution center, a store. Everything in the “Factory” box should be sorted into either the “Farm” or “Natural Resources” container. After doing this, your students get it – products have been grown or mined. They realize that like the “Factory” container, nothing should be in the “Store” container; this is just where we purchase the items. Factories and stores rely on raw ingredients from the farm and natural world.

Every picture or product is now in either the “Farm” or “Natural Resources” container. At this point you’ll want to remind students that farms need natural resources – soil, water, light, and air. The “Farm” container could actually be placed into the “Natural Resources” container!

Questions for Discussion

- Needs vs. Wants: Which of the products in the tubs do we need to survive? Which do we want for a variety of reasons?
- Considering all the things we use every day, how many careers do you think there might be in the area of farming or agriculture and natural resources? From production, processing (factory), to distribution what entry level and highly skilled jobs are there?
- Which items used in this activity are from renewable resources? What is a renewable resource? What is a recyclable resource? Which items are renewable/recyclable in the “Farms” container? Which are renewable/ recyclable from the “Natural Resources” container? Were there any items that were nonexhaustible?
- How does the proper management of farms and natural resources affect our quality of life?

Additional Activities, What’s Next?

- ◆ Do the relay a second time using only two containers, “Farm” and “Natural Resources.” This will help you to assess student understanding.
- ◆ Ask students to research some ways to conserve or manage our natural resources, including farms, and share their findings with the class.
- ◆ Ask your students to create a concept web (see Utah Agriculture in the Classroom lesson plan on the 5-Fs of Agriculture) with one of the pictures used in the “Source Search” activity. Each picture should be placed in the center of a piece of large paper and the web drawn to identify associations or links to careers, natural resources or other products.

Vocabulary

Renewable Resources:

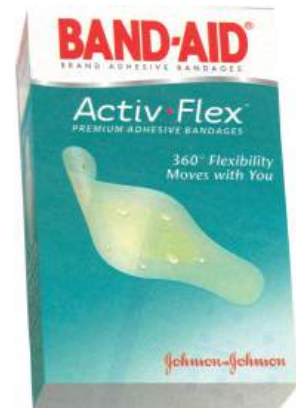
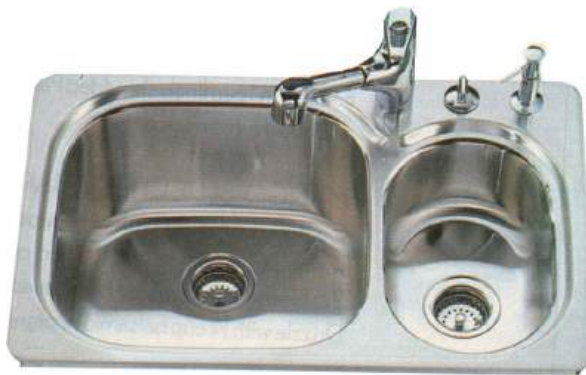
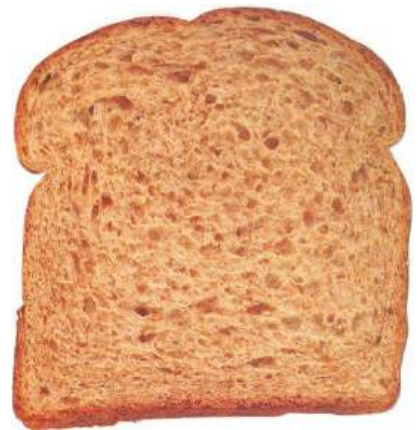
Natural resources that can be replaced by human efforts are considered renewable. These resources can be used up without proper management. Examples: forests, fish, wildlife, agriculture, plants, animals.

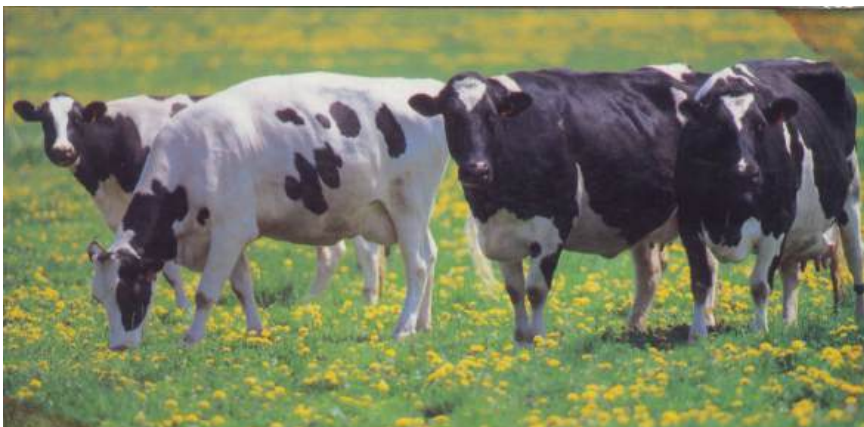
Nonrenewable Resources:

These are limited natural resources that cannot be replaced or reproduced (within a generation). We cannot manage them for renewal. Once they are gone they are gone – forever. Examples: oil, mineral resources (lead, iron, cobalt, zinc, etc.), soil (made so slowly, 1,000 - 500,000 years).

Nonexhaustible Resources:

Natural resources that can last forever regardless of human activities. They renew themselves continuously. This does not mean that resources are not limited. Human misuse can damage these resources. Examples include surface water (little can be done to affect the total amount of water), air (we can damage the air with pollution, but we cannot use it up), and sunlight (pollution can limit this resource).









Agriculture in Your Life



Overview

Students will match everyday products with agricultural sources that can be found on the prairie. Lesson extensions provide an opportunity for students to visit a farm and/or meet with the farm family.

Suggested Grade Level

PreK - 1

Estimated Time

20 – 30 minutes

Objectives

Students will be able to:

1. identify the basic agricultural sources of everyday products, including food and fiber products outside the prairie.
2. Discuss the important day-to-day activities, chores and products from their adopted farm family.

Materials

Activity Sheet A

Background

Agriculture plays a major part in our lives: from what we wear, to what we use in our classes, and even to what we do after school. We may not always think of agricultural products as the physical source of the items or things we use everyday. However, most of these daily essentials can be traced back to an agricultural source.

Production agriculture, or farming, is what most students think of when they hear the word “agriculture.” This is the actual production or growing of raw commodities. People who raise and harvest crops and livestock for consumption or purchase are typically categorized as farmers and ranchers. It doesn’t stop there. Production agriculture also includes a variety of specialties, such as fish, timber, fur-bearing animals, trees, shrubs, flowers, herbs and much more.

Most of the products we use everyday come from agriculture. The sheets we sleep on and the pajamas we wear are made from cotton, just like Q-tips for your ears. The feathers in the pillows may come from chickens or ducks. The cereal and milk we eat for breakfast; the pencils, crayons, and paper that we use at

school; and the baseballs, bats and gloves we use after school all originate from raw agricultural products. We know that our food comes from agriculture, but you can see how we are surrounded by and reliant upon many agricultural products the whole day through.

Activity

1. Discuss background information, then hand out Activity Sheet A.
2. After students work through the activity, have a discussion about what other products come from agriculture.

Extensions

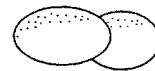
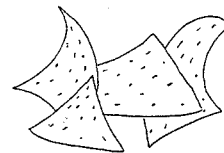
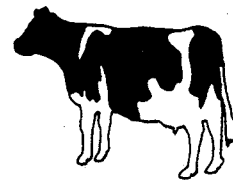
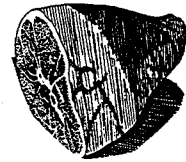
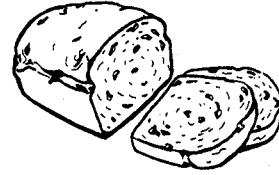
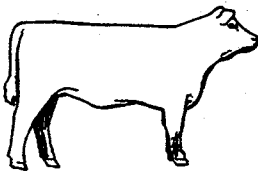
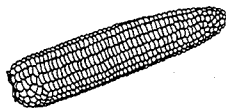
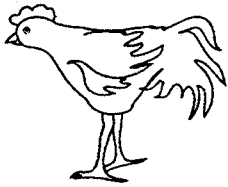
1. Have students color in images from Activity Sheet.
2. Adopt an Agriculturist – Many teachers find it educational to have someone involved in agriculture “adopt” their class. The students correspond regularly with the farmer or rancher and his/her family to practice writing skills and learn about the day-to-day operation of the farm or ranch. The family may send photographs or videotapes, grain or feed samples and other items from the farm or ranch. In turn, the students can write to the family to ask questions or react to what they have learned.

(**NOTE:** Before students become involved, the teacher and the farm family need to set goals for the program. Establish a regular correspondence schedule to keep students interested. Try to get the farm family to visit the classroom, or schedule a student field trip to the farm.)

Adapted from Food for America, National FFA Organization, P.O. Box 68960, Indianapolis, IN 46268-0999

Agriculture in Your Life

Draw a line from the picture of the food product to the picture of the plant or animal it comes from.





Agriculture in Your Life

Overview

Students will practice word manipulation while categorizing sources of basic agricultural products. Lesson extensions provide additional opportunities for students to make real connections to agriculture.

Suggested Grade Level

2 - 5

Estimated Time

20 - 30 minutes

Objectives

Students will be able to:

1. identify the original agricultural sources of basic everyday products produced around the United States.
2. identify food and fiber products outside traditional farming circles.

Materials

1. Activity Sheets A, B, & C
2. Colored pencils or crayons

Background

Agriculture plays a major part in our lives: from what we wear, to what we use in our classes, and even to what we do after school. We may not always think of agricultural products as the physical source of the items or things we use everyday. However, most daily essentials can be traced back to an agricultural source.

Production agriculture, or farming, is what most students think of when they hear the word “agriculture.” This is the actual production or growing of raw commodities. People who raise and harvest crops and livestock for consumption or purchase are typically categorized as farmers and ranchers. It doesn’t stop there. Production agriculture also includes a variety of specialties, such as fish, timber, fur-bearing animals, trees, shrubs, flowers, herbs and much more.

Most of the products we use everyday come from agriculture. The sheets we sleep on and the pajamas we wear are made from cotton, just like Q-tips for your ears. The feathers in pillows may come from chickens or ducks. The cereal and

milk we eat for breakfast; the pencils, crayons, and paper that we use at school; and the baseballs, bats and gloves we use after school all originate from raw agricultural products. We know that our food comes from agriculture, but we are surrounded by and reliant upon many agricultural products the whole day through.

Vocabulary/Glossary

agriculture – farming; the science, art and business of cultivating the soil, producing crops and raising livestock useful to people.

cotton – the soft, white seed hairs, which fill the seed pod of the cotton plant.

crops – agricultural products, growing, harvested, or collected; for example, wheat, cotton, fruit, honey.

dairy cows – cows raised mainly for the production of milk for dairy products.

farmer – a person who earns a living by farming, especially one who manages or operates a farm.

forestry – the science of systematic forest management for the production of timber, conservation, recreation, and wildlife.

flowers – plants cultivated for their blossoms; flowering plants.

horticulture – the art or science of growing flowers, fruit, vegetables, trees or shrubs.

livestock – domestic animals kept for use on a farm or raised for sale and profit.

rancher – a person living and working on a large farm raising livestock in large numbers.

timber – trees or forests collectively; wood suitable for building whether cut or still in the form of trees.

wheat – any of several cereal grasses having dense erect spikes containing grains which thresh free of chaff.

Activity

1. Discuss background information, then hand out Activity Sheet A. Students should match the product with its agricultural source.

Answer Key: Activity Sheet A

timber – paper, pencils, potpourri, houses

dairy cow – cheese, ice cream, yogurt

cotton – blue jeans, paper, shirts

flower – perfume, potpourri

wheat – spaghetti, tortillas, cereal

2. Discuss with students other products that come from agriculture.
3. Hand out Activity Sheet B. Discuss the vocabulary words and the **bold-faced** heading words listed to ensure that students understand them.
4. Review alphabetizing. Have students write the vocabulary words in alphabetic order on the lines under each heading. After students complete the exercise, they can complete the Word Find puzzle.

Answer Key: Activity Sheet B

crops – corn, cotton, rice, soybean, wheat
livestock – beef cattle, dairy cattle, poultry, sheep, swine
horticulture – apples, flowers, trees, turf grass, vegetables
dairy – butter, cheese, ice cream, sour cream, yogurt

5. Have students work on Activity Sheet C. **NOTE:** Each commodity should have a different color dot and each commodity should be marked on the United States map with its designated color.

Extensions

1. Adopt an Agriculturist – Many teachers find it useful to have someone involved in production agriculture “adopt” their class. The students correspond regularly with the farmer or rancher and his/her family to practice writing skills and learn about the day-to-day operation of the farm or ranch. The family may send photographs or videotapes, grain or feed samples and other items from the farm or ranch. In turn, the students can write to the family to ask questions or react to what they have learned.

(**NOTE:** Before students become involved, the teacher and the farm family need to set goals for the program. Establish a regular correspondence schedule to keep students interested. Try to get the farm family to visit the classroom, or schedule a student field trip to the farm.)

2. Have students look beyond Activity C and place answers on a larger wall map of the United States. Ask students to discuss agricultural products they know are grown in certain parts of the country. For example, Florida and California: citrus fruits; Gulf of Mexico: seafood. Why are these products produced in these locations? Have groups draw these products or cut out pictures from magazines to place on the classroom map. State rankings of various common commodities are available from the USDA website <www.usda.gov>
3. Have the class construct an “occupation line” showing how many people and different occupations are involved in delivering a raw product to the consumer (transportation, manufacturing, packaging, sales, stores, etc.) Use several products including some that the consumer uses fresh (fruit, beef or chicken) and some that are changed from the raw material (clothing, furniture).

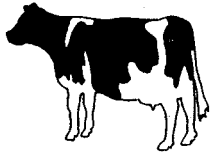
Adapted from Food for America, National FFA Organization, P.O. Box 68960, Indianapolis, IN 46268-0999.

Agriculture in Your Life

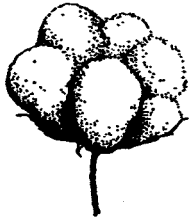
Match the product on the right with the pictures of the product's agricultural source.



Timber



Dairy Cow



Cotton



Flower



Wheat

cheese

blue jeans

paper

spaghetti

perfume

ice cream

pencils

tortillas

shirts

potpourri

houses

yogurt

cereal

Agriculture in Your Life

Place the vocabulary words in alphabetic order under the appropriate topic.

<u>Crops</u>	<u>Livestock</u>	<u>Horticulture</u>	<u>Dairy</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Vocabulary Words

beef cattle	corn	soybeans	apples
cotton	vegetables	ice cream	butter
sour cream	cheese	poultry	swine
sheep	dairy cattle	flowers	rice
turf grass	wheat	yogurt	trees

Find and circle the words in the puzzle.

WORD FIND

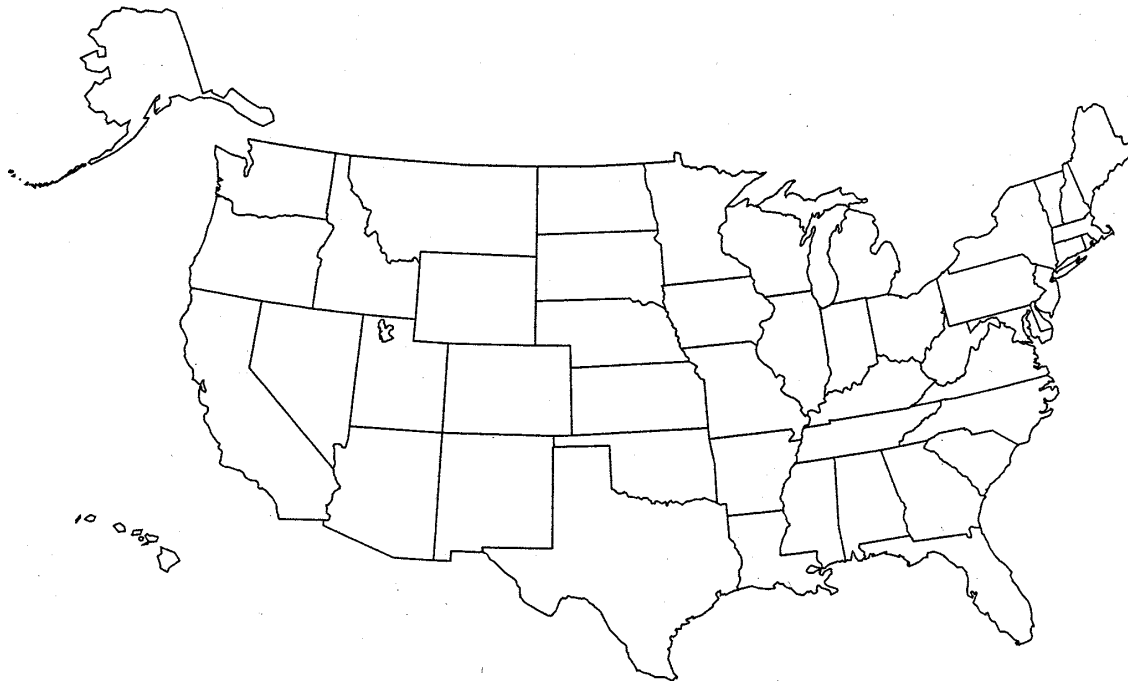
butter	sheep
cheese	swine
corn	trees
cotton	vegetables
rice	wheat

```

c o r n a c t b o e g
o q t s n s a u m s s
t r e e s h m t r e w
t o a w h e a t w e i
o c r t l e o e f h n
n s f b m p j r i c e
v e g e t a b l e s o
  
```

**Where in the United States does your food come from?
Where does your lunch come from?**

Most states produce their own milk, eggs, fruits, vegetables, and grains. Some states produce so much of a particular crop or animal that they have become famous for their particular products. Color each small circle on the legend with a different color and then color a small circle on the map to match the products of the most productive states in the United States. **Mark each agricultural product with a different color.** Many states will have more than one colored circle. Why are these products produced in these locations?



Legend

- ☐ Beef: Texas, Nebraska, Kansas, Colorado, Iowa, Oklahoma, and California.
- ☐ Chickens: Arkansas, Georgia, Alabama, North Carolina, Mississippi, and Texas.
- ☐ Corn: Illinois, Iowa, Nebraska, Indiana, Minnesota, and Ohio.
- ☐ Dairy Products: Wisconsin, California, New York, Pennsylvania, Minnesota, and New England.
- ☐ Eggs: California, Georgia, Arkansas, Indiana, Pennsylvania, and Texas.
- ☐ Fruit & Vegetables: California, Florida, Arizona, Washington, New York, Georgia.
- ☐ Pork: Iowa, Illinois, Minnesota, Nebraska, Indiana, North Carolina, and Missouri.
- ☐ Soybeans, major oil crop used in salad dressings and mayonnaise: Illinois, Iowa, Nebraska, Indiana, Minnesota, and Ohio.
- ☐ Potatoes: Idaho, Washington, California, North Dakota, Maine, and Wisconsin.
- ☐ Tomatoes: Florida, California, Virginia, Ohio, Georgia, and Michigan.
- ☐ Wheat: North Carolina, Kansas, Montana, Oklahoma, Washington, and Minnesota

Illinois Lunchables

Grade Level: K-3

Approximate Length of Activity: One hour

Objectives:

Teacher:

1. Develop an awareness of the agricultural products of Illinois.
2. Develop an awareness of soil type and how soil and climate conditions dictate Illinois agricultural products.

Students:

1. Develop an awareness of Illinois agricultural products.
2. Taste and experience Illinois-grown agricultural products.
3. Discuss how climate and soil impact Illinois agricultural products, and produce a sack lunch of food containing Illinois agricultural products.

Illinois Learning Standards: 12.B.1a; 15.C.1a; 15.C.1b; 17.C.1a

Introduction:

Bread is made from wheat grown on farms. Wheat grown in Illinois is used to make cakes, cereals, pretzels, cookies, biscuits, and pancakes, but is not used to make bread. However, wheat grown in other states is used in Illinois bakeries to make bread.

Farmers plant the wheat seed in the ground using a grain drill. The wheat is planted in the fall and it's typically called winter wheat. The wheat plant consists of roots, a stem, long slender leaves, and a head which has kernels (which are seeds). In June or July the wheat is ready to harvest. The farmer combines the wheat in the field and unloads the hopper into trucks or wagons to haul back to the farm or the country elevator. The elevators look like giant silos and may be the tallest structures in small country towns. The country elevator ships the wheat by truck, rail, or barge to a grain terminal. Next the wheat is sold to the various industries which make food, feed, and other products. Some wheat is shipped overseas.

The place where wheat is shipped to make flour is called the mill. The people who process the wheat are called millers. Wheat is put through a cleaning process to remove foreign matter such as weeds, seeds, corn, beans, and stems. Rollers then press over the wheat kernels to break them into pieces. Then they are shaken on screens to sift out the bran (the broken crust of the seed) and germ (the part of wheat used to grow a new plant) not used in



wheat flour. This is repeated many times to make a soft powdery substance we know as flour. If whole wheat bread is being made, the bran and the germ are added back in. Next the miller adds a special ingredient to the flour to whiten it, and B-vitamins and iron are added for nutrients. The flour is shipped in bags to the bakery or to the grocery store.

Bakers like to use wheat flour because it contains a magical protein called gluten. To make dough, they add active yeast, warm water, and other ingredients to the flour. The gluten traps the air bubbles the yeast releases and causes the dough to rise.

Ham, commonly used as a lunch meat, comes from hogs. Bacon, pork sausage, and pork chops also come from hogs. There are close to five million young pigs and mature hogs on Illinois farms. Hogs are usually taken to market when they weigh 220-260 pounds. By this time, they are about five to six months old. Pork in our diet is important because it contains high amounts of protein, B-vitamins, and Thiamin.

Mayonnaise is a product of soybeans, a major Illinois crop. Soybean oil, made by extracting oil from soybeans, is a main ingredient in mayonnaise. The oil makes up 20 percent of the weight of the soybean. Soybeans are also used to make salad dressings, margarine, cookies, cereals, crackers, soup, enamel paints, electrical insulation, pesticides, inks for printing, etc. Other ingredients in mayonnaise include eggs, spices, and vinegar or lemon juice.

The goal of the lesson is for students to create a lunch made from predominantly Illinois agricultural products.

Materials Needed:

- “Look What Grows on Illinois Farms!” handout
- Two long tables to form an assembly line for making the Illinois Lunchables
- Food handling gloves for the class
- Three loaves of whole wheat bread
- One jar of mayonnaise
- Ham slices
- A bunch of seedless grapes
- Two bags of carrot sticks
- Apple juice boxes, one for each student in class
- Four plastic knives
- One box of sandwich bags
- Brown paper lunch sacks, one for each student



Activity Outline:

1. Ask students what agricultural products are grown in Illinois and list them on the chalkboard. (Examples: corn, beans, pork, beef, dairy [milk and cheese], apples, pears, cherries, peaches, strawberries, blueberries, raspberries, grapes, melons, peas, sweet corn, popcorn, tomatoes, peppers, asparagus, onions, cucumbers, potatoes, catfish, chickens, ducks, honey bees, mushrooms, potatoes, watermelon, etc.) See “Look What Grows on Illinois Farms!” handout for more information.
2. Have students provide examples of ag products not grown in Illinois. (Examples: peanuts, cotton, oranges, bananas, grapefruit, pineapple, head lettuce, cranberries, rice, kiwi fruit, and more.)
3. Discuss why farmers can raise some types of crops, but not others. Reasons would include climate (too hot or cold, or too wet or dry) and type of soil.
4. Discuss how farmers plant wheat, harvest wheat, how it gets to the mill, and then to the bakery.
5. Ask the students if the products we eat every day come only from Illinois. Then prepare for Illinois Lunchables.
6. Divide the students in class into three to four working groups for the assembly line to assemble the lunch. The first group serves the second group by preparing their lunches as they pass by the assembly line. Then the passersby become the assemblers when the first group is finished.
7. For the assembly line, the first student of the first group removes two slices of bread, and the second student places one slice of ham on the sandwich. The third student measures out one-half teaspoon of mayonnaise and spreads it on the ham. The fourth student cuts the sandwich and then bags it.
8. In the second functional group, the first student takes the sandwich from the first group, opens a sack, and places the sandwich into the sack. The second student counts out ten grapes and places them into a plastic bag and the plastic bag into the sack. The third student counts out two carrot sticks and places them into a plastic bag, and then into the sack. The fourth person adds a napkin and one box of apple juice drink and hands the sack to the awaiting student.
9. This activity involves standard measurements, i.e., tablespoon, for uniformity and the use of cooperative activity in the larger group and subdivided groups as well.
10. When one half of the class has a prepared lunch, that half becomes the foodhandlers and preparers and the other half is served by the assembly line.



Discussion Questions:

11. Are all of the products you have in your lunch grown on farms?
12. Are all of the products we ate today grown in Illinois? Which ones are and which ones aren't?
13. What are the advantages and disadvantages of growing your own food?
14. How does wheat get from the farm to the bread in the grocery store?

Related Activities:

1. Follow the production of the Illinois Lunchables with a picnic in the schoolyard or local park where local plants and trees can also be discussed.
2. Make a list of the food each student has for dinner that evening, and the next day make a graph of the Illinois agricultural products eaten and those products grown in other areas. Compare the results and discuss.
3. Discuss the recycling of the paper bag and the plastic bag used in preparing the Illinois Lunchables. (See if the juice box, peanut butter jar, jam jar, or plastic knives were made of recyclable materials.)
4. Find out what nutrients, vitamins, and minerals are in the foods you ate in Illinois Lunchables. Was the lunch a balanced meal?



Look What Grows on Illinois Farms

Illinois is a major agricultural producer. In fact, more corn, soybeans, cattle, and hogs are produced here than in just about any other place in the world!

But, did you know Illinois farmers produce dozens of unique grains, livestock, and specialty crops? Many of them even find their way to your family's table or into your homes. If you look closely, you'll also find Illinois agricultural products in items like paints, cosmetics, medicines, fuels, printing inks, chemicals, beverages, and all kinds of food! See how many of these products you can find. You may use them every day. And remember . . . an Illinois farmer probably helped in making them!

Read on to find out more about the contributions of Illinois Agriculture to the quality of life in America.

SOYBEANS

Fact: *There are 10,700,000 acres of soybeans in Illinois — more than anywhere else in the United States!*

Soybeans are found in such products as:

Foods

Cooking oils
Mayonnaise
Animal feeds
Candy
Pet foods
Beer & ale
Bakery goods
Salad dressings
Oriental foods
Margarine
Coffee creamer
Cereals
Baby food

Non Foods

Pharmaceuticals
Caulking compounds
Disinfectants
Electrical insulation
Herbicides
Printing inks
Soap
Crayons
Glue
Paint
Plywood
Cosmetics
Fuel for buses



CORN

Fact: *Illinois produces 1,130,000,000 bushels of corn a year — the second highest in the United States!*

Look for corn in these products:

Foods

Ketchup
Peanut butter
Baby foods
Process cheese products
Vegetable oil
Margarine
Fruit juice drinks
Cereals
Sweeteners
Beer & ale
Potato chips
Shortening
Soft drinks

Non Foods

Cleaners
Detergents
Sandpaper
Charcoal briquettes
Photographic films
Chewing gum
Glues & adhesives
De-icers for roads
Ethanol-blended fuels
Antibiotics
Rubber tires
Degradable plastic trash bags
Cosmetics



CATTLE

Fact: *Illinois dairy cattle produce two-and-a-half million pounds of milk in one year.
There are 475,000 beef cattle on Illinois farms.*

Dairy cattle and/or beef cattle also provide us with these products:

Foods

Milk and milk products
Marshmallows
Pet foods

Non Foods

Piano keys
Floor wax
Textiles
Insulin
Vitamins
Chewing gum
Insulation
Cosmetics
Boots & shoes
Perfumes
Soaps
Plastics
Photographic film
Candles
Pharmaceuticals
Bandages
Shaving cream
Sutures
Luggage
Shoe polish



HOGS

Fact: *There are close to five million hogs and pigs on Illinois farms.*

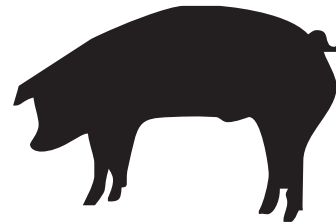
Hogs and pigs provide us with such products as:

Foods

Chops and roasts
Gelatin

Non Foods

Antifreeze
Matches
Gelatin
Fabric softeners
Glass
Water filters
Rubber gloves
Chalk
Cement
Floor wax
Plastics
Upholstery
Paint brushes
Glue
Wood putty
Furniture polish
Insecticide
Crayons
Heart valves
Sutures
Cosmetics
Gloves & leather items



SPECIALTY CROPS

Fact: *Illinois is also known for its specialty crops and other livestock. They range from specialized varieties of grains and oilseeds to animals, birds, nuts, and livestock, and an abundance of fruits and vegetables.*

Some Illinois commodities include:

Grains & Oilseeds

Wheat
Oats
Clover
Straw
Canola

Vegetables

Tomatoes
Popcorn
Sweetcorn
Potatoes

Other Specialty Crops

Sunflowers
Herbs
Horseradish
Catfish
Christmas trees

Fruits & Nuts

Apples
Blueberries
Cherries
Pears
Strawberries
Grapes

Animals, Birds, & Bees

Ducks
Honey bees
Buffalo
Mink
Llamas
Lamb & sheep



Career Bingo

Grade Level: K-3

Approximate Length of Activity: 45 minutes

Objectives:

Teacher:

1. Provide information on a variety of ag-related careers.
2. Have students work cooperatively on an activity.

Students:

1. Become familiar with careers related to agriculture.
2. Match careers with definition of jobs.

Illinois Learning Standards: 15.A.1b; 15.C.1a

Introduction:

Agriculture is the production of food and fiber through growing crops and raising animals. The agricultural industry is made up of all the people who help feed and clothe other people in the world. So, can you live a day without agriculture? Think about it. It's the food we eat, the clothes we wear, the cars we drive, the homes we live in, and much, much more! This is why the agriculture industry is our nation's largest industry.

There are many areas for employment opportunities in agriculture. These areas are production; social service professionals; education and communication; managers and financial specialists; scientists, engineers and related specialists; and marketing, merchandising, and representatives. All of these jobs are important to the economy of our state, country, and world. There are over 250 career areas available and 22 million people working in agriculture, and this is just in the United States. In Illinois, one out of every five to six people are employed in an agricultural career.



Materials Needed:

- “Agricultural Careers” worksheet for each student
- “Career Bingo Game Card” sheet for each student
- “Career Bingo Pictures” sheet for each student
- Scissors
- Glue
- Markers for Bingo Cards (corn, soybeans, candy corn, etc.)

Activity Outline:

1. Discuss with the students the various careers in agriculture. Use the “Agricultural Careers” worksheet to get ideas.
2. Give each student a copy of the “Career Bingo Game Card” and “Career Bingo Pictures” worksheet.
3. The students should cut out the pictures on the “Career Bingo Pictures” worksheet and glue the pictures into the various boxes on their “Career Bingo” board. Each student should design their own bingo board so no two are alike.
4. Hand out markers for the bingo cards. The markers could be corn kernels, soybeans, candy corn, etc.
5. Use an extra copy of the “Career Bingo Pictures” worksheet to call out careers during the bingo game.

Discussion Questions:

1. What kind of career or job do your parents have? Is it related to agriculture?
2. What type of job would you like to have? Is it related to agriculture?

Related Activities:

1. Interview someone in the agriculture field.
2. Invite a guest speaker to the classroom to tell about their role in agriculture.
3. Take a field trip to an ag-related business.



Agricultural Careers

Science and Research

Chemist
Animal Nutritionist
Soil Scientist
Plant Breeder
Biotechnologist
Economist
Equipment Tester
Food Packager
Lab Technician
Food Scientist/Technologist
By-Product Developer

Ag Communications

Farm Newspaper Editor/Writer
Farm Radio Broadcaster/Technician
Television Weather Reporter/Director
Magazine Writer/Publisher
Photographer for Newspaper & Magazine
Advertising Executive/Writer
Exhibitor at Agriculture Trade Shows
Market Reporter

Ag Education

High School Ag Teacher
Extension Advisor
College Professor
Government Worker
Health Teacher

Environment and Conservation

Conservationist
Recycling Manager
Environmentalist
Land Use Planner
Irrigation Consultant

Production Agriculture

Beef Producer
Corn Grower
Dairy Farmer
Fruit Grower
Lamb and Wool Producer
Soybean Grower
Swine Producer
Vegetable Grower
Wheat Grower
Poultry Producer

WS- 188

Business & Industry

Feed Mill Operator
Fertilizer Salesperson
Seed Plant Supervisor
Seed Sorter
Pharmaceutical Representative
Manufacturer for Combines, Planters, Tractors
Implement Dealer
Construction Worker for Buildings
Farm Supplier (fences, feeders, grain bins)
Trucker, Barge Operator, Train Engineer
Farm Manager
Loan Officer
Credit Analyst
Grain Broker
Salesman for Feed, Seed, Equipment
Grain Marketer
Country Elevator Manager
Cheese Maker
Bread Maker
Grocer
Butcher
Wholesale Food Salesman
Milk Delivery Driver
Produce Cleaner

Ag Services

Veterinarian
Farm Accountant
Inspector for Feed & Seed
Mechanic
Parts Manager
Welder
Surveyor
Electrician
Ag Pilot
Inspector for Food
Food Broker
Ag Lawyer
Meat Inspector
Restaurant Owner
Waiter/Waitress
Safety Inspector

To be used with:
Career Bingo

Name: _____

Career Bingo Game Card

		FREE		

Career Bingo Pictures

 Corn Farmer	 Food Inspector	 Mechanic	 Ag Pilot	 Ag Reporter
 Ag Teacher	 Trucker	 Ag Photographer	 Veterinarian	 Seed Salesman
 Conservation Officer	 Sheep Farmer	 Researcher	 Newspaper Writer	 Elevator Manager
 Landscape Architect	 Tractor Salesman	 Dairy Farmer	 Chemist	 Vegetable Grower
 Hog Farmer	 Accountant	 Restaurant Manager	 Dietician	This space intentionally left blank.

From Tassel to Table



From Tassel to Table Chain

Materials:

One individual-sized cereal box
Hole Punch
Yarn (8 pieces, 6-8 inches each)
Corn Ag Mag

Construction Paper (Yellow, Green, Pink, Brown, Blue, Red, Orange)
Scissors
Access to www.agintheclassroom.org
Corn kernels

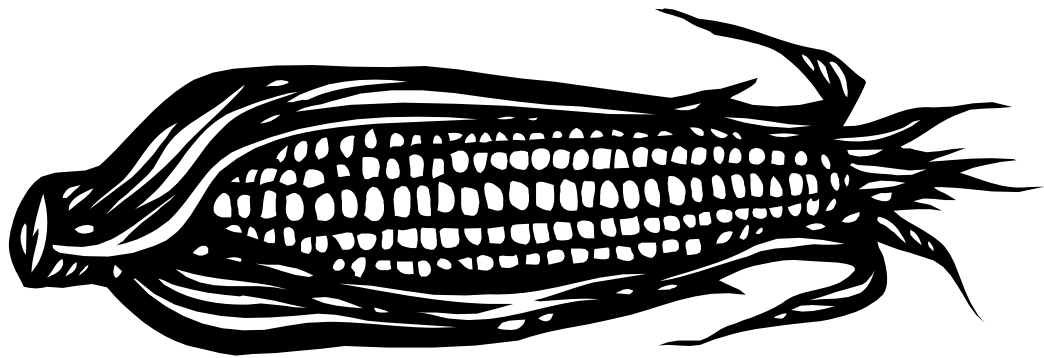
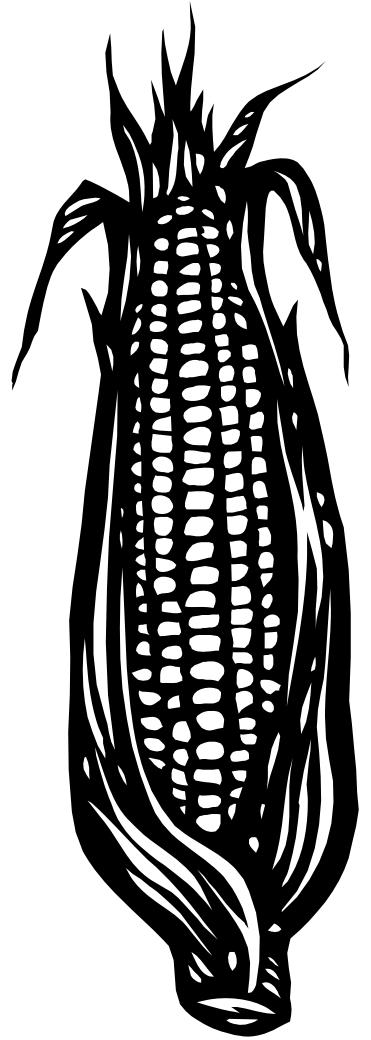
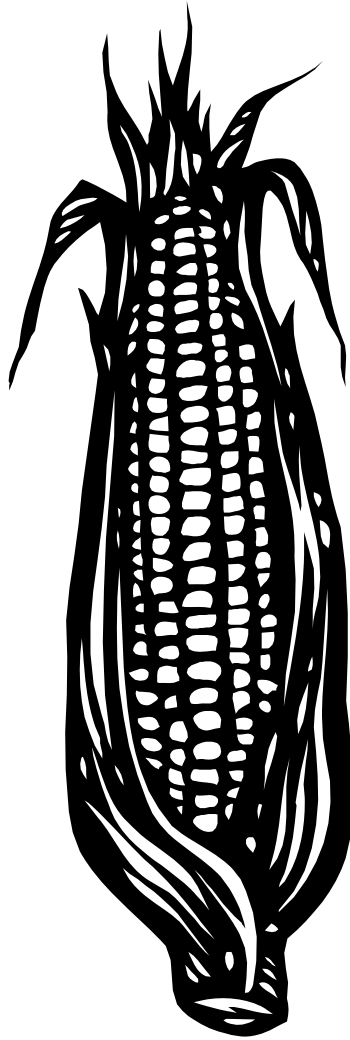
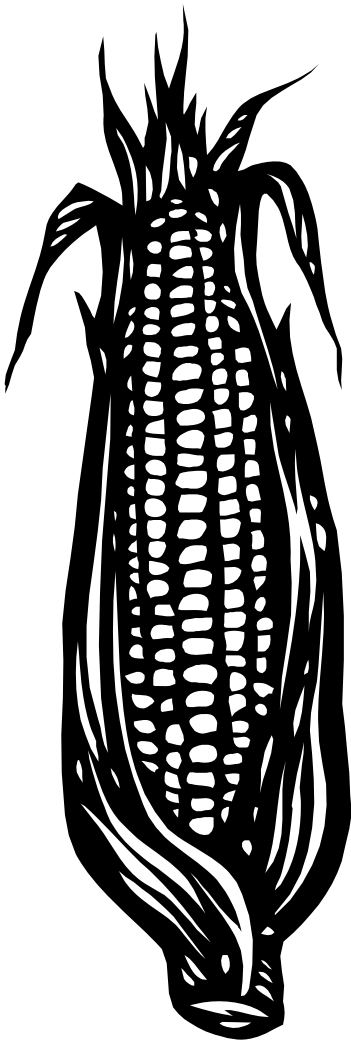
Directions:

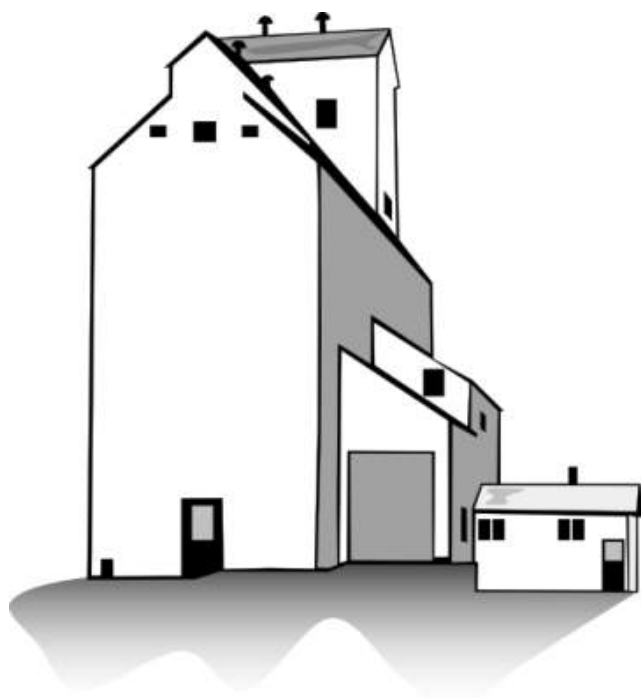
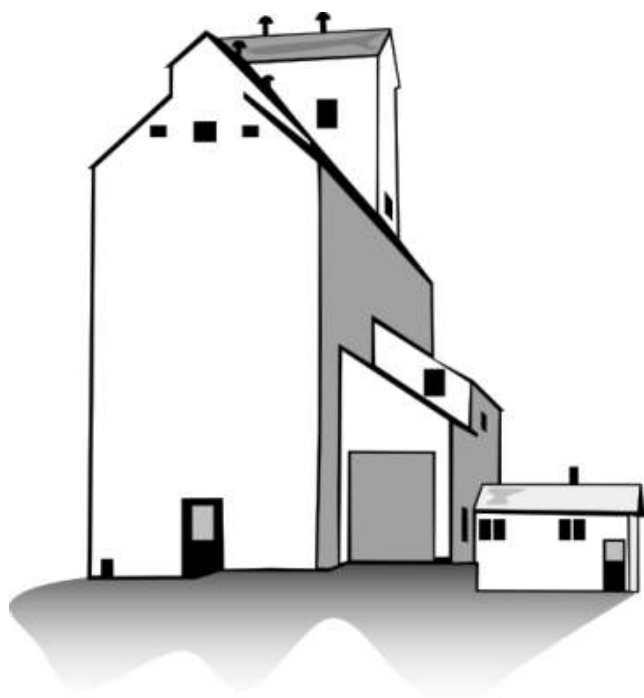
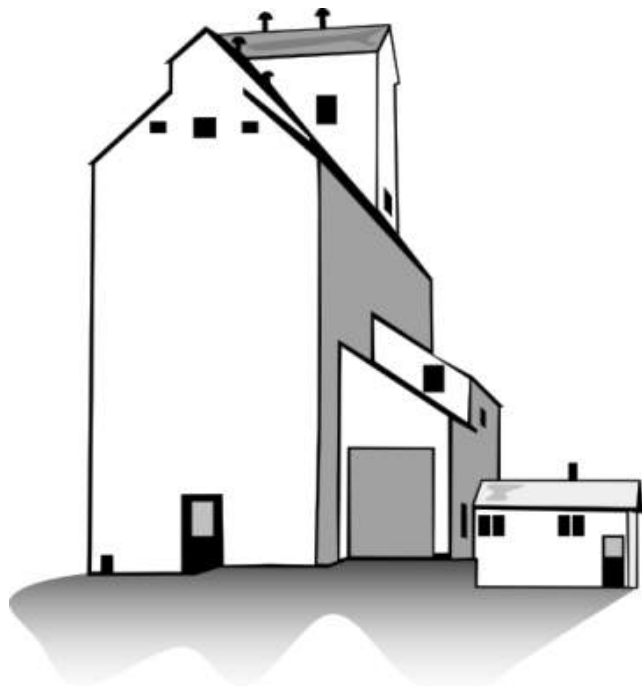
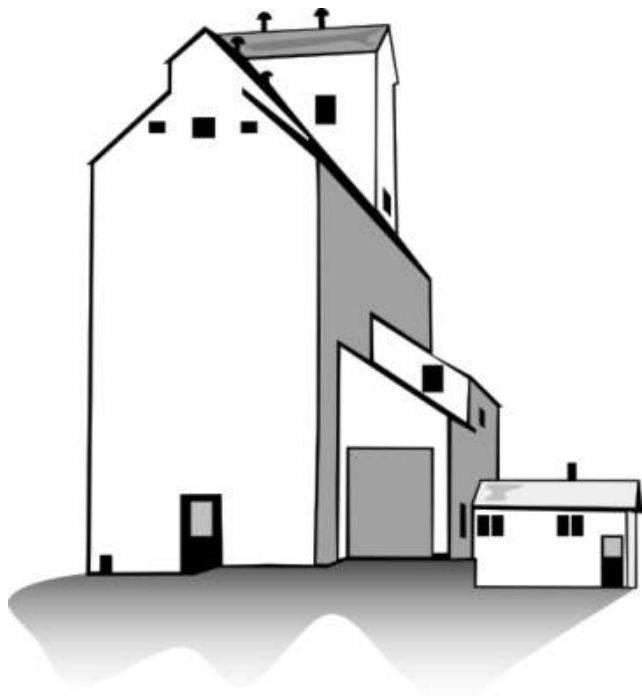
1. Learn about corn by reading the Corn Ag Mag.
2. Have students make one of each item out of construction paper: kernel, corn, combine, cob, elevator, manufacturer, truck and grocery cart. These are available at: www.agintheclassroom.org under "Make & Takes."
3. Instruct students to punch a hole on each side of the construction paper items, except the corn kernel, which needs the top punched.
4. Have students create a chain by placing the items in the following order:
 - Kernel: The corn plant starts with a kernel. Farmers plant kernels in the spring time. The kernel needs moisture and warm temperatures to grow.
 - Corn plant: During the spring and summer months, the corn plant grows. It develops leaves and a strong root system. Wind pollination fertilizes the silk. This fertilization is what creates an ear of corn. The corn plant continues to mature until mid-October.
 - Combine: When the kernels are at the right moisture level, farmers harvest the corn using a combine.
 - Cob: The kernels are shelled, which means they are taken off of the cob.
 - Elevator: These kernels can be stored on the farm or taken to a grain elevator. At the elevator, farmers receive money in exchange for the corn.
 - Manufacturer: Corn is processed to make products you use everyday, such as cereal. Check the ingredient label on your cereal box. You might see ingredients such as corn meal and corn syrup. A manufacturer makes and packages cereal.
 - Truck: Once the cereal has been made, it is transported to your grocery store by using trucks.
 - Grocery Store: A grocery store displays and sells a variety of products, so that you, the consumer, can pick out and purchase your cereal.
 - Cereal Box: Check the Nutrition Label. There is corn in your cereal box. Now, you know how it got there!
5. Have the students place all the items in their cereal box. Then, starting with the kernel, they can slowly pull shapes out and share how corn goes from the tassel to the table.

Note to Educator: It may be helpful to discuss each step of chain prior to doing this activity. Use this activity for an interest approach or to culminate a corn or food lesson.

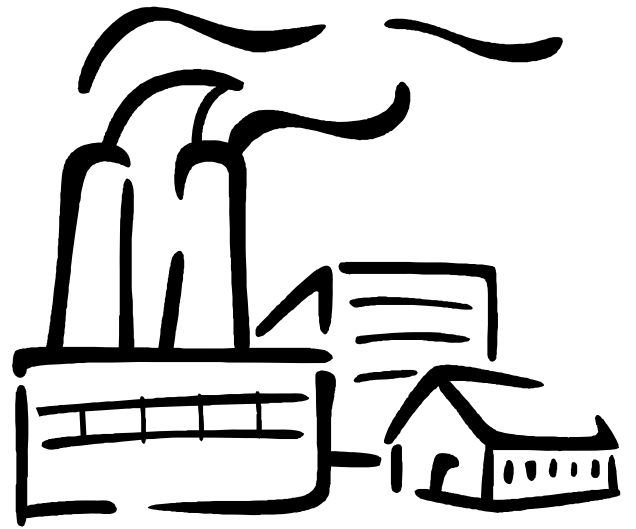
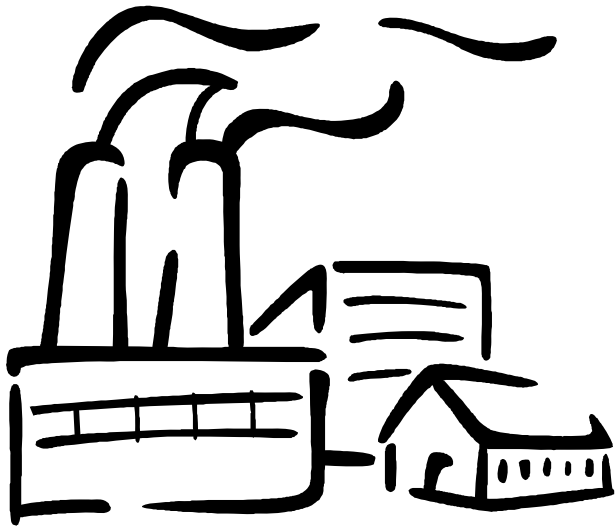
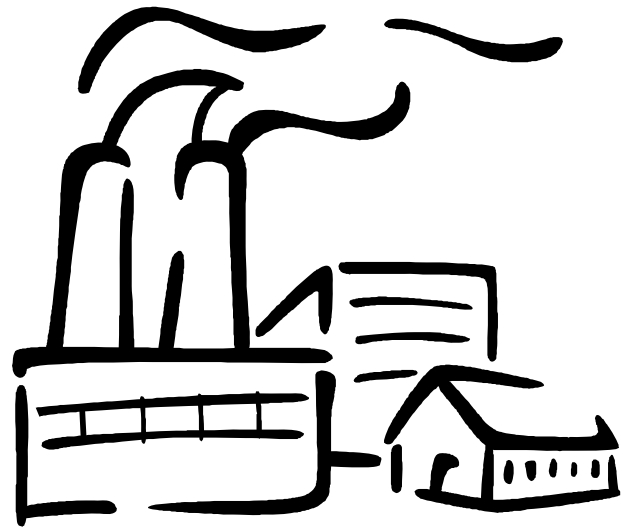
Illinois Learning Standards: .12.A.2a; 15.A.2a; 15.D.2b

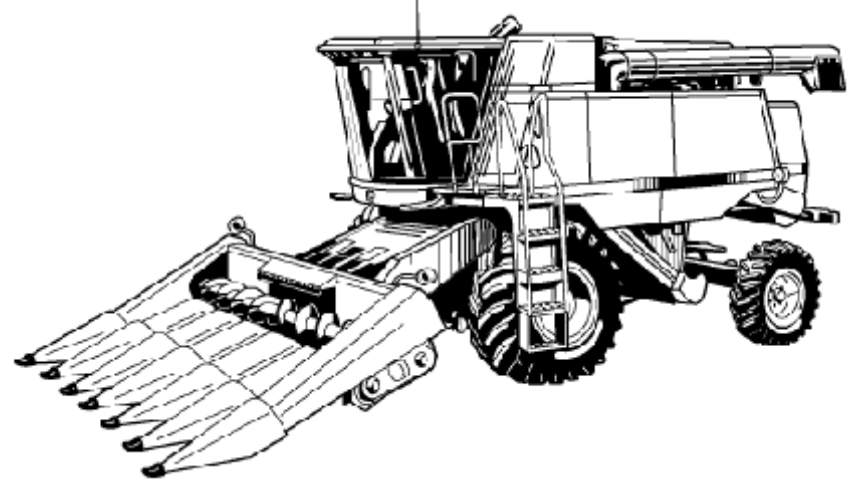
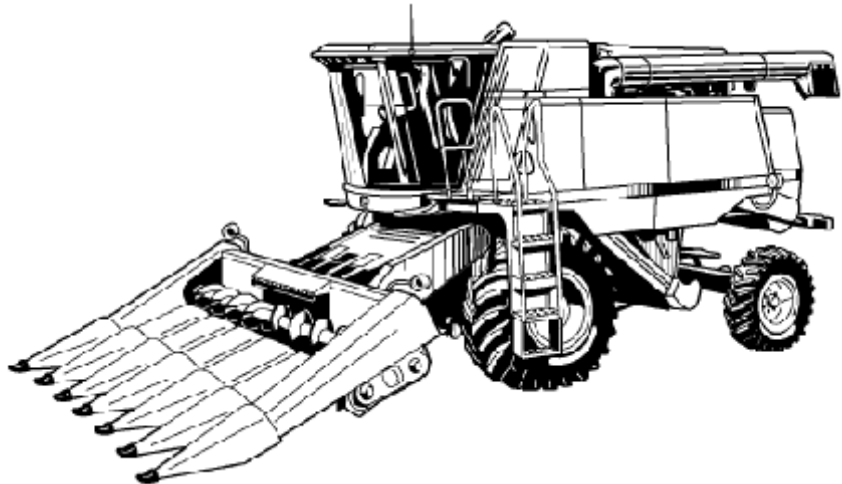
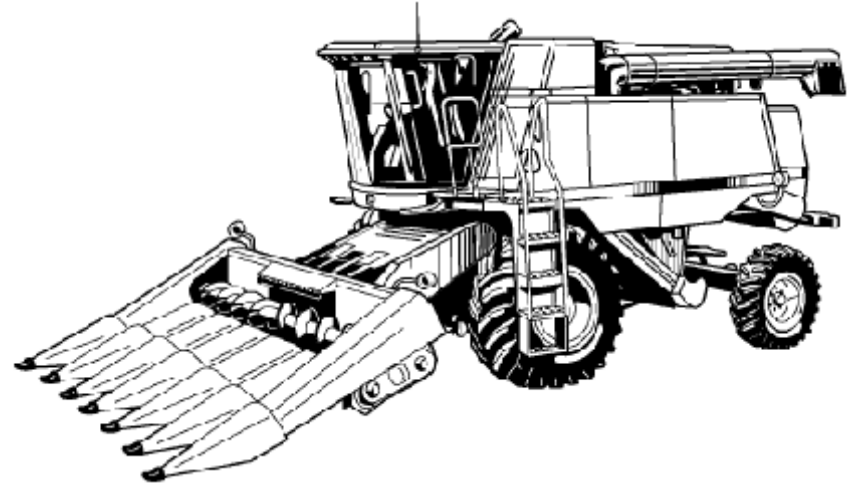
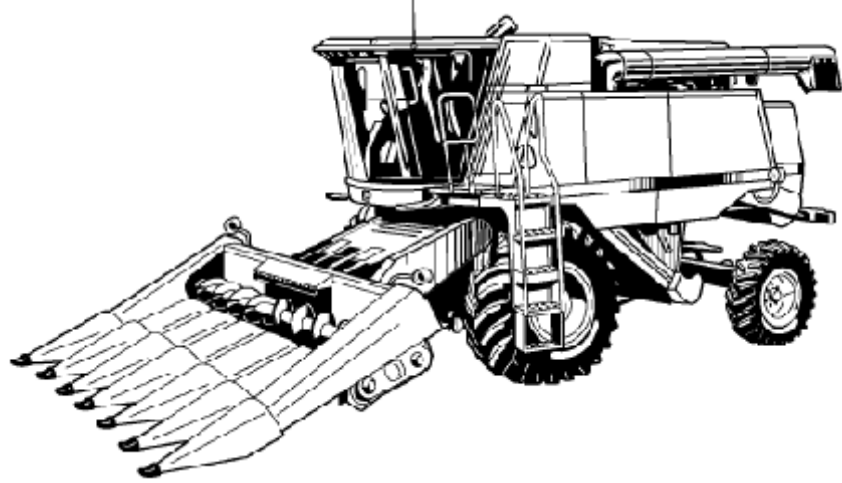
Illinois Assessment Framework: 12.4.03; 12.4.04; 12.4.05

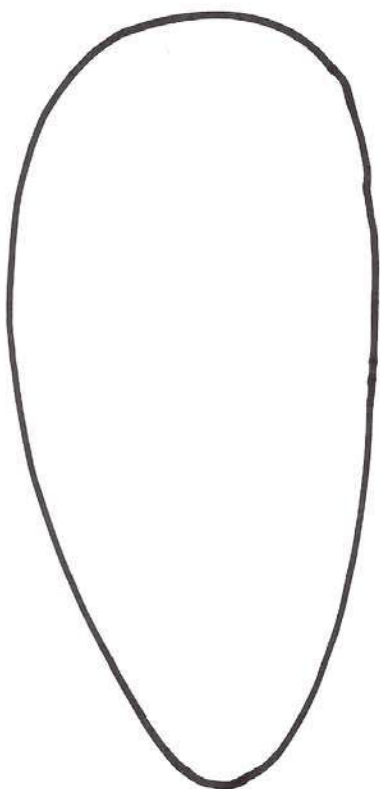
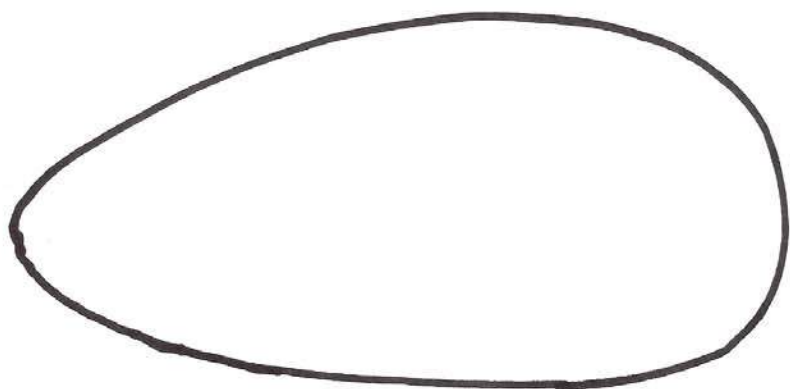
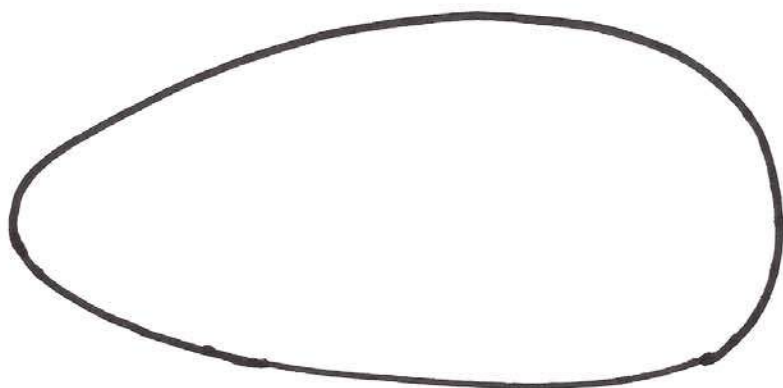
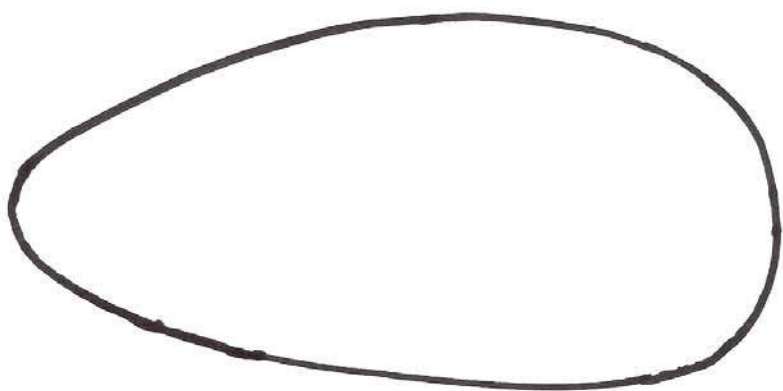


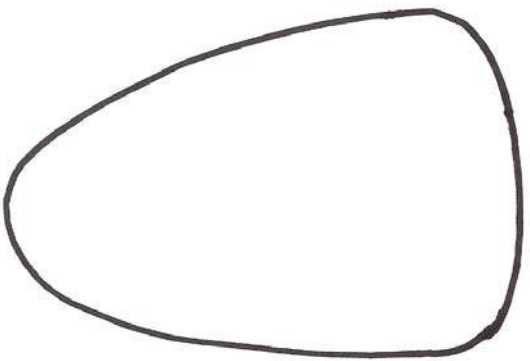
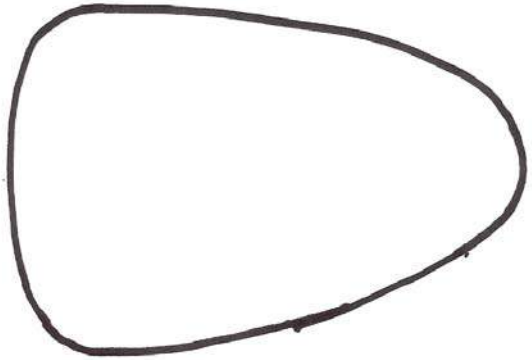
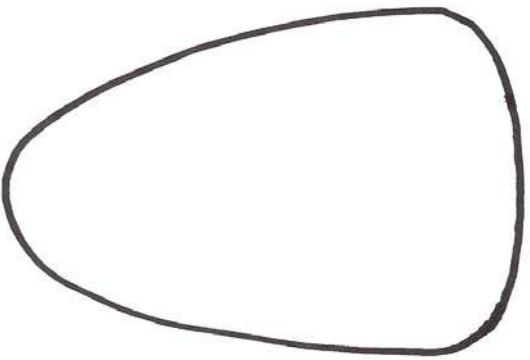
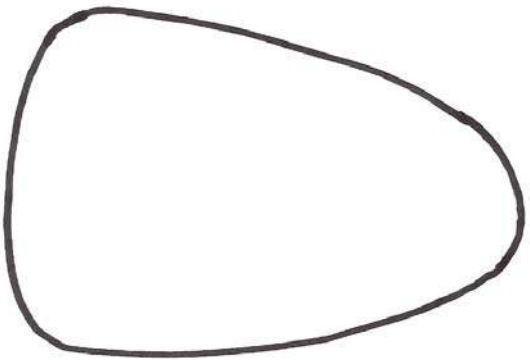
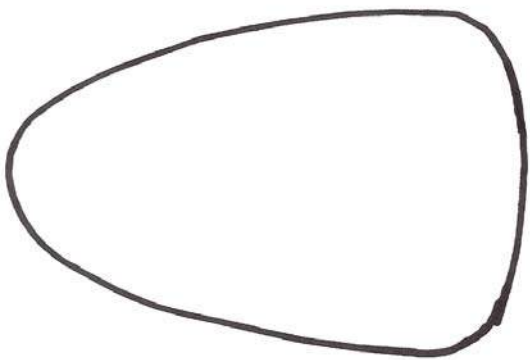
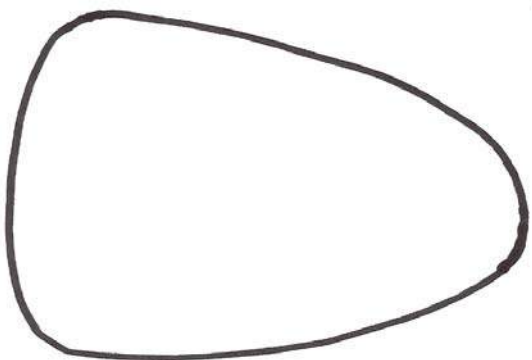


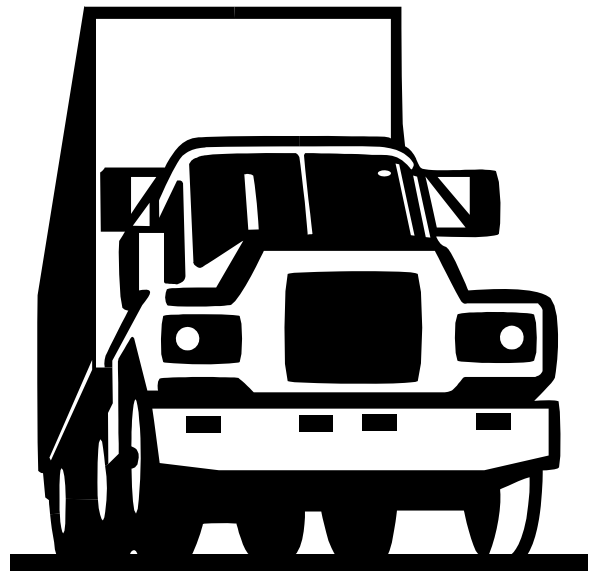
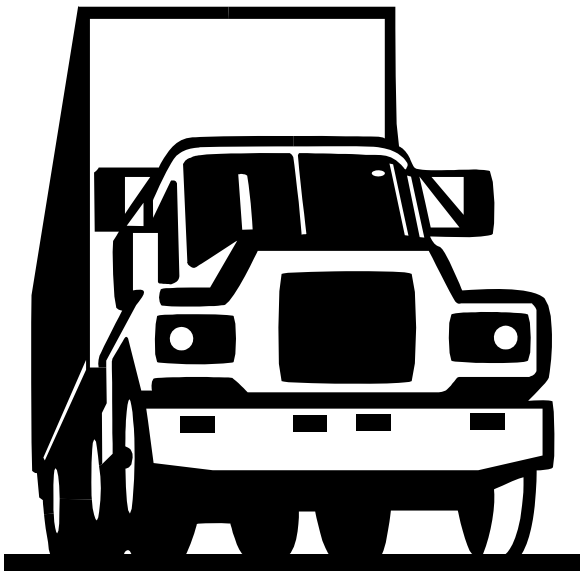
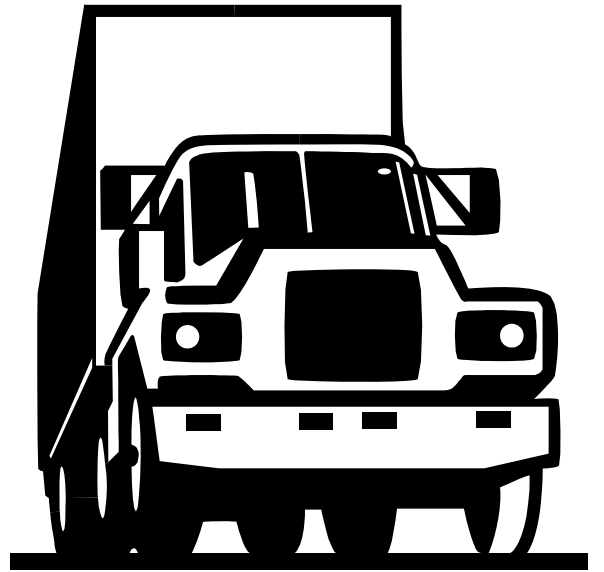
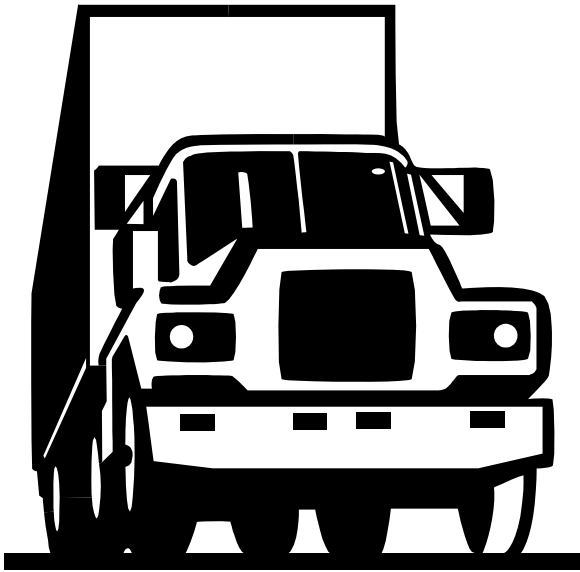












Growing with Technology

Grade Level: K-3

Approximate Length of Activity: One class period

Objectives:

Teacher:

1. Teach the history of agricultural advancements in farming.
2. Learn about the various pieces of farm equipment and familiarize students with the various pieces.
3. Understand the purpose and importance of each piece of farm equipment and machinery and to extend this knowledge to the students.

Students:

1. Learn about changes in farming methods over the years.
2. Learn about the pieces of equipment farmers use.
3. Understand what each piece of equipment or machine does.
4. Compare the old way of doing various jobs on a farm to the new ways to do the jobs on a farm.

Illinois Learning Standards: 3.A.1; 4.B.1b; 13.B.1c; 13.B.1d; 15.C.1a; 16.A.1c; 16.C.1a(w); 17.C.1a; 17.C.1b

Introduction:

Before the early voyages to discover new land began, certain crops were only known in certain regions. For instance, Europe did not know what potatoes were and had never even heard of them until the Spanish brought potatoes to Europe in the 1500s. When European and Spanish explorers and settlers came to America, the American Indians introduced many new crops to them. The Europeans brought with them their knowledge of various farming methods, tools, seeds, and livestock.

The Agricultural Revolution began in the early 1700s. During this time, many discoveries and inventions were made. This helped to make farming somewhat easier and much more productive. Because of these inventions, one farmer could produce more food and feed more people than before. This allowed people to begin taking new jobs that were away from the farm.

Farmers have to do a lot to prepare the soil to plant a crop, take care of the crop, and get the crop out of the field. Most of the jobs farmers had to do were done by hand with very few



hand tools to help them. To do many of these jobs, farmers used animals to help do the heavy work. Farmers have gone from using very few hand tools before the 1700s to using different types of equipment in the 1700s and 1800s. Still, many inventions required animals such as oxen or horses to pull it through a field or to supply the power for the machine to run. Since then, many advances in farm machinery and farm equipment have been made. Because of these advancements, one farmer can feed more people now than ever before.

One piece of valuable machinery that farmers use today is a tractor. When farmers did not have tractors, they used horses and other animals to pull and work pieces of heavy equipment. The first types of tractors invented were called traction engines. They ran on steam and were hard to maneuver. Over time, newer, improved versions came about and, by the 1920s, a more practical tractor was developed. From then on, tractors have been used for many different things. A tractor is used to plow, plant, cultivate, and pull heavy loads. A tractor can pull heavy machines and equipment because it has a powerful engine. In fact, it is so powerful it equals the same power as 200 horses. Tractors also have huge tires to keep them from getting stuck in muddy places.

A plow is a piece of machinery used to prepare the soil to plant the crops. Plows dig up the soil to allow air and water to get into the soil. This helps improve the soil so when the seeds are planted they will get the appropriate nutrients. The first plow to be invented was a cast iron plow. It had a mould board made of cast iron and handles and a beam made out of wood. The plow was hooked up to horses and a farmer steered it through the field to plow up the soil. Then a steel plow was invented that made plowing the soil much easier because the soil did not stick to the plow as before. Today, plows are more mechanized. They are hooked up to the hitches on the back of a tractor and pulled through the fields. The farmer controls the plow by moving levers inside the tractor's cab, which in turn moves the hitches and the plow.

Before the 1700s, farmers planted crops by spreading the seeds by hand. In the early 1700s, a farmer named Jethro Tull invented a seed drill. The seed drill dug small trenches in the soil and put seeds into them. Today, this piece of equipment is called a planter. Planters put the seeds in the soil and cover the seeds with more soil. Planters have tanks to hold the seeds that will be planted. There are feed meters on the planters to drop the right amount of seeds into the soil. Then the row of wheels on the planters cover the seeds with soil.

Farmers used to harvest crops by hand. They would cut the stalks out of the field, stack them in large piles, and store them in a silo. (A silo is a cylindrical structure in which grain is kept.) Then the farmer had to separate the grain from the stalk by hand. It took many people to do these two tasks. Fortunately Cyrus McCormick invented the reaper, a machine that cut the stalks out of the field. The reaper had a turning wheel that caused a blade to move back and forth and cut the stalks. Soon after that, a thresher was invented. The thresher separated the grain from the stalks. Farmers could then use a reaper to get the stalks out of the field and a thresher to get the grain off of the stalks.

Since the 1930s farmers have used machines called combines to pick the grain from the fields (which is harvesting). A combine is a combination of a reaper and a thresher. A combine is a machine that separates grain from stems as it cuts a crop in the field. Then the combine stores the crop in a big tank that is part of the combine. The leftover stalks are blown out of the combine. When this tank gets full, the auger, which is a long arm on the side of the combine,



moves the crop from the storage tank and dumps it into a truck or wagon.

Dairy cows used to be milked by hand. Every day farmers would milk their cows two to three times a day by hand. Nowadays most farmers use milking machines. Farmers still milk their cows twice a day, but it is a much easier process. The farmers attach suction cups to the teats of a dairy cow. This suction system pumps milk from the cow and into a storage tank. The storage tank keeps the milk fresh and cool. When farmers had to milk by hand, it used to take two people about two and one-half hours to milk 20 cows. Today, the milking machine and one farmer can milk 20 cows in about 15 minutes!

A long time ago, with the help of horses and other farm animals, farmers would cut the hay in the fields and rake it into bundles. Then they would haul it back to the barn to store. Nowadays farmers use hay balers. These hay balers cut the hay or straw, pack it into square or round bales, and then leave the bales in the field.

Materials Needed:

- Copies of “Farm Equipment and Machinery” pictures (one set for teacher use plus copies so each student receives one to color)
- “From Old to New” worksheet

Activity Outline:

1. Talk to the students about farm machinery and equipment. Hold up each picture of “Farm Equipment and Machinery” pictures and discuss what that piece did a long time ago or what it does today (depending upon the picture). Pass around the pictures for the students to get a close-up look of them.
2. Pass out the worksheet “From Old to New.” Have the students draw a line between the old method of farming to the newer method of farming. Discuss the answers with the students.
3. Take the copies of the “Farm Equipment and Machinery” pictures and pass out one to each student. (Not all students will have the same picture.) Have the students color in the piece of equipment or machinery. The students should write the name of the piece of equipment/machinery below the picture and/or write a sentence about the piece.

Discussion Questions:

1. How do farmers plant seeds now? How did they used to plant seeds?
2. What two pieces of equipment did farmers use to harvest the crop?
3. What big machine do farmers use now to harvest crops?
4. What machine do farmers use often and attach many types of equipment to?
5. How did farmers used to milk cows? How do they milk cows now?
6. How many times a day do farmers have to milk their cows?



Related Activities:

1. Have the students draw a picture of a farm with pieces of equipment in their picture.
2. Find out what other types of equipment are used by farmers.

Other Resources:

1. The Illinois Farm Bureau® has produced an educational magazine entitled *Ag Mag* 15 “Safety Sleuths” to teach students about farm safety. Contact your county Farm Bureau® to receive free copies for your classroom.
2. *Fun Facts About Farm Equipment* by ERTL®, written by Ray H. Miller, The ERTL Company, Inc.
3. *Mighty Machines – Tractors And Other Farm Machines* by Claire Llewellyn, Dorling Kindersley, Publishing Inc.
4. *A Tractor Goes Farming* by Roy Harrington, published by the American Society of Agricultural Engineers.
5. *Harvest Year* by Cris Peterson, Boyds Mills Press, Inc.
6. *Century Farm* by Cris Peterson, Boyds Mills Press, Inc.

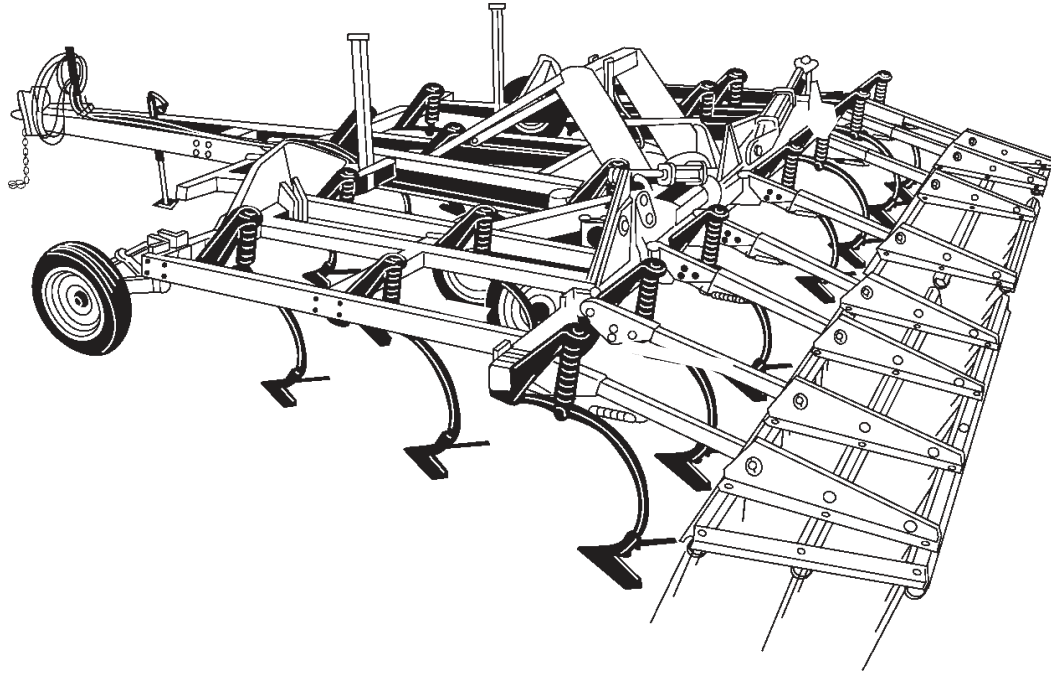


Farm Equipment and Machinery



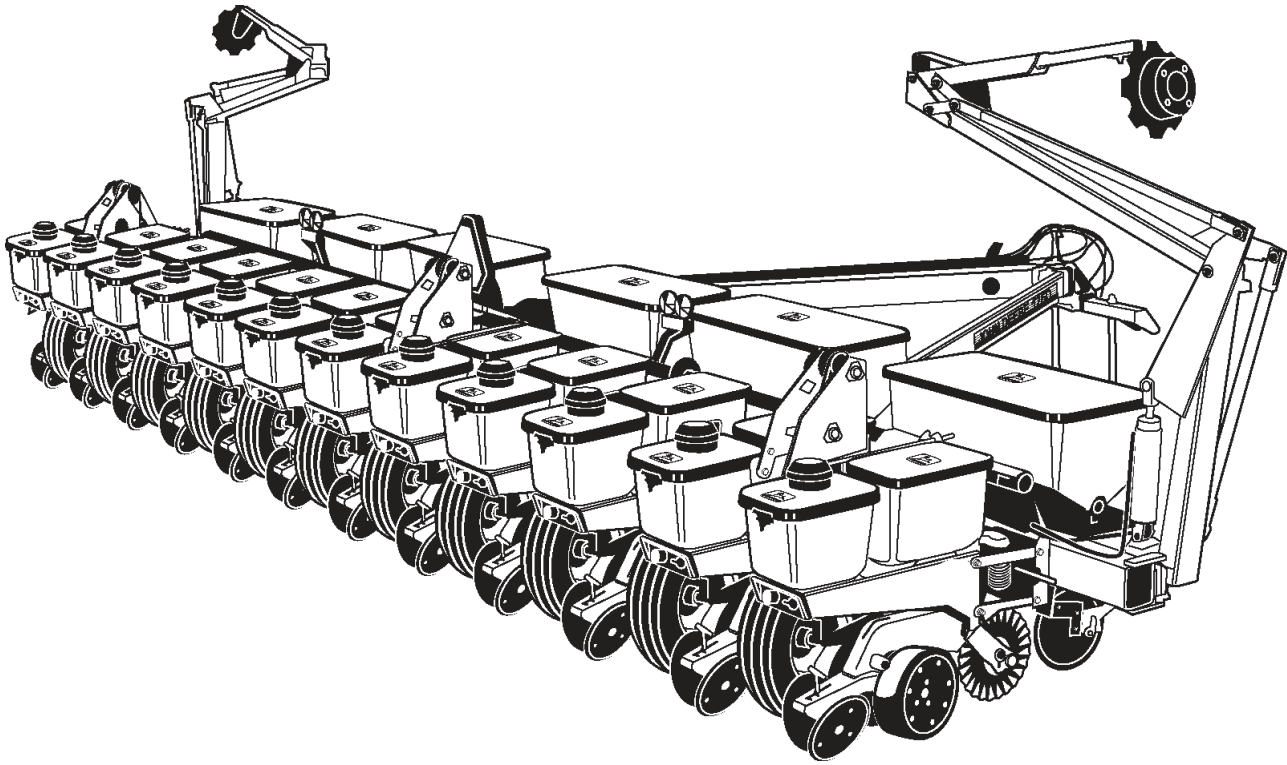
Tractor

Farm Equipment and Machinery



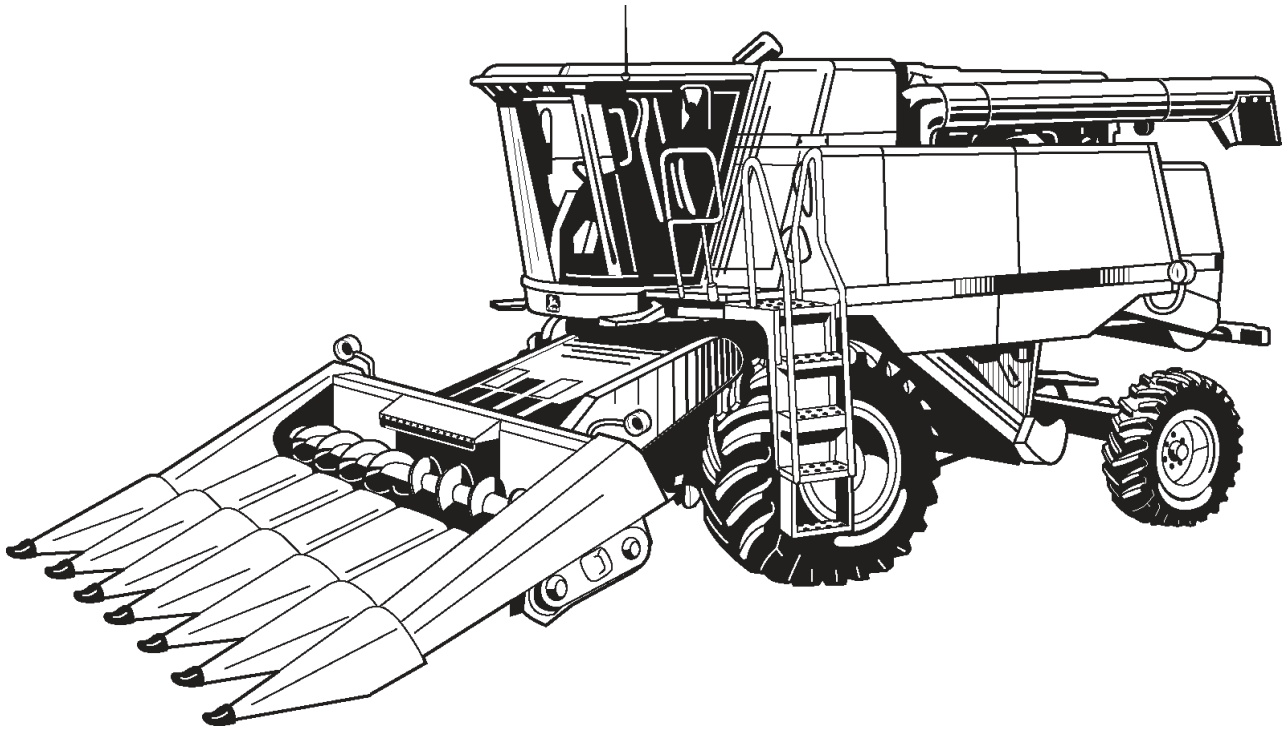
Plow

Farm Equipment and Machinery



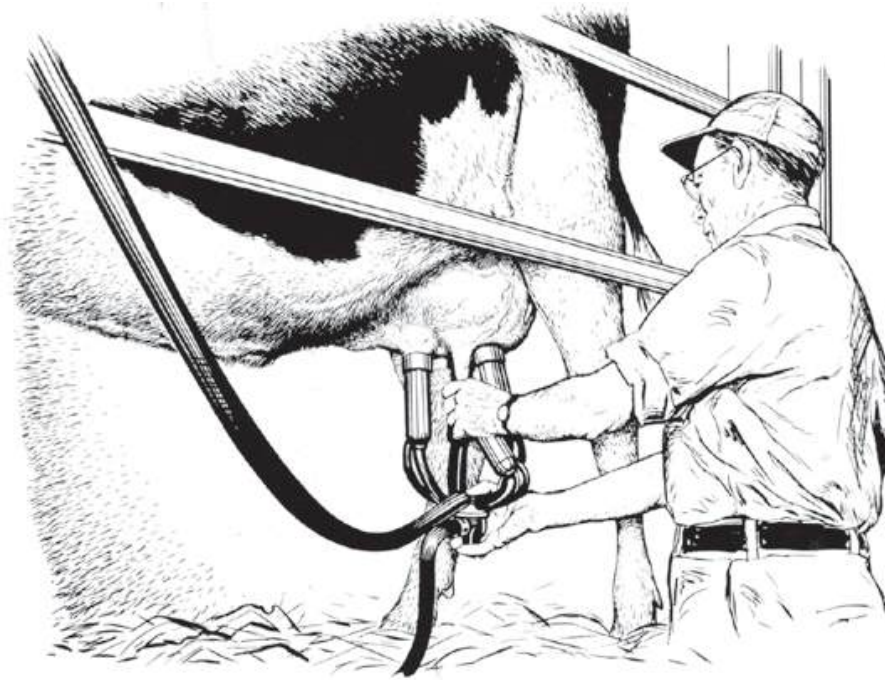
Planter

Farm Equipment and Machinery



Combine

Farm Equipment and Machinery



Milking Machine

Farm Equipment and Machinery

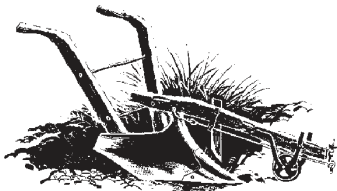
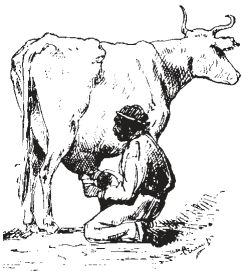
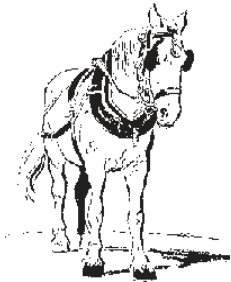
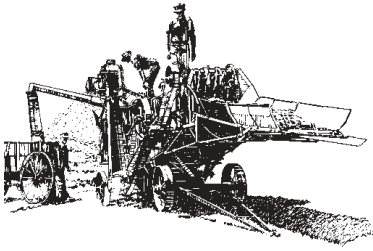


Hay Baler

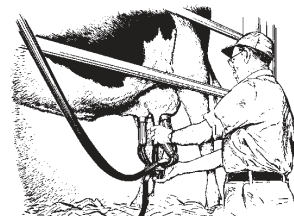
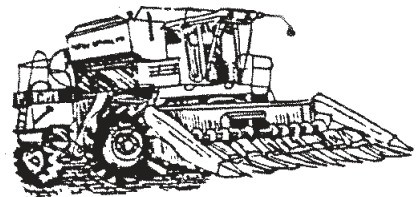
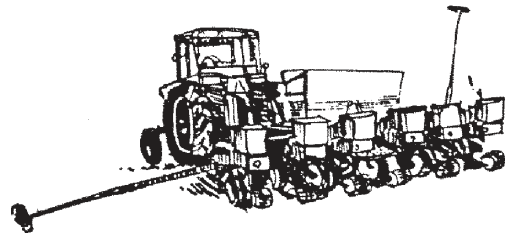
From Old to New

Technology has changed the way people farm. Draw a line to match up the old method to the new method used today.

Old Way



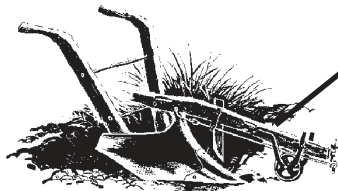
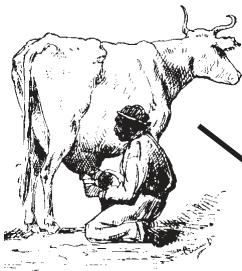
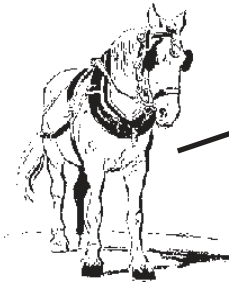
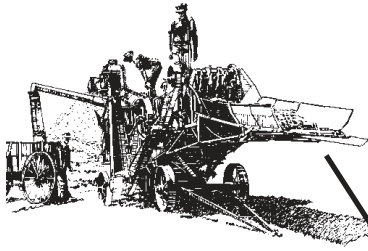
New Way



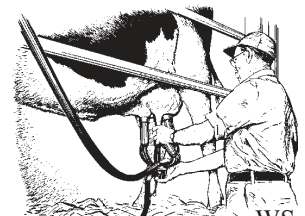
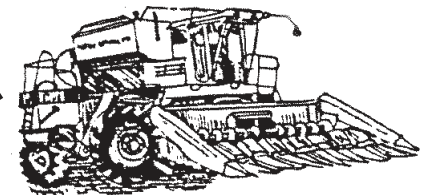
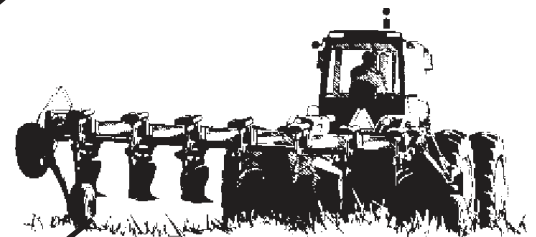
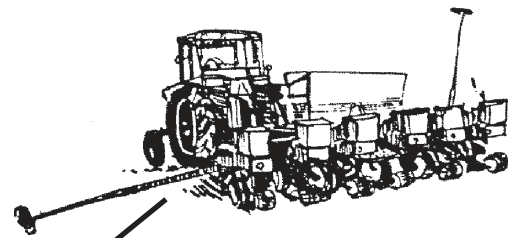
From Old to New

Technology has changed the way people farm. Draw a line to match up the old method to the new method used today.

Old Way



New Way



WHERE DOES IT COME FROM?

17

GRADES: 4-6

SUBJECTS: Social Studies (Economics, Geography), Math, Language Arts

OBJECTIVE: Students will interpret U. S. Department of Agriculture's National Agricultural Statistics Service (NASS) data to discover where the agricultural commodities used in some common snacks were grown.

BACKGROUND

Different parts of our country are better for raising different agricultural commodities. Many of the fresh fruits and vegetables we eat grow in temperate parts of the country, like California, Florida and parts of Texas. That's because the growing season is longer in those parts of the continent. Wheat, barley, corn and other grain crops grow well in our country's midsection, in what once was grass land. In some parts of the country the land is not suitable for growing crops but provides good grazing land for cattle and other livestock. Potatoes grow best in cooler climates, so they are a good crop for mountainous regions where it stays cool longer in the spring. Some crops require a great deal of rain, and some need plenty of sunshine. We are able to produce many different kinds of products in our country because we have so many different climates.

Because of modern technology for storing, moving, and processing agricultural crops, we are able to have just about any kind of food we want to eat at any time of year.

The census of agriculture gathers numbers to help us know what grows best in which part of the country.

ACTIVITY

1. Share background material, and explore the meanings of the words "commodity," "product," "end product," and "byproduct." To illustrate, bring to class some examples of end products and the agricultural commodities from which they were made,

MATERIALS

(for 30 students)

5 small bags of corn chips (corn)

5 small bags of potato chips (potatoes)

5 small bags of apple chips or individual containers of applesauce (apples)

5 small packages of beef jerky (beef)

5 small packages of pretzels (wheat)

5 small packages of string cheese

large paper bag

classroom map of the U.S.

colored map pins, one color per group

map pencils



VOCABULARY

statistics
 agriculture
 survey
 analyze
 data
 production
 yield
 commercial
 commodity
 crop
 product
 end product
 byproduct
 cwt
 irrigate
 dormant

e.g., cotton ball (or raw cotton boll, if available) and cotton shirt, dry beans and bean dip, tomato and tomato sauce, apple and apple cider. Ask students to differentiate between the commodity and the end product.

2. Ask students to name their favorite foods. Write the foods on the chalkboard. Now ask students if they know what agricultural commodity these foods are made from and where the commodities grow. Write the guesses on the chalkboard.
3. Place all the snacks in a large paper bag, and have students draw from the bag to determine which group they will work with. Explain that each snack represents a major agricultural commodity grown in the U.S. Write the words "corn," "potatoes," "apples," "beef," "wheat," and "milk" on the chalkboard. Lead a class discussion to help students determine what product each snack represents.
4. For each group, make copies of the information about the specific agricultural commodity the group will be studying, the survey form, the data about their product and the map of the U.S. Have students read the information and answer questions on the survey form. Have the groups use the NASS data in the tables to determine where their assigned food grows and record that information on the survey form, using the questionnaire provided. Then have students locate the top five states where their snacks grow on the maps of the U.S. and color in those states.
5. Provide each group with a different color of map pins. Have each group report on its findings and mark the states where the designated food grows on a classroom map. Students should also report on growing conditions necessary for each product.
6. Lead a discussion in which you ask students what factors determine what is grown (climate, availability of land, transportation, storage capacities) in which states and how much is produced (climate, size of state, soil type).

ADDITIONAL ACTIVITIES

1. If you have internet access for your students, have the groups compare their results with the "Inventory by County" maps on the NASS Web site. Go to the NASS Web site. Click on "Census of Agriculture." Click on "Agricultural Atlas Maps." Scroll down to find the appropriate commodity, e.g. Map # 139 for milk cows inventory, map # 144 for beef cows inventory.



2. Have students keep records for a week of what foods are served in the cafeteria. Have them research to find out what raw materials are used in the foods. Use the data to find out where the food is grown.
3. Have students interview those responsible for buying the food used in the cafeteria and determine how much, if any, local food is used in preparing meals.
4. Have each student choose a favorite food and research the three main ingredients in the food and where the ingredients are produced.
5. Data on NASS tables is presented in thousands. Have students multiply numbers or add zeroes to find the actual numbers of selected data.
6. Have students stay in their groups and research the states in which their ingredients were grown to find size, climate, population, other crops grown, etc. Then have each group choose a presentation method to report their findings to the class—skits, posters, etc.
7. Have students write as many statements as they can about the data and information provided.

EXTRA READING

Bartoletti, Susan Campbell, *Black Potatoes: The Story of the Great Irish Famine, 1845-1850*. Houghton-Mifflin, 2001.

Bial, Raymond, *Corn Belt Harvest*, Houghton Mifflin, 1991.

Corcoran, Barbara, *Potato Kid*, Macmillan, 1989.

Johnson, Sylvia, *Wheat*, Lerner, 1990.

Lauber, Patricia, *Cowboys and Cattle Ranching Yesterday and Today*, Thomas Y. Crowell, 1973.

Sabin, Louis, *Agriculture*, Troll, 1985.

Slawson, Michele Benoit, *Apple Picking Time*, Crown, 1994.

Watts, Barrie, *Potato*, Silver Burdett, 1988.



Name _____

Where Does It Come From?

1. My snack is _____
2. The main agricultural commodity used to make this snack is _____
3. Name some states where you think this commodity might be grown.

4. Make a check mark next to the growing condition that comes closest to describing what your agricultural commodity needs.



- a. ☐ Cool conditions.
- b. ☐ Not too wet.
- c. ☐ Sunny mild days when in bloom; plenty of rain mid summer.
- d. ☐ Sometimes raised on land that cannot be used for other purposes.
- e. ☐ Plenty of pasture and plenty of water.
- f. ☐ Plenty of water.



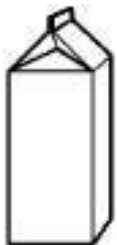
5. Look at the chart. Find the top five states where the main ingredient in your snack is produced.

1. _____
2. _____
3. _____
4. _____
5. _____



6. Count the states listed. _____ Are all 50 states represented? yes no

7. Is the state where you live on the list? yes no



If so, write the number showing how much of this agricultural product was produced in your state. _____

8. List some products this agricultural commodity is used to make.



Name _____

Where Does It Come From?

Beef

We get meat from beef cattle and milk from dairy cattle. Although females from all cattle breeds produce milk and meat, some cattle are better at giving milk and some are better at providing meat.



In a cow/calf operation, the farmer keeps cows for the calves they will produce. The mother cow carries the baby calf for a little longer than one school year. At birth the average calf will weigh 75-100 pounds, about the size of you and one of your friends. Calves grow by drinking milk from their mothers and by eating green grass from pastures. During the winter, calves stay in feed lots and eat grain. Sometimes they graze on wheat fields before it is time to let the wheat grow tall.

When the calves are big enough, about 800 pounds, they are sold to feed lots, where they are kept and fed.

From beef animals we get steaks, roasts and hamburgers. We also get leather for shoes, belts, baseball gloves and footballs. Gelatin in products such as ice cream and yogurt are made from the bones of the cow. Even chewing gum has an ingredient that comes from a cow. Here are some other products we get just from the fats and proteins produced by cattle.

makeup

detergent

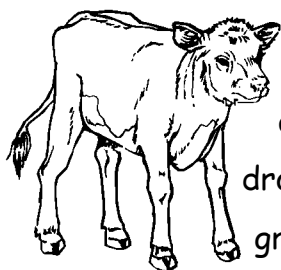
floor wax

crayons

toothpaste

perfume

Cattle and calves for beef are produced in every state in the nation. They can be raised in many different climates and on many different kinds of land. In the West, cattle are often grazed on land that cannot be used for other purposes. This is land that



erodes easily or is too rocky or dry. As long as the beef producer doesn't keep the animals for too long on one section of land, grazing animals help keep this land healthy. They fertilize the land with their droppings while their hooves break up the surface of the soil so tender grass can poke through.



CATTLE AND CALVES

Inventory -- 2002
Thousand Head



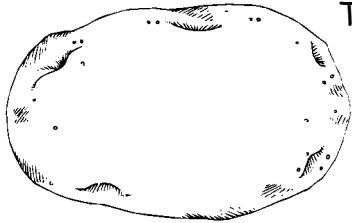
Alabama	1,438
Alaska	13
Arizona	841
Arkansas	1,842
California	5,234
Colorado	2,656
Connecticut	54
Delaware	22
Florida	1,739
Georgia	1,272
Hawaii	154
Idaho	1,990
Illinois	1,359
Indiana	862
Iowa	3,536
Kansas	6,321
Kentucky	2,395
Louisiana	856
Maine	90
Maryland	241
Massachusetts	51
Michigan	998
Minnesota	2,266
Mississippi	1,073
Missouri	4,460
Montana	2,397
Nebraska	6,203
Nevada	460
New Hampshire	40
New Jersey	42
New Mexico	1,591
New York	1,453
North Carolina	848
North Dakota	1,873
Ohio	1,241
Oklahoma	5,324
Oregon	1,361
Pennsylvania	1,633
Rhode Island	5
South Carolina	432
South Dakota	3,696
Tennessee	2,234
Texas	13,979
Utah	877
Vermont	284
Virginia	1,623
Washington	1,100
West Virginia	404
Wisconsin	3,338
Wyoming	1,270
U.S. (Total)	95,498

Name _____

Where Does It Come From?

Potatoes

The potato is not a root but a storage area, which is part of the plant's underground stem. The roots collect more water and food than the growing plant can use at one time.



The plant stores the excess food in oval packages, called tubers (the potato). When the greenery starts to wither and turn brown, the potatoes are ready to harvest.

Potatoes produce more pounds of protein per acre than corn, rice, wheat or oats. The average American eats about 125 pounds of potatoes and potato products each year.

Potatoes were first grown by ancient tribes living in the Andes Mountains of Bolivia and Peru as early as 200 AD. Archaeologists have found pictures of potato plants in designs on ancient pottery. The tribespeople preserved the potatoes by trampling them and then drying them.

Even though potatoes were first grown in South America, people in North America did not start eating them until after they became a popular food in Europe. European explorers carried potatoes from South America to Europe in 1570. About 150 years later the rulers of several European countries ordered their people to start growing potatoes. In Ireland, potatoes became the main food for the people. In the 1840's disease wiped out the potato crop in Ireland for two years in a row. Many Irish people moved to America then, because they had no food to eat.

Most of the world's potatoes today are grown in Europe. Potatoes are a truck crop grown in all 50 of the United States. A truck crop is a crop that is grown on a farm and taken to the market by truck.

Before they go to market, potatoes are graded according to size and quality. The price of the potato depends on how it looks and how much it weighs.

Potatoes grow best in cool weather and are an important crop in mountainous parts of the country, where the growing season is short.

From potatoes we get some of our favorite foods—French fries, mashed potatoes, potato chips and more.

POTATOES

Production - 2004

Thousand Cwt*

Alabama	228
Arizona	1,767
California	17,661
Colorado	25,786
Delaware	806
Florida	9,246
Idaho	131,970
Illinois	1,992
Indiana	1,120
Kannsas	1,360
Maine	19,065
Maryland	1,196
Massachusetts	800
Michigan	13,650
Minnesota	18,920
Missouri	1,992
Montana	3,551
Nebraska	9,288
Nevada	2,881
New Jersey	594
New Mexico	2,060
New York	5,184
North Carolina	2,700
North Dakota	26,765
Ohio	1,080
Oregon	19,775
Pennsylvania	2,640
Rhode Island	145
Texas	6,429
Virginia	1,200
Washington	93,810
Wisconsin	30,450
U.S. (Total)	456,041

*Cwt a unit of weight in the U.S. Customary System equal to 100 pounds.

Source: USDA, NASS



Name _____

Where Does It Come From?

Apples



Scientists say apples have been around for 750,000 years. In North America, the first apple orchard was planted in Boston, Massachusetts, in 1625.

As our country was settled, nearly every farm grew some apples. Most of the early varieties would be considered poor today. Of nearly 8,000 varieties known around the world, about 100 are grown in commercial quantity in the U.S.

Apples come in lots of colors and shapes. Each apple is loaded with minerals, vitamins and fiber. Apples are in the Pome family—a fruit whose seeds are embedded in the core of the fruit. The rose is also in this family. The average apple tree will bear fruit in three years, with full production coming in 8-10 years. A standard apple tree lives an average of 100 years.

Growing an apple takes all year. In the winter, while the trees are dormant, apple growers begin pruning—sawing off limbs and clipping branches to let the sunshine in. Pruning helps the tree produce better fruit.

About the time when frost ends in spring, the buds begin to swell. With the opening of the "King" blossom (the largest and centermost of the five blossom clusters), it is time for pollination to begin. Bee colonies rented from bee keepers must be moved in quickly. Sunny mild days are needed during bloom to encourage strong bee activity. Apples need more than one variety of pollen for the cross-pollination that ensures good fruit set.

Fruit size and firmness are affected by the moisture the apple trees receive in mid summer. If the weather is too dry, producers must irrigate.

August is the last growing month before the apples begin to ripen. Red apples need cool nights during harvest to trigger an enzyme which increases the amount of color or "blush." Apples bruise easily and must be hand picked. Picking begins around the end of August and ends in October.

Besides fresh apples for eating, apples give us applesauce, apple cider, apple juice, apple pie and other delicious baked treats.

APPLES

Total Production - 2004
Million Pounds

Arizona	22.2
California	370.0
Colorado	31.0
Connecticut	15.0
Georgia	14.0
Idaho	80.0
Illinois	49.0
Indiana	50.0
Iowa	2.1
Kentucky	5.5
Maine	31.5
Maryland	41.0
Massachusetts	28.5
Michigan	790.0
Minnesota	22.0
Missouri	49.0
New Hampshire	18.0
New Jersey	45.0
New York	1,040.0
North Carolina	145.0
Ohio	102.0
Oregon	140.0
Pennsylvania	455.0
Rhode Island	1.8
South Carolina	4.0
Tennessee	8.5
Utah	38.0
Vermont.....	32.5
Virginia	300.0
Washington	5,800.0
West Virginia	87.0
Wisconsin	52.0
U.S. (Total)	9,869.6

Source: USDA, NASS



Name _____

Where Does It Come From?

Wheat

Wheat is one of the oldest foods known to man. There are six classes and more than 30,000 varieties of wheat. The six classes are hard red winter, hard red spring, soft red winter, durum, hard white and soft white. They all have origins in seeds that were carried to the U.S. by European farm immigrants.



Since there are so many varieties of wheat, it can be grown in many different climates. Somewhere in the world wheat is being harvested every month of the year.



Planting of winter wheat begins before September in the northern U.S. and continues through October in the southern regions. The wheat will sprout and grow in the fall until a winter freeze occurs. It will then become dormant until spring, when it will mature until harvest. Winter wheat is harvested in May in the southern regions. Harvest continues through July in the north.

Too much rain creates problems at all stages of growth. Spring wheat may rot before sprouting. If planting is delayed because the ground is too wet, it may not mature.

If the plant does not have enough moisture, it will grow weak, and the wheat head won't produce plump kernels.

Hard wheat flours provide a variety of bread products. Durum semolina and flour are used to make pasta. Soft wheat is used to make crackers, cookies, cereals, cakes and pancakes. Wheat is also used to make wallpaper glue and other building products.



WHEAT

Production -- 2002
Thousand Bushels

Alabama	2,278
Arizona	9,601
Arkansas	34,968
California	33,591
Connecticut	3
Colorado	37,529
Delaware	3,605
Florida	212
Georgia	7,664
Idaho	78,507
Illinois	27,923
Indiana	15,345
Iowa	962
Kansas	262,980
Kentucky	16,448
Louisiana	5,708
Maryland	10,625
Michigan	28,249
Minnesota	64,610
Mississippi	5,980
Missouri	34,889
Montana	112,450
Nebraska	50,300
Nevada	384
New Jersey	1,718
New Mexico	4,212
New York	6,640
North Carolina	18,927
North Dakota	215,655
Ohio	46,929
Oklahoma	102,004
Oregon	34,080
Pennsylvania	8,937
South Carolina	5,710
South Dakota	42,414
Tennessee	13,061
Texas	75,132
Utah	3,848
Vermont	38
Virginia	10,213
Washington	128,411
West Virginia	304
Wisconsin	11,693
Wyoming	2,213
U.S. (Total)	1,577,005

Source: USDA, NASS, 2002 Census of Ag



Name _____

Where Does It Come From?

Corn



The corn plant is an American native. It was first grown by farmers in Mexico around 7,000 years ago.

Corn is an annual plant that grows seven to ten feet tall. It is actually a type of grass. Strong roots called prop roots help support the cornstalk. A tassel grows at the top and contains hundreds of small flowers that produce pollen.

Producers in the U.S. feed the largest part of the corn crop to cattle, hogs, sheep and poultry. The number of bushels of corn produced in the U.S. measures more than double that of any grain crop.

The different types of corn include dent corn, flint corn, sweet corn, popcorn and flour corn. Dent corn and flint corn are commonly called "field corn" because they are fed to animals. Sweet corn, popcorn and flour corn are used for human food.

Corn is planted in the early spring using a corn planter. The machine drops the kernels into rows and then presses the soil around each kernel. Before planting, the planter places fertilizer in the soil. The rest is up to the weather. Rain is extremely important because the corn plant needs a lot of water to grow.

Sometime between late September and November the corn will be dry enough to be harvested. Corn is harvested by a large combine. The machine cuts off the corn plant, removes the ear of corn and separates the kernels from the corn cob. Parts of the corn plant are left in the field to protect the soil for the next year.

There are more than 3,500 different uses for corn products, and more uses are being found each day. Corn makes oil, syrup, cereal, starch and more than 1,000 other products you can buy in the grocery store.

Corn kernels are used to make fructose, a liquid sugar used to sweeten soda pop and bakery goods. Cornstarch is also made from corn. It can be used to produce packaging materials which help protect the environment. Ethanol is made from corn and is used as fuel for cars, trucks and buses.

CORN

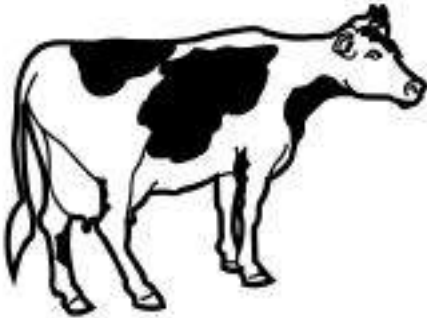
Production -- 2002
Thousand Bushels

Alabama	15,240
Arizona	5,128
Arkansas	31,747
California	28,396
Colorado	102,653
Connecticut	362
Delaware	13,369
Florida	2,457
Georgia	26,720
Hawaii	203
Idaho	6,562
Illinois	1,418,566
Indiana	696,156
Iowa	1,851,276
Kansas	280,682
Kentucky	108,721
Louisiana	54,945
Maine	296
Maryland	30,042
Massachusetts	347
Michigan	234,709
Minnesota	989,888
Mississippi	58,488
Missouri	268,225
Montana	1,584
Nebraska	908,360
New Hampshire	113
New Jersey	4,031
New Mexico	8,509
New York	42,768
Nevada	34
North Carolina	58,918
North Dakota	111,380
Ohio	254,818
Oklahoma	23,642
Oregon	3,097
Pennsylvania	52,645
Rhode Island	4
South Carolina	11,148
South Dakota	295,167
Tennessee	64,081
Texas	197,109
Utah	2,134
Vermont	625
Virginia	22,659
Washington	14,156
West Virginia	3,057
Wisconsin	385,057
Wyoming	3,789
U.S. (Total)	8,613,062

Name _____

Where Does It Come From?

Milk



Just as beef cattle are raised mostly for their meat, dairy cattle are raised for their milk. The main breeds of dairy cows in the U.S. are Holstein, Guernsey, Jersey, Brown Swiss and Ayrshire. Some breeds produce more milk than others, and some produce richer milk than others.

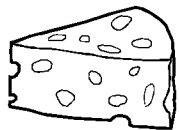
A dairy cow weighs about 1,500 pounds. The average cow spends 6-10 hours a day eating. That's about 90 pounds of food. She eats hay (dried grass), grains (feed), and silage (chopped green grasses and green corn or beans). She drinks 25-50 gallons of water each day. That's nearly a bathtub full.

Cows that eat only grass produce about 48 glasses of milk a day.

Cows that eat grass and feed or silage produce 100 glasses a day.



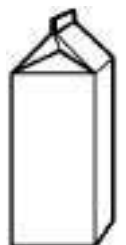
Cows make milk to feed their calves, but they are such big animals that they make much more milk than a calf needs. A dairy cow must have one calf a year, or she will stop producing milk. The cows must be milked twice a day and sometimes three times a day.



Dairy farmers are careful to keep the milk clean and avoid exposing it to the open air, which would contaminate it. The cow's udder is washed before she is milked to keep the milk clean.

Before modern milk delivery, when people traveled and wanted milk, they had to take their cows with them. Today a tanker truck picks up milk from the dairy each day and delivers it to the milk processing plant. At the dairy plant, the milk is pasteurized to kill any disease-causing bacteria.

The milk is processed into many different foods and dairy products, including butter, chocolate milk, ice cream, yogurt, cheese and more.

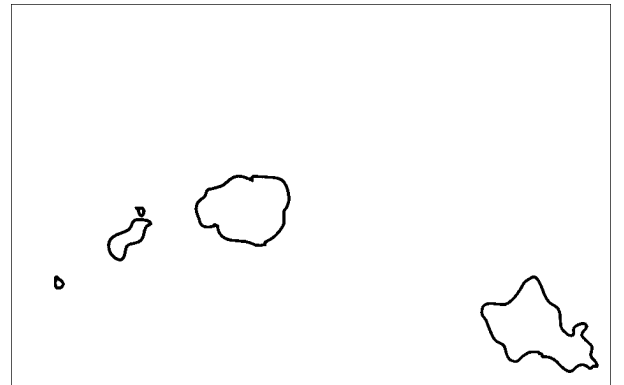
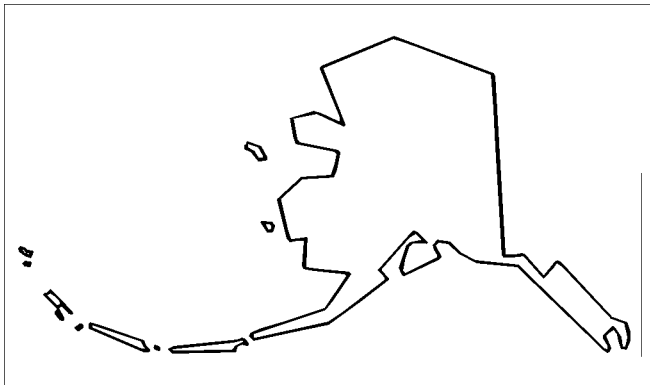
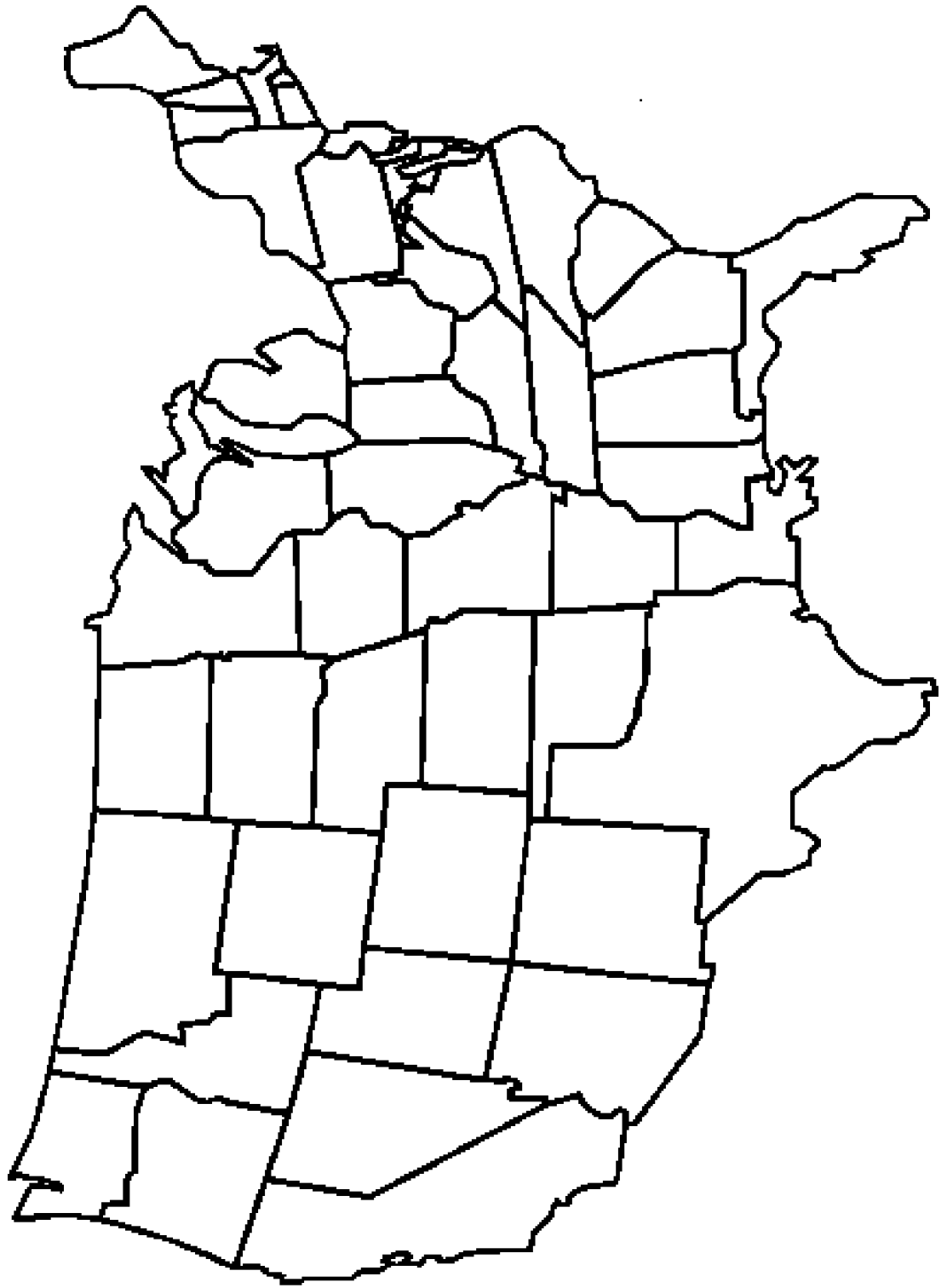




MILK

Production -- 2003
Million Pounds

Alabama	252
Alaska	16.7
Arizona	3,552
Arkansas	354
California	35,437
Colorado	2,153
Connecticut	413
Delaware	132
Florida	2,161
Georgia	1,444
Hawaii	92
Idaho	8,774
Illinois	2,047
Indiana	2,939
Iowa	3,810
Kansas	2,130
Kentucky	1,465
Louisiana	512
Maine	624
Maryland	1,215
Massachusetts	332
Michigan	6,375
Minnesota	8,258
Mississippi	423
Missouri	1,886
Montana	345
Nebraska	1,129
Nevada	485
New Hampshire	305
New Jersey	216
New Mexico	6,666
New York	11,952
North Carolina	1,044
North Dakota	520
Ohio	4,490
Oklahoma	1,312
Oregon	2,177
Pennsylvania	10,338
Rhode Island	22.1
South Carolina	318
South Dakota	1,330
Tennessee	1,205
Texas	5,630
Utah	1,622
Vermont	2,637
Virginia	1,731
Washington	5,581
West Virginia	216
Wisconsin	22,266
Wyoming	54
U.S. (Total)	170,394
Puerto Rico	820



Where Does It Come From?

(answers)

1. Beef jerky; 2. beef; 3. student determined; 4. d; 5. Texas, Kansas, Nebraska, Oklahoma, California; 6. 50 states; 7. specific to your state; 8. makeup, crayons, steaks, roasts, hamburgers, ball gloves, footballs, shoes, belts, ice cream, yogurt, chewing gum, detergent, toothpaste, floor wax, medicine.

1. Potato chips; 2. potatoes; 3. student determined; 4. a; 5. Idaho, Washington, Wisconsin, North Dakota, Colorado; 6. 33 states; 7. specific to your state; 8. French fries, mashed potatoes, potato chips.

1. Apple chips or applesauce; 2. apples; 3. student determined; 4. c; 5. Washington, New York, Michigan, California, Pennsylvania; 6. 35 states; 7. specific to your state; 8. apple-sauce, apple pie and other desserts, fresh apples for eating, apple cider, apple juice.

1. Pretzels; 2. wheat; 3. student determined; 4. b; 5. Kansas, North Dakota, Washington, Montana, Oklahoma; 6. 44 states; 7. specific to your state; 8. pasta, crackers, cookies, cereals, cakes, pancakes, wallpaper glue and other building products.

1. Corn chips; 2. corn; 3. student determined; 4. f; 5. Iowa, Illinois, Minnesota, Nebraska, Indiana; 6. 49 states; 7. specific to your state; 8. oil, syrup, cereal, starch, soda pop, bakery goods, cornstarch, fructose, ethanol, packaging materials.

1. String cheese; 2. milk; 3. student determined; 4. e; 5. California, Wisconsin, New York, Pennsylvania, Idaho; 6. 50 states; 7. specific to your state; 8. butter, chocolate milk, ice cream, yogurt, cheese and more.



Back to the Farm

Skills: Social Studies, Language Arts

Objective: The student will trace his or her family history to find family members with farming or ranching backgrounds.

Background

Our ancestors started farming about 10,000 years ago. For a million years before that people had been gathering wild fruits and seeds and killing small animals for their families to eat. One day someone noticed grass growing where grain had been spilled or stored the season before. The people got the idea to plant the seeds and see if they could grow the crops they needed and wanted. When they placed the seeds in the ground, they started to grow.

Animal husbandry probably began the first time someone managed to tame a wild animal that had been injured or trapped.

People all over the world developed different ways of farming, depending on where they lived. The first colonists in the New World tried to farm the land they found the same way they had farmed in Europe. It didn't work, and they nearly starved. They had to learn to farm like the Indians and grow the crops that would grow well in the place where they had come to live.

Back then nearly everyone had to farm and hunt to provide enough food to keep their families alive. The first US census, taken in 1790, listed 95 percent of the people as rural. That changed after the industrial revolution. Farmers had tools that helped them produce more and more food. When too many farmers started raising too much food, food prices fell, and many farmers could no longer earn enough money to support their families. They were forced to leave the farm and find work in the new industries. In the 1930s much of the farmland in our country started to wear out or erode away. Two million farmers were forced to leave their farms then.

Today only about 2 percent of the people in this country actually live on a farm or ranch. It is no longer necessary for every family to grow its own food. One American farmer today can feed about 125 people, both in this county and around the world. For every American farmer there are another seven people involved in American agribusiness. That includes thousands of businesses and millions of people who process, deliver and sell food to people all over the world. It includes people who teach agriculture in

P.A.S.S.

GRADE 3

Reading—1.1,2,3; 2.1,2;

4.1,2,3,4,5; 5.1; 6.2

Writing—1.1,2,3,4,5; 2.1,2,3,6;

3.1,2,3,4,6

Oral Language—1.1,2; 2.1,2,4,5,6;
3.1,2

Visual Literacy—1.2; 2.1,3; 3

Social Studies—1.1; 3.2,4; 4.3,4;
5.1,2,3

GRADE 4

Social Studies—1.1,4

Reading—2.1; 3.1,2,3,4; 4.1,2,3;
5.1,2

Writing—1.1,2,3,4,5,6; 2.1,4;
3.2,3,4,5,6

Oral Language—1.2; 2.1,2,3,4,5;
3.1,2;

Visual Literacy—1; 3

Social Studies—1.1; 3.2,4; 4.3,4;
5.1,2,3

GRADE 5

Reading—1.1,2,3,4; 2.1,2,3,4;

3.1,2,3,4,5; 4.1,2,3,4; 5.1,2

Writing—1.1,2,3,4,5,6; 2.2,3,5,6;
3.1,2,3,4,5,6

Oral Language—1.1,2;
2.1,2,3,4,5,6; 3.1,2

Visual Literacy—1.1,2; 2.2,3,4; 3

Social Studies—1.1; 7.2,5

GRADE 6

Reading—1.1,2; 3.1,2,3,4,5;
4.1,2,4; 5.1

Writing—1.1,2,3,4,5,6;
2.1,2,3,4,5,7,9; 3.1,2,3

Oral Language—1.1,2,4; 2.1,2,3

Visual Literacy—1.1; 3

Social Studies—1.1; 3.1,2; 4.2

Vocabulary

agribusiness—an industry engaged in the producing operations of a farm, the manufacture and distribution of farm equipment and supplies, and the processing, storage, and distribution of farm commodities

agriculture—the science or occupation of cultivating the soil, producing crops, and raising livestock

ancestor—one from whom an individual, group, or species is descended

genealogy—the study of family lines of ancestors

Industrial Revolution—the rapid major change in the English economy in the late 18th Century, marked by the general introduction of power-driven machinery process

Who is it?

Have class members bring baby or pre-school pictures in which the student is the only one in the picture. Assign a number to each baby picture, then make a list of all the class members. Have students try to match as many names to the baby pictures as possible. Compare results.

Oklahoma Ag in the Classroom is a program of the Oklahoma Cooperative Extension Service, 4-H Youth Development, in cooperation with the Oklahoma Department of Agriculture, Food and Forestry and the Oklahoma State Department of Education.

Oklahoma Ag in the Classroom
Oklahoma 4-H Programs
205 4-H Youth Development
Oklahoma State University
Stillwater, OK 74078
405-744-8889 <http://www.agclassroom.org/ok>



our state universities and scientists who research the insects and diseases that affect our food supply. It includes bankers who loan money to farmers and ranchers so they can buy the equipment they need, and it includes the people who build and sell that equipment. Agribusiness includes the truckers who haul the cattle to market, the florist who sells a dozen red roses and even the check-out clerk at the grocery store.

Social Studies/Language Arts

1. Discuss the term “genealogy” with students, and explain how to develop a family tree. Lead a discussion in which you ask students “What would be the purpose of learning your family’s history?”
2. Read and discuss background material. Brainstorm, and have students help you make a list on the chalk board of agriculture-related jobs.
3. Hand out student worksheets.
 - Have students take worksheets home to complete, with the help of a parent.
 - Have students draw stars next to the names of family members who work(ed) in an agriculture-related business.
 - Have students share findings with the class.
4. Bring in a guest speaker who lives or has lived on a farm or ranch, and ask him or her to talk about daily chores.
5. Have students do written or tape-recorded interviews of family members who have lived on a farm/ranch operation or who work in agribusiness. Have students share the interviews with classmates or another class.

Extra Reading

Artley, Bob, *Once Upon a Farm*, Pelican, 2000.

Avi, *The Barn*, Orchard, 1994.

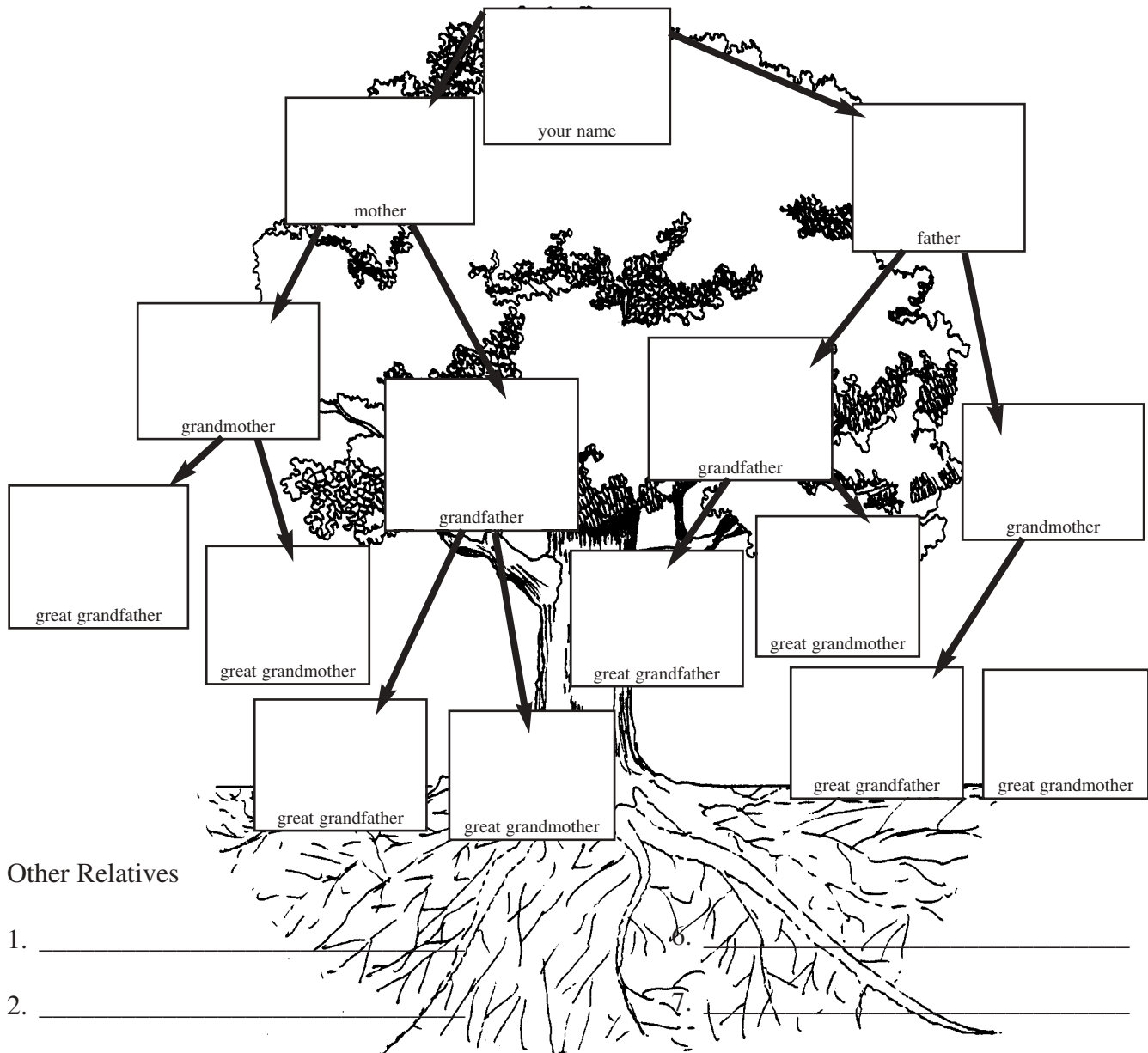
Greenwood, Barbara, and Heather Collins, *A Pioneer Sampler: The Daily Life of a Pioneer Family in 1840*, Ticknor Fields, 1999.

Peterson, Cris, *Century Farm: One Hundred Years on a Family Farm*, Boyd's Mills, 1999.

Name _____

Back to the Farm

Fill in the blanks to complete your family tree as completely as possible. Get an adult family member to help. Put a star next to the people who are or were involved in farming or ranching. Circle the people who work in agribusiness.





AgMag Jr.

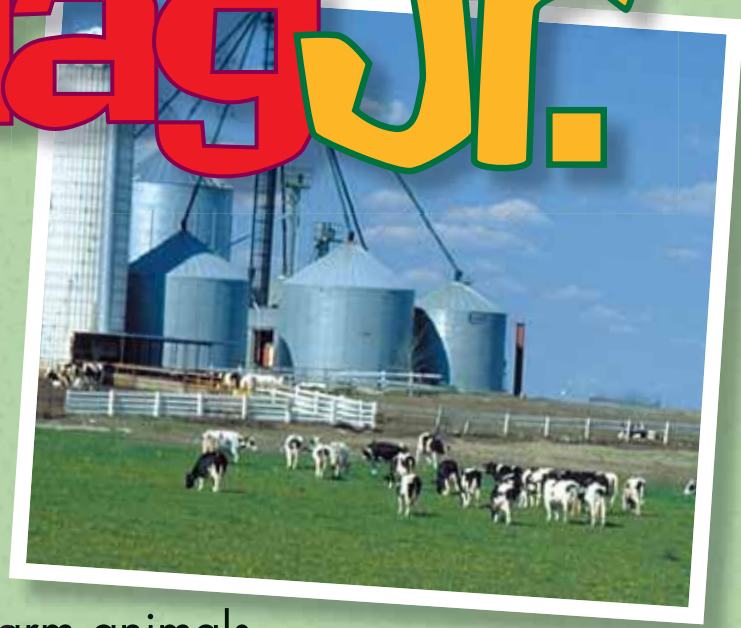
Volume 1

Agriculture is Everywhere!

Look around and you will see agriculture everywhere. What is

agriculture? It's growing plants and farm animals.

It's the workers who change things grown on farms into things we can use. It's the stores that sell us food, clothes and much more!



Do you wear clothes?

Circle your answer.

Yes

No

Do you eat food?

Circle your answer.

Yes

No

Do you use pencils and paper?

Circle your answer.

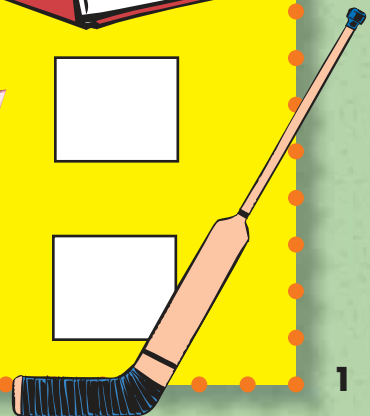
Yes

No



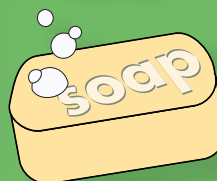
All these things came to you from agriculture!

How did they start out? Write **p** for plant.
Write **a** for animal.



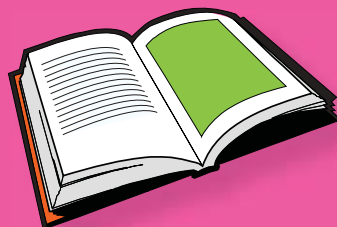
Agriculture is in your home.

Circle things you have in your home.



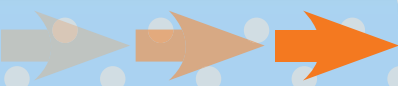
Agriculture is in your school.

Draw a box around things you use in school.



What is your favorite food?

Draw it here.



Tell how it comes from agriculture.



Agriculture is everywhere in your community.

Draw a star by the things you like to do.



Eating ice cream



Playing sports



Shopping



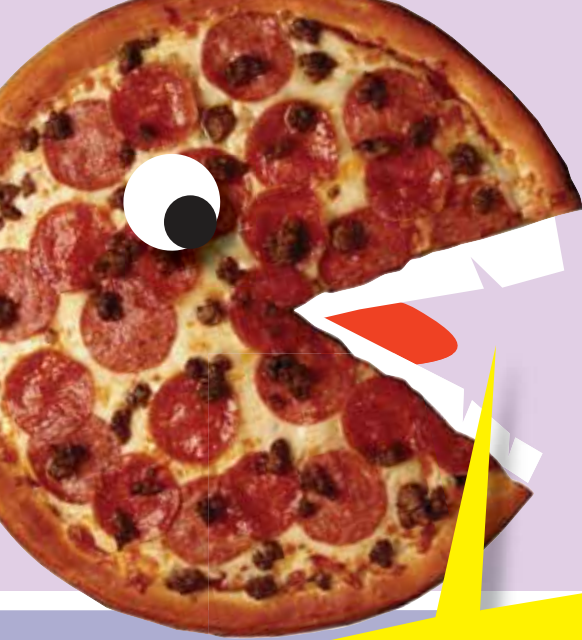
Exploring a fair



Visiting an apple orchard

Your turn!

Tell how **farmers** and agriculture give us all these things.
Write **agriculture** here.



Farmers make great pizza!

The foods in pizza come from agriculture. Some of them are tomatoes, onions, mushrooms, green peppers, cheese, sausage, pepperoni and the crust (wheat).

What's in your favorite pizza?

Pizza Picks

In each child's row put a smiley face under the pizza they like.



	sausage	veggie	pepperoni
 Joe			
 Amy			
 Juan			

1. Joe does not like pizza with meat.
2. Amy likes pizza with toppings that begin with the same letter as "pizza."
3. Juan likes meat but not pepperoni.

Who likes veggie?

Who likes sausage?

Who likes pepperoni?

Just for
Laughs!



Where do cows go when they want to have fun with their friends?

To the mooovies!



Teacher Guide

Volume 1, 2007

Introducing AgMag Jr.!

Many of you are aware of the Minnesota Agriculture in the Classroom (MAITC) education program. Initiated in 1986, MAITC is a unique public/private partnership between the Minnesota Department of Agriculture and the MAITC Foundation. The overall program goal is to advance agricultural literacy to all learners, especially K-12 students and educators. MAITC's mission is "to promote understanding and awareness of the importance of agriculture."

For the past 22 years, MAITC has published and marketed the popular Minnesota AgMag series to students and educators in grades 4-6, with emphasis on Minnesota geography, history, environmental education and science. Other grade level educators have been envious! For many years, teachers of primary grades have been asking for their "own" AgMag so they could more easily integrate agriculture into their curricula at the primary grades.

Say hello to the AgMag Jr.! Thanks to financial support from one of the program's long-standing partners, AgStar Financial Services, we are pleased to "pilot" the new AgMag Jr. for the 2007-08 school year. If met with positive acceptance from students and teachers, our goal is to establish it as an annual classroom resource for the primary grades.

Why Ag in the Classroom?

In times past, people were very aware of the role agriculture played in their lives. It meant survival! Nearly everyone—men, women and children—worked the land.

Agriculture still means survival. That will never change. But as time goes on, fewer and fewer people have close contact with farming. They're not aware of their own—and the nation's—total dependence on agriculture. Think about it.

- Less than 2 out of 100 Americans work directly in production agriculture (farming). This small group meets the food and fiber needs of the nation as well as many people abroad.
- Agriculture, along with its related occupations, is the nation's largest industry. It generates billions of dollars each year; one out of every five jobs depends on it in some way. It has massive impact on the American economy, greatly influences the U.S. international balance of trade and directly affects the number of jobs here at home.

Agriculture is constantly changing, but one thing is constant, it is a vital part of your day! Even as early as the primary grades, it is important for students to gain a better understanding and appreciation for the ways agriculture touches their lives, each and every day. Food does not magically appear in the grocery store or on the kitchen table. It all starts with agriculture. Building this agricultural literacy is what Ag in the Classroom is all about.

Hello Out There (Resources)

MINNESOTA AGRICULTURE IN THE CLASSROOM

Attn: Al Withers, Program Director
625 Robert Street North
St. Paul, Minnesota 55155
Telephone: 651-201-6688 E-mail: alan.withers@state.mn.us



www.mda.state.mn.us/maitic

Go online to order great resources to complement your new AgMag Jr. Check out the fantastic 22 title Children's Agricultural Literacy Book Bundle, our Minnesota Commodity Card Set, the Farm Babies bookmarks and much more.

www.agclassroom.org

Check out great lessons and classroom resources available from other state Ag in the Classroom programs. Many have downloadable primary grade lessons on their web sites.

Did you know? Minnesota ranks in the top ten producers in the nation in these products! (2006 ag commodities)

- 1st in sugarbeets, turkeys, sweet corn and green peas for processing
- 2nd in spring wheat, oats, canola and cultivated wild rice
- 3rd in soybeans, and hogs
- 4th in corn, sunflowers, dry edible beans, flax, American cheese and mink pelts
- 5th in barley, total cheese and ice cream
- 6th in potatoes, red meat, honey and milk production
- 7th in all hay and ag exports
- 8th in all wheat
- 10th in eggs and cattle/calves on feed

Many of the organizations representing the commodities listed here have great FREE materials for teachers!

Academic Standards Connection

The student Minnesota AgMag Jr. and other educational materials from Minnesota Agriculture in the Classroom can meet many of the current academic standards. These materials can serve as a wonderful “real life” connection and supporting piece as you incorporate the standards into your classroom activities. Here are a few examples of potential connections:

Social Studies

(Economic Strand) Standard: The students will understand the relationship between producers and consumers.

Science

(Organism Strand) Standard: The students will observe plant and animal life cycles.

(Heredity Strand) Standard: The students will be able to match adult animals to their offspring.

(Flow of Matter and Energy Strand) Standard: The students will understand that organisms have basic needs.

Reading and Language Arts

(Reading and Literature Strand) Standard: The student will use a variety of strategies to expand reading, listening and speaking vocabularies.

Glossary

ACRE: A way to measure land. An acre is about the size of a football field (43,560 sq. ft.).

AGRICULTURE: Growing plants and raising animals that people use for food, clothing and many other things every day. It's also harvesting those farm products and getting them to us so we can use them.

(Adult notes: Agriculture is the industry that grows, harvests, processes and brings us food, fiber, forests, sod, landscaping materials and more. Agriculture uses soil, water, sun and air to produce its products. Agriculture starts on farms, orchards, gardens and ranches with the growing and the harvesting of crops and livestock. It continues as farm products move to processing plants and finally travel as finished products to stores, farm markets, lumberyards, greenhouses and more where consumers buy the products. Agriculture is connected in some way with almost everything we eat, wear and use.)

Quote from an Unknown Source: “Agriculture is not simply farming. It's the supermarket, the equipment factory, the trucking system, the overseas shipping industry, the scientist's laboratory, the houses we live in, and much more. It has an affect on the air we breathe, the ground we walk on, the water we drink, and the food we eat.”

BY-PRODUCTS: A part of a plant or animal used for something other than its main purpose. (Examples: Hogs are mainly raised for meat, but by-products are fats for soaps, leather for pigskin products, hair for brushes, etc. Soybeans are mainly raised for animal and human food, but soy is also found in candles, lotions, ink, paint, fuels and more).

CROPS: Plants that are grown and harvested to feed people and animals or to make other things people need.

FARM: Areas of land where plants and animals are grown or raised for food, clothing and more.

FARMER: A person who lives and works on a farm. He or she provides us with products we need and use every day. Farming is a job; farmers make money by selling their farm products.

FARM (Agriculture) PRODUCTS: Animals or plants raised on farms, or products made from them. Raw materials often must be changed (processed) to be of use. Example: Sheep are sheared to produce wool, but a hunk of raw wool has no practical purpose to someone who needs clothes. The wool is cleaned and processed into yarn, fabric and eventually clothing, which are woolen products people can use.

FIBER: The raw product for fabric such as cotton and wool.

FORESTRY: Growing and managing forests. In the sense of farming, it is the growing of trees to provide paper and wood products.

LIVESTOCK: Farm animals raised for food, clothing and other products or uses.

ORCHARD: Land that is used to grow fruit or nut trees.

POULTRY: “Bird” types of farm animals raised for meat and eggs. Chickens, turkeys, ducks and geese are kinds of poultry.

RENEWABLE RESOURCE: A resource that can be regrown and replenished in a short period of time. Ethanol (from corn) and biodiesel (from soybeans) are examples of renewable fuels. When we need more of these fuels, we grow more corn or soybeans.

Discussion Prompters

AgMag Jr. Cover—What is Agriculture?

(See Agriculture in the Glossary above. The goal of the first three pages of your AgMag Jr. is to define agriculture and guide students to think about how many things in their everyday worlds are connected to agriculture.)

1. What is agriculture? (Invite students to offer their own definitions. Some may say “farming,” or “milking cows.” Agriculture starts on the farm, but includes all the people and places who harvest the farm crops, change them into forms we can use and get them to stores where we can buy them. It is all the businesses and workers who get food, clothing, furniture, landscaping trees, lumber and more from the farms to our homes, schools and communities.)
2. Who were the first farmers? (Many years ago, American Indians lived on the land where we live today. The Indians hunted deer, buffalo and small animals in the forest. They raised crops (corn, squash and beans) and harvested nature's crops (berries, nuts, maple syrup). All their food, homes, clothing, weapons and toys came from the land and water. Many of the foods we eat at Thanksgiving and year around are thanks to American Indians.)
3. How has the job of the farmer become easier today than it was long ago? (Modern machinery has replaced horse or oxen power and old-fashioned tools. Scientists have developed plants that can grow in many different weather and soil conditions. Animal nutritionists and veterinarians help keep farm animals healthy.)
4. Do you know someone whose job is connected to agriculture? How?
5. Some students may need help connecting items at the bottom of the page back to their plant and animal

sources. Discuss as a class, then invite them to write "a" for things originating as animals, "p" for items originating as plants.

Answers: woolen mittens (a); baseball (a); cereal (p); chicken (a); book (p) and hockey stick (p).

Page 2—Agriculture is in your home and school.

Discuss how each of the items on this page is connected to agriculture and invite students to circle the home items and box the school items they have.

1. What products of agriculture do you think were used to make these home items?

Answers: paint (animal fats, soy and vegetable oil); blue jeans (cotton); newspaper (tree pulp, soy ink); bed and bedding (cotton sheets, perhaps wool blanket, some pillows have feathers, wood from trees); shoes (cotton canvas, leather, cotton shoelaces); soap (may have many different ingredients including soy and other vegetable oils, fats from cattle, scent oils like almond, coconut or mint, honey, beeswax, wheat germ, oatmeal and lanolin from sheep); candle (soy oil, cotton wick).

2. What products of agriculture do you think were used to make the things you use at school?

Answers: wooden pencils, rulers, desks, lunch bags, paper in books (trees); crayons (soy oil, animal fats); glue (many today are made of non-toxic synthetic polymers, but some have tapioca or proteins from milk); ink in books (soy).

Page 3—Agriculture is everywhere in your community.

Discuss each of the photos and invite students to tell how each activity connects to agriculture. (Sports clothing and equipment (bats and balls from wood and leather, etc.) City trees, sod and turf on playing fields are agriculture. Eating, grocery shopping, animals at fairs and visiting an orchard have obvious agricultural connections.)

1. What other things do you like to do at play and in the community? What are the agriculture connections?
2. Did you go to the state fair? What signs of agriculture did you see?
3. There are many different kinds of apples. What is your favorite?
4. Like you, what do plants and animals need to grow? (Plants need air, water, soil and sunlight. Animals need all the same things plus their own kinds of food. Animal foods depend on plants, too.)

Page 4—Pizza and Agriculture

1. What's in your favorite pizza?

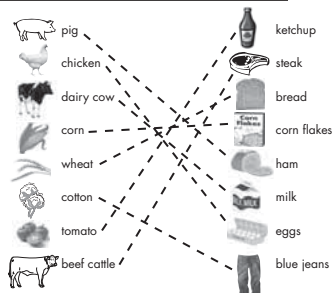
Fun Fact: As a nation, we eat 100 acres (100 football fields) of pizza per day. That's 350 slices every second! Most Americans prefer pepperoni on their pizza.

2. **Pizza Picks:** This activity represents an easy logic exercise. Depending on your children's experience with similar activities, you may want to vary the directions to match your group. For example:
 1. Joe does not like pizza with meat. Put an X under each pizza he does not like. Put a smiling face under the pizza he likes.
 2. Amy likes pizza with toppings that begin with the same letter as "pizza." Put a smiling face under the pizza Amy likes. Put an X under each pizza she does not like.
 3. Juan likes meat, but not pepperoni. Put an X under each pizza he does not choose. Put a smiling face under Juan's choice.

Answers: Joe likes veggie. Amy likes pepperoni. Juan likes sausage.

Answers: Reproducible Activities

Where does it come from?



What happens first?

In order: Growing, Harvesting, Changing, Selling, Eating

Farm Animal Babies

Chick's mother is hen.
Father sheep is ram.
Ewes might have 1 to 3 babies.

Who am I? sheep

Mooo....ve Over and Read!

Neat Literature Connections

Allison's Zinnia by Anita Lobel

Corn Is Maize by Alik

Cotton – Now & Then by Karen Bates
Willing & Julie Bates Dack

Dirt – The Scoop on Soil by Natalie M.
Rosinsky

*Extra Cheese, Please! Mozzarella's
Journey From Cow to Pizza* by Cris
Peterson

From Wheat to Bread by Kristin Thoennes
Keller

Growing Vegetable Soup by Lois Ehlert

Harvest Year by Cris Peterson

If It Weren't For Farmers by Allan Fowler

Pumpkin Pumpkin by Jeanne Titherington

Red Leaf, Yellow Leaf by Lois Ehlert

Sugarbush Spring by Marsha Wilson
Chall

*The Edible Pyramid: Good Eating Every
Day* by Loreen Leedy

The Long Way to a New Land by Joan
Sandin

The Long Way Westward by Joan Sandin

The Milk Makers by Gail Gibbons

The Seasons of Arnold's Apple Tree by
Gail Gibbons

Too Many Pumpkins by Megan Lloyd

Tops and Bottoms by Janet Stevens

Teacher's Grab Bag

Recipe for Corn Putty

Play with it like clay, and then watch it become liquid again.

- 1 cup cornstarch
- ¼ cup + 1 tablespoon water
- food coloring

Blend mixture with fork. It should flow when the bowl is tipped but feel solid when you touch it. If it's too thick, add a little water. If it's too runny, add a little cornstarch.

Where does it come from?

Match up the farmer's product to the store product.

Farm Products



pig



chicken



dairy cow



corn



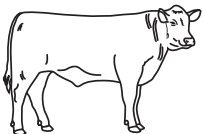
wheat



cotton



tomato



beef cattle

Store Products



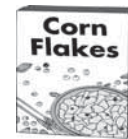
ketchup



steak



bread



corn flakes



ham



milk



eggs



blue jeans

Did *you* know?

Sheep's wool is used in the toes of ballet shoes to cushion the toe when standing on it.



Have a ball with agriculture!
The hide from one steer can make 20 footballs!

What happens first?

Cut the pictures apart.
Paste them on another
piece of paper in the right
order. Then tell the story of
how the apples get from
the orchard to your table.



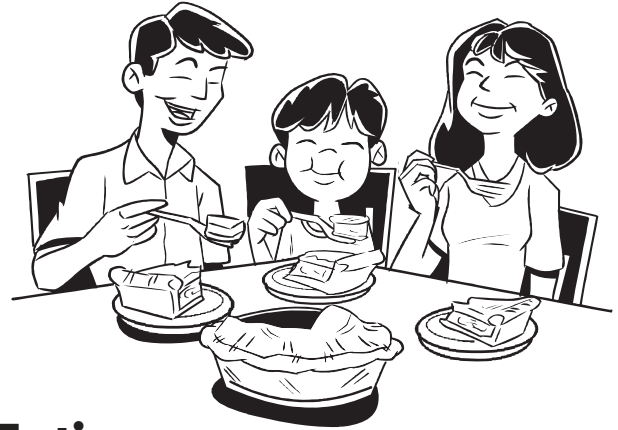
Harvesting

Apples are picked from the trees.



Changing

Apples are washed and sorted.
Some are made into pies.



Eating

Families enjoy eating fresh apple pies.



Growing

Apples grow on special farms
called **orchards**.

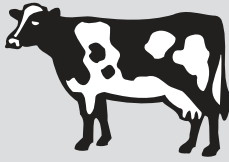
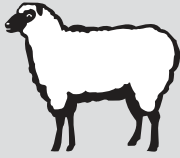


Selling

The pies travel by truck to the store.
Your family buys the pies.

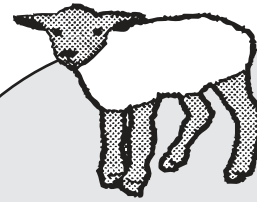
Farm Animal Babies

Farmers raise farm animals.

	 horse	 cattle	 chicken	 sheep
Mother's name	mare	cow	hen	ewe
Father's name	stallion	bull	rooster	ram
Baby's name	foal	calf	chick	lamb
Number of babies	1	1	12 to 15	1 to 3

What is the chick's mother's name?

What is the father sheep called?



How many babies might a ewe have?

Who am I?

Use a word from the gray picture row in the graph.

My coat can be shaved to make wool. Like your hair, it always grows back.

Can you have a day without AGRICULTURE?

Did you take a shower without agriculture today?
(soap, towels, deodorant, shaving cream, combs, etc.)

Did you get dressed without agriculture today?
(shoes, clothes, make-up, perfume, etc.)

Did you eat breakfast without agriculture today?
(cereal, bacon, toast, milk, pop tarts,
bagels, freon/refrigerant, cellophane, etc.)

Did you go to work without agriculture today?
(brake fluid, asphalt, car upholstery, car polish & wax,
ball bearings containing bone charcoal, ethanol, etc.)

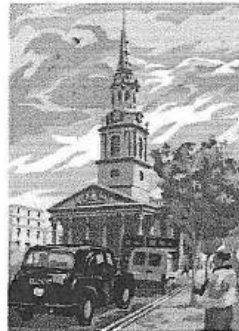
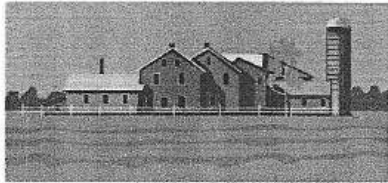
Did you work without agriculture today?
(pencils, paper, books, crayons, chewing gum, paint brushes,
paint, desks, linoleum, floor wax, sheet rock, etc.)

*You can't have a day
without AGRICULTURE!!!*

Name: _____

Facts About Farms Pretest Posttest

Circle the farm.



Circle the farmer.



Circle what a farmer does.



Which chore is done on a farm?



What does a farmer sell?



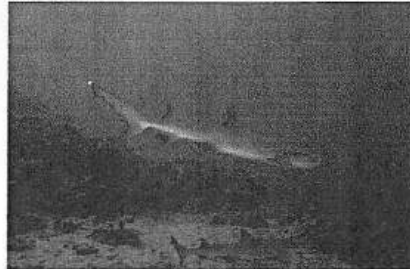
Name: _____

Farm Animals
Pretest Posttest

Circle the animals that live on a farm



horse



shark



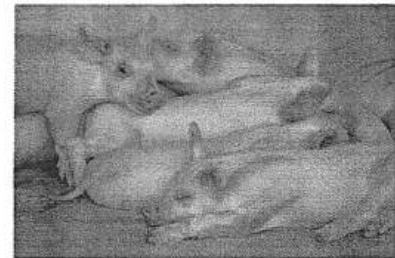
goat



cattle



monkey



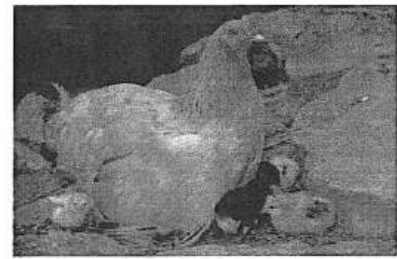
pigs



sheep



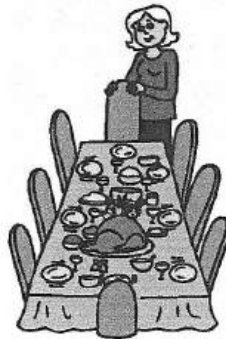
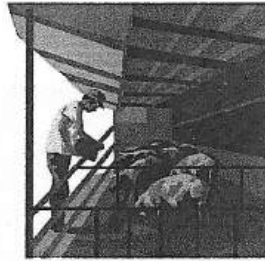
tiger



chickens

How Food Gets to Your House

Number in order the steps of how food gets to your table.



Where did the cookies come from?

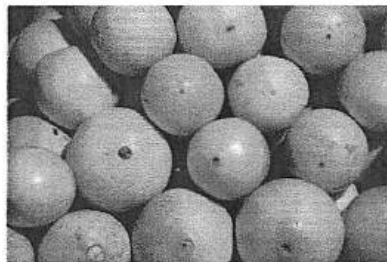
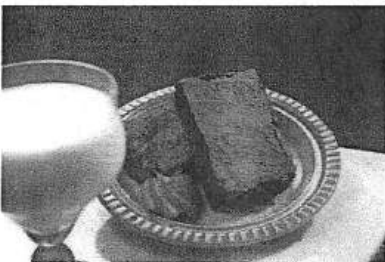


Wheat



bananas

Where did the milk come from?

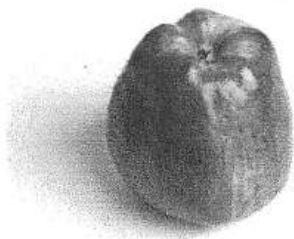


oranges



cows

Where did the apple come from?

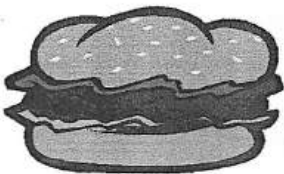


apple tree



pumpkins

Where did the hamburger come from?

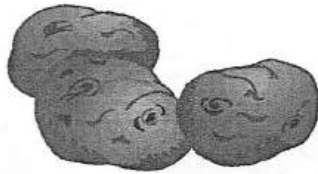


pig



cow

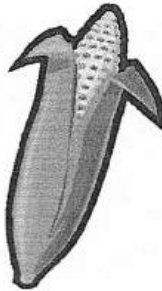
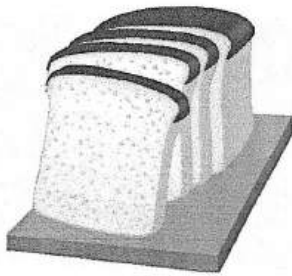
Where did the French fries come from?



potatoes

carrots

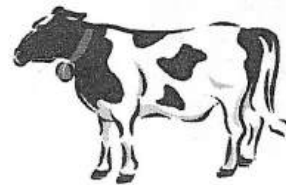
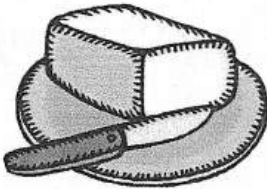
Where did the bread come from?



corn

wheat

Where did the butter come from?



store

cow

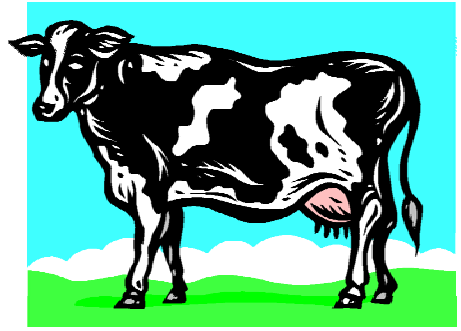
Where did the flour come from?



wheat

hay

Name: _____



Hamburger and steak are beef.
Beef comes from cattle. Beef cattle
are raised for beef dairy cattle are
raised for milk.

Young cattle are called calves. Cattle that are mothers
are called cows, fathers are called bulls.

Beef comes from _____
_____ .

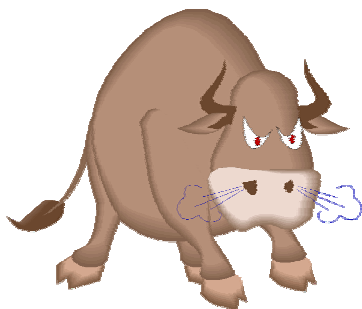
There are _____ and _____

cattle.

Young cattle are called _____ .

Cows are _____ ,

_____ are fathers.



Name: _____

comes from

cows and is good to drink.

Maple trees give us

for our pancakes.

Farmers use

to plant and harvest crops for us.

Farmers use

to plant and harvest crops for us.

_____ is used to flavor gum.

Farmers grow

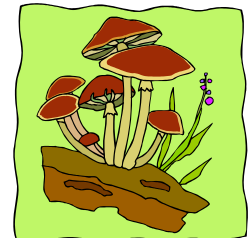
on logs.

are animals raised

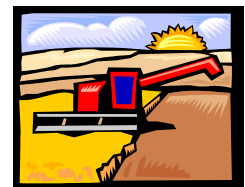
on farms and they live in the wild.



maple syrup



mushrooms



machines



mint



mink



milk

Making Connections --- With Words

Connect Two

Place vocabulary words in this section.

potatoes

cow

wheat

hamburger

french fries

bread

_____ and _____ are connected because

_____ and _____ are connected because

_____ and _____ are connected because

Name: _____



cows produce milk.

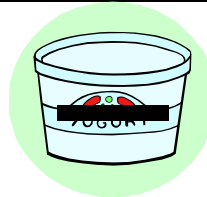
rayDi

When cheese is made,
is left over.

hyew

Eating

gtuyor



can help your body feel better after you have been sick.



and



elc recma

butter

are both made from milk.

Drinking

ikml

makes your bone strong and healthy.



Agricultural Word Search

F	D	A	C	O	R	N	H	E	N	I	B	M	O	C
I	R	O	Z	M	U	J	C	O	T	T	O	N	W	H
S	W	Y	F	K	L	T	Y	X	A	U	L	V	Y	I
H	A	S	O	Y	B	E	A	N	S	R	O	B	T	C
V	Q	N	O	P	E	M	T	F	H	K	D	R	N	K
N	D	B	D	Q	E	L	R	N	E	E	M	Y	E	E
U	A	W	K	U	F	N	R	A	E	Y	W	S	M	N
C	P	T	G	V	H	A	P	F	P	S	H	B	N	X
M	D	X	U	S	B	P	R	U	X	C	E	J	O	D
D	I	S	K	R	M	H	D	M	T	D	A	I	R	Y
X	U	R	V	L	A	W	S	R	B	P	T	S	I	U
V	O	K	R	U	E	L	B	A	T	E	G	E	V	Z
P	J	N	E	J	A	C	R	E	P	L	X	C	N	T
U	M	G	T	K	F	S	U	E	Y	F	I	B	E	R
M	I	D	A	P	P	L	E	S	S	N	D	M	S	A
P	N	Y	W	K	U	F	W	H	K	O	H	U	J	C
K	V	L	H	G	R	M	S	B	C	V	U	L	B	T
I	N	W	I	V	H	P	L	A	N	T	E	R	V	O
N	M	U	L	O	Y	H	U	L	R	G	P	Y	C	R
S	X	C	O	N	S	E	R	V	A	T	I	O	N	E

Can you find the words listed below which are related to agriculture in the puzzle above? Some are up and down, across, at an angle, backwards, or cross each other.

food
fiber
natural resource
environment
conservation
farm

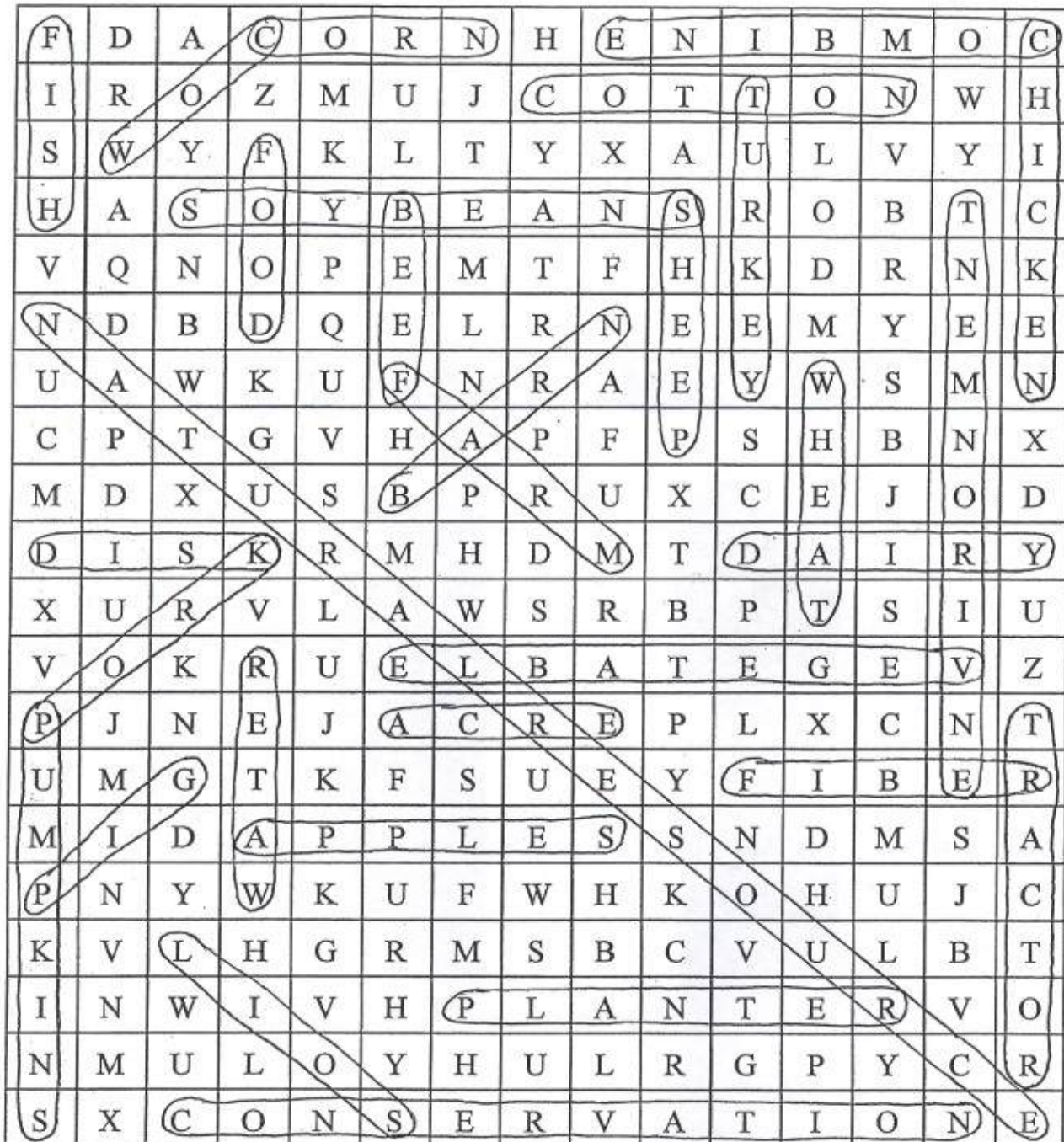
soil
water
tractor
combine
planter
disk

acre
barn
corn
soybeans
wheat
vegetable

apples
pumpkins
cotton
beef
dairy
pork

cow
pig
sheep
fish
chicken
turkey

Agricultural Word Search



Can you find the words listed below which are related to agriculture in the puzzle above? Some are up and down, across, at an angle, backwards, or cross each other.

food

fiber

natural resource

environment

conservation

farm

soil

water

tractor

combine

planter

disk

acre

barn

corn

soybeans

wheat

vegetable

apples

pumpkins

cotton

beef

dairy

pork

COW

pig

sheep

fish

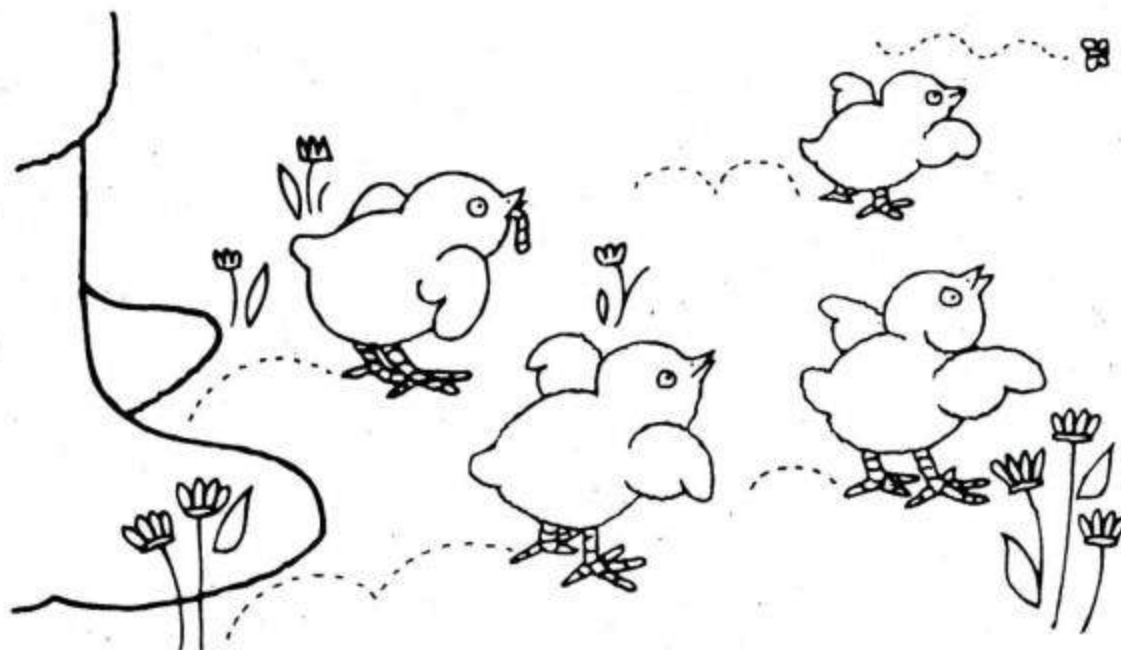
chicken

turkey

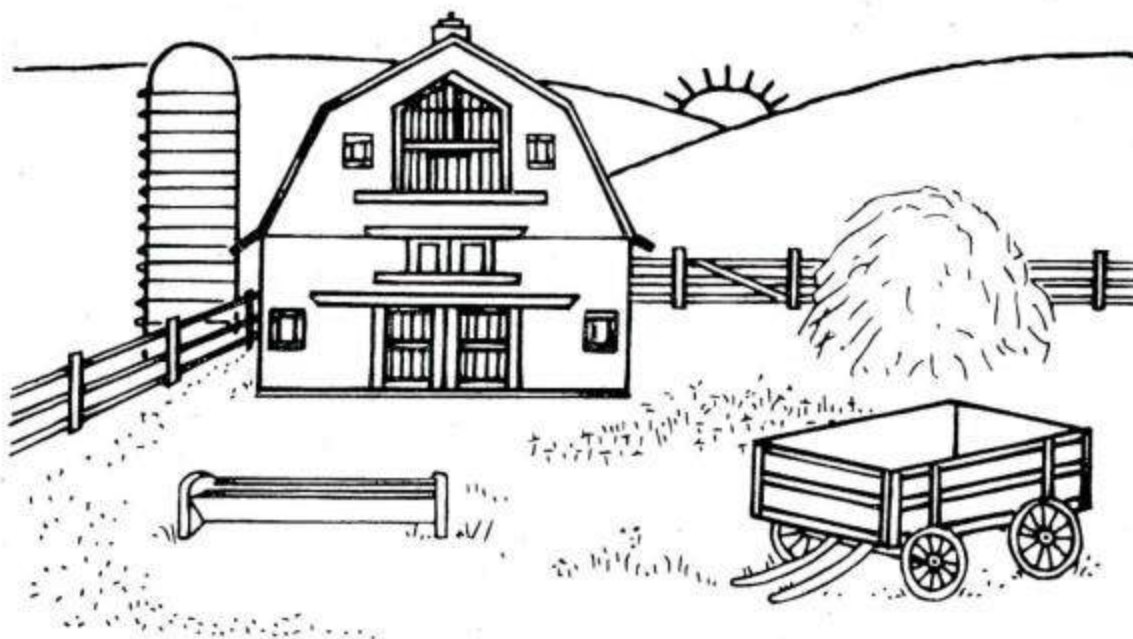


[illegible]

The following booklet is designed to place in the copy machine and double side each page. Then simply fold to make the booklet. The folded booklet could be stapled.

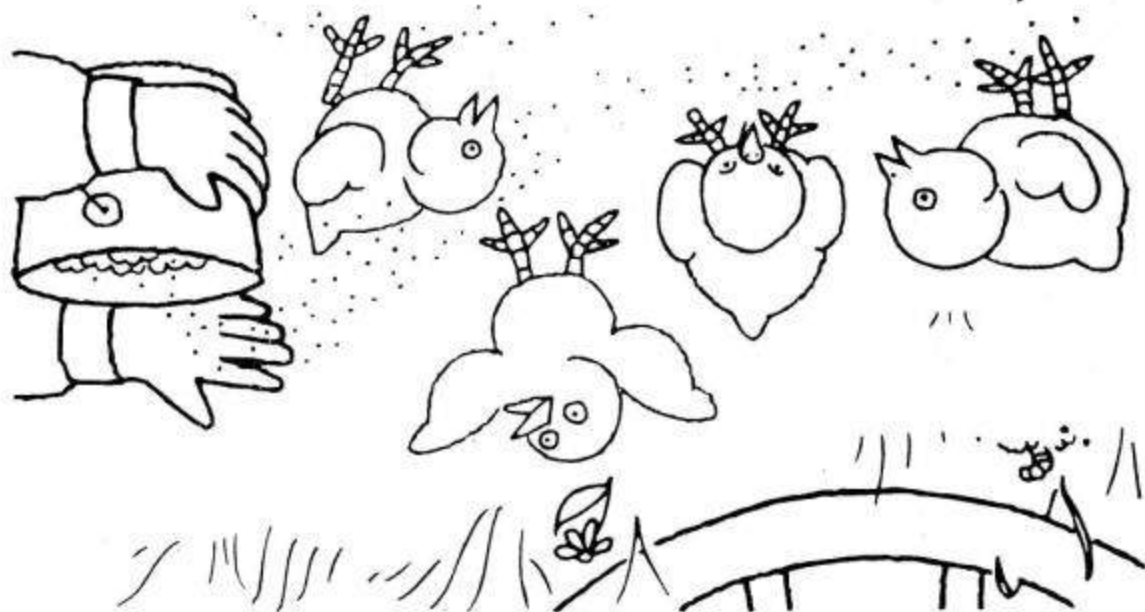


Cheep, cheep, cheep, cheep, off they go.



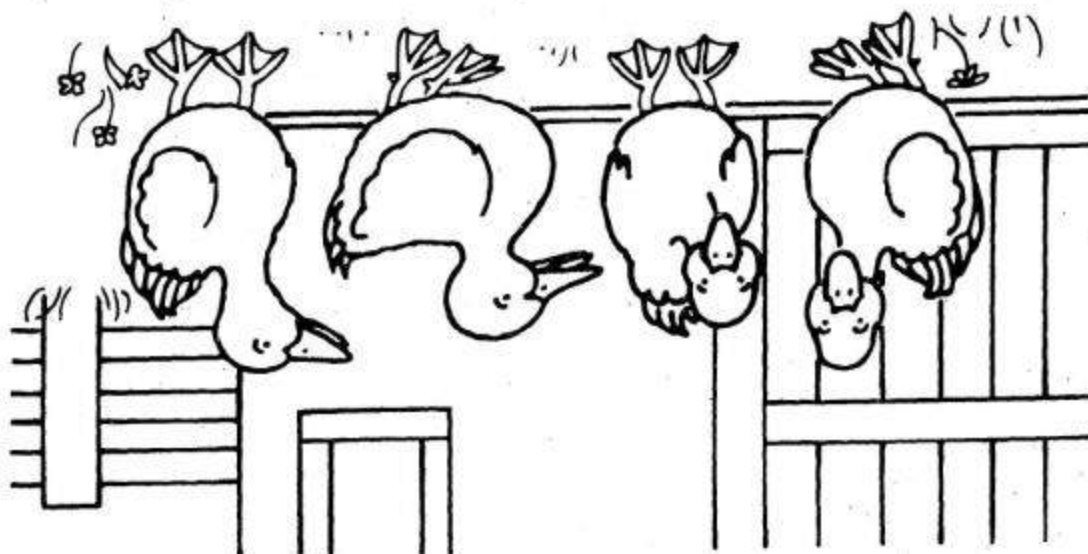
Down on the farm early in the morning,

See the busy farmer feeding them their breakfast.

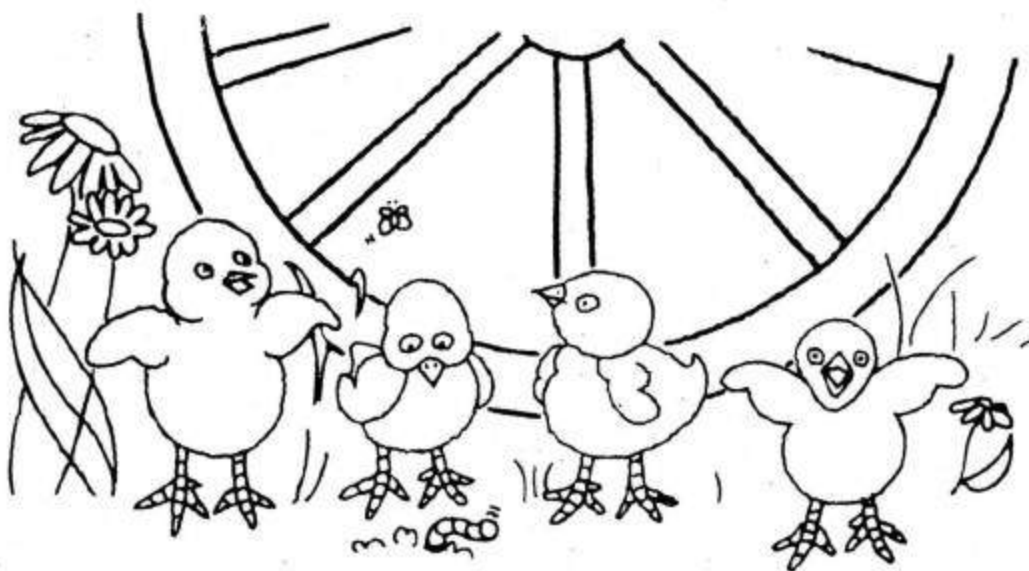


© Copyright 1990, Warren Publishing House, Inc.

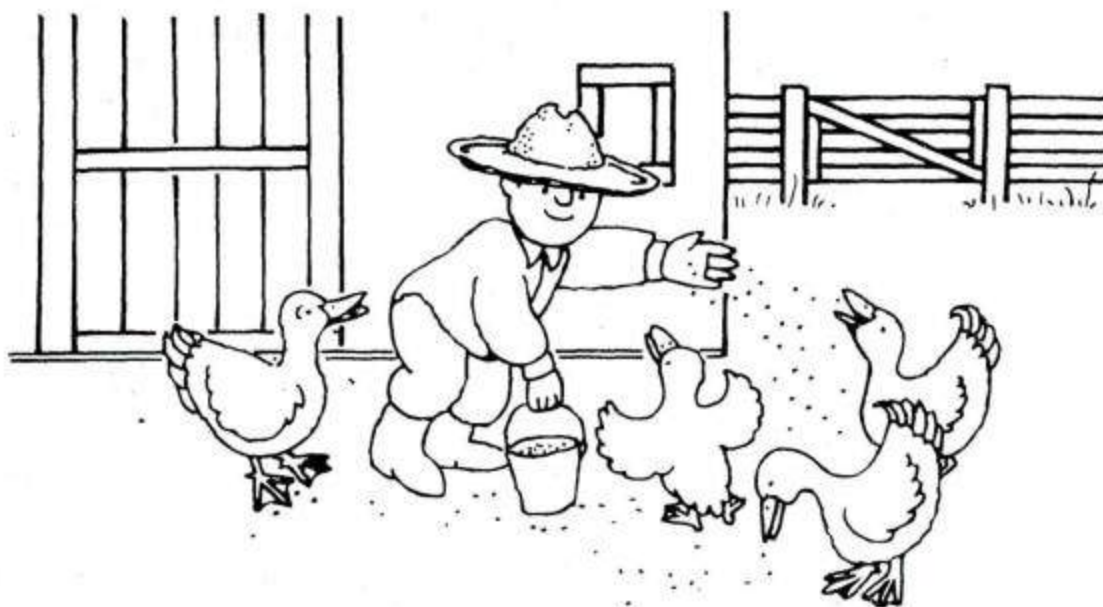
see the little ducks standing in a row.



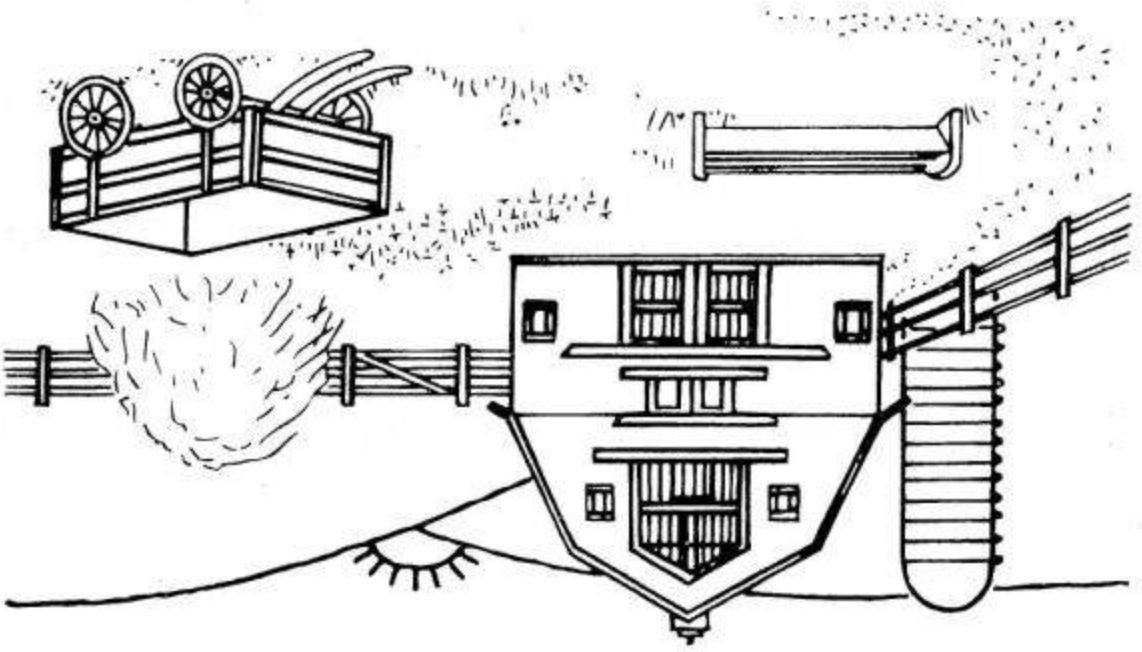
© Copyright 1990, Warren Publishing House, Inc.



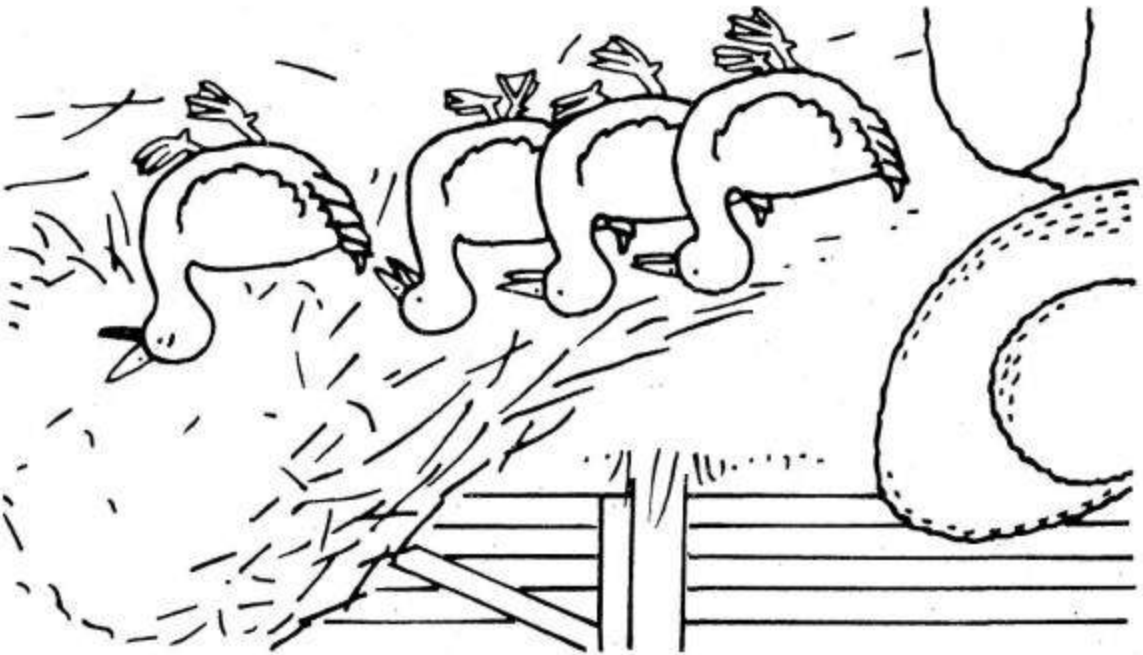
see the little chicks standing in a row.



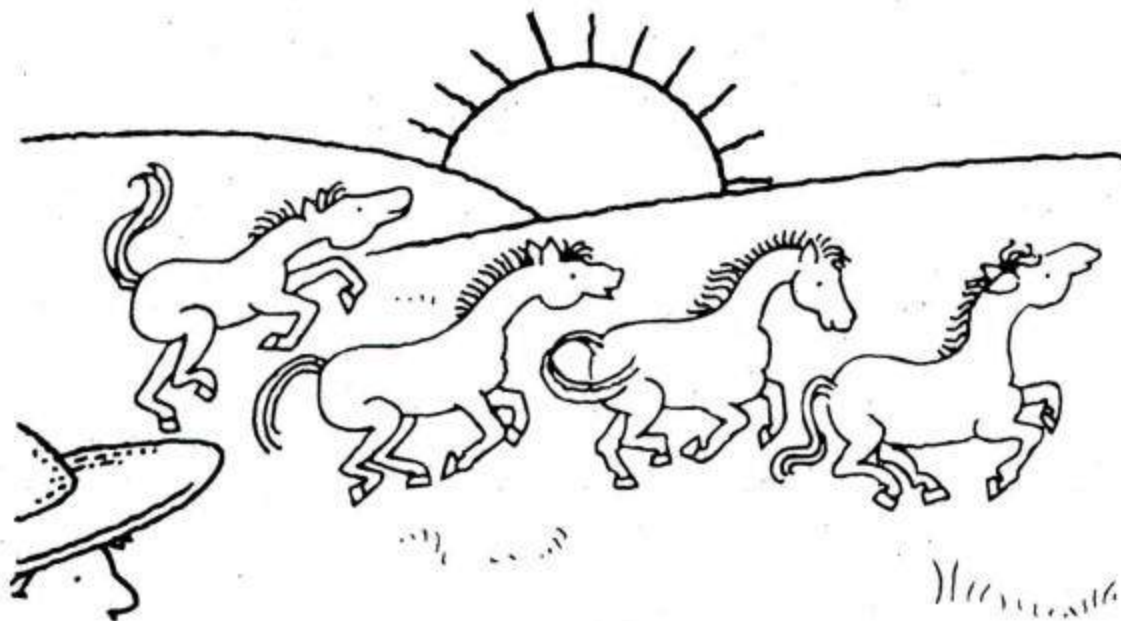
See the busy farmer feeding them their breakfast.



Down on the farm early in the morning,



Quack, quack, quack, quack, off they go.

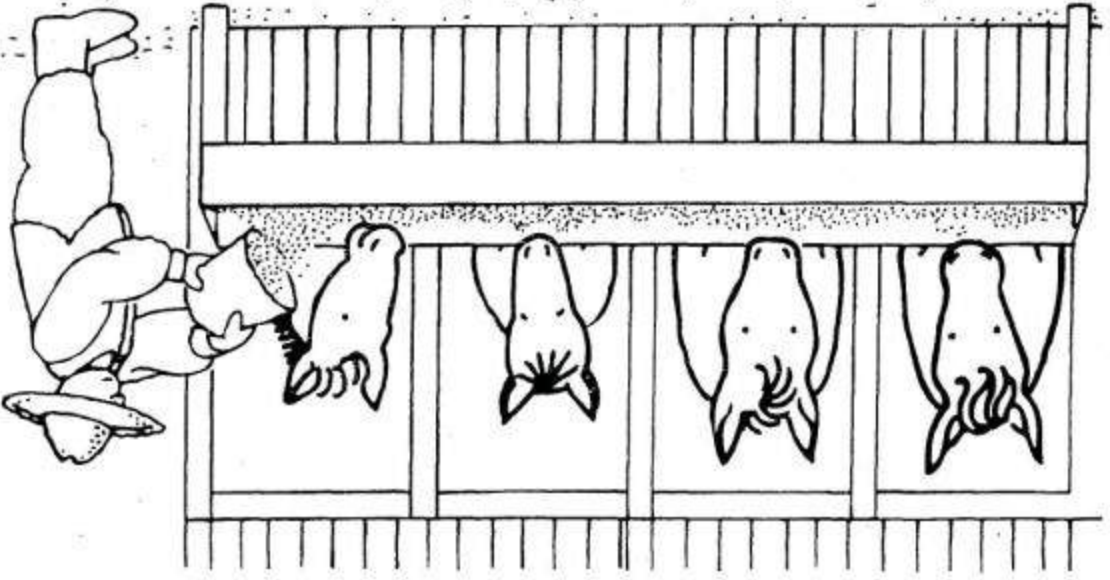


Neigh, neigh, neigh, neigh, off they go.

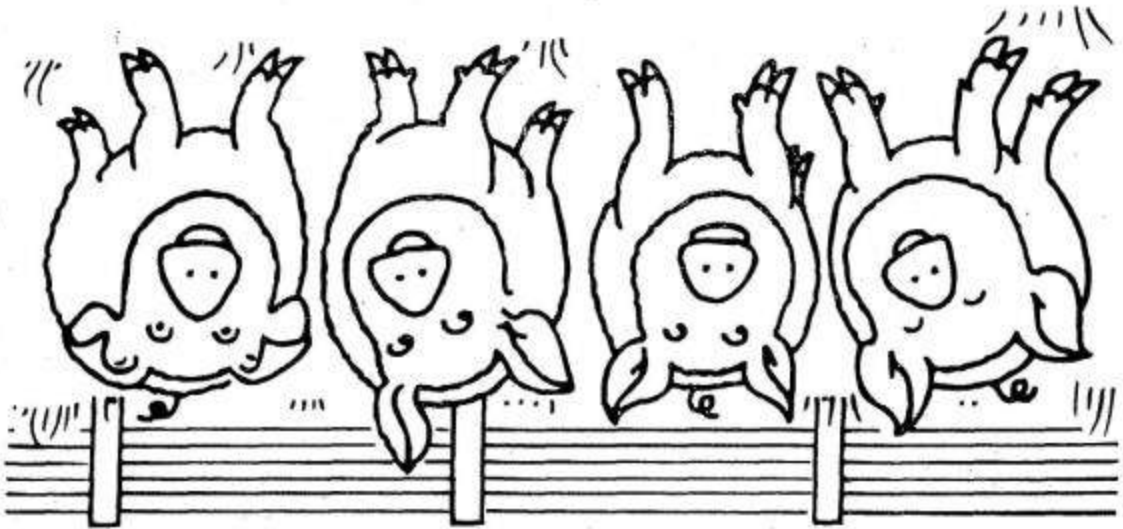


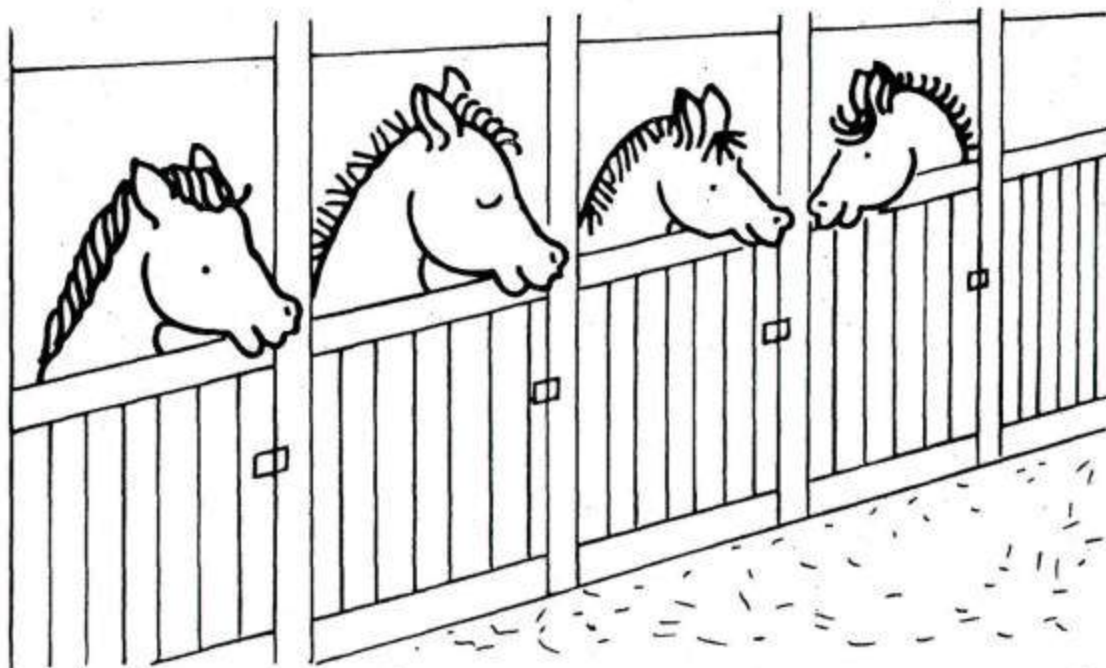
Down on the farm early in the morning,

See the busy farmer feeding them their breakfast.

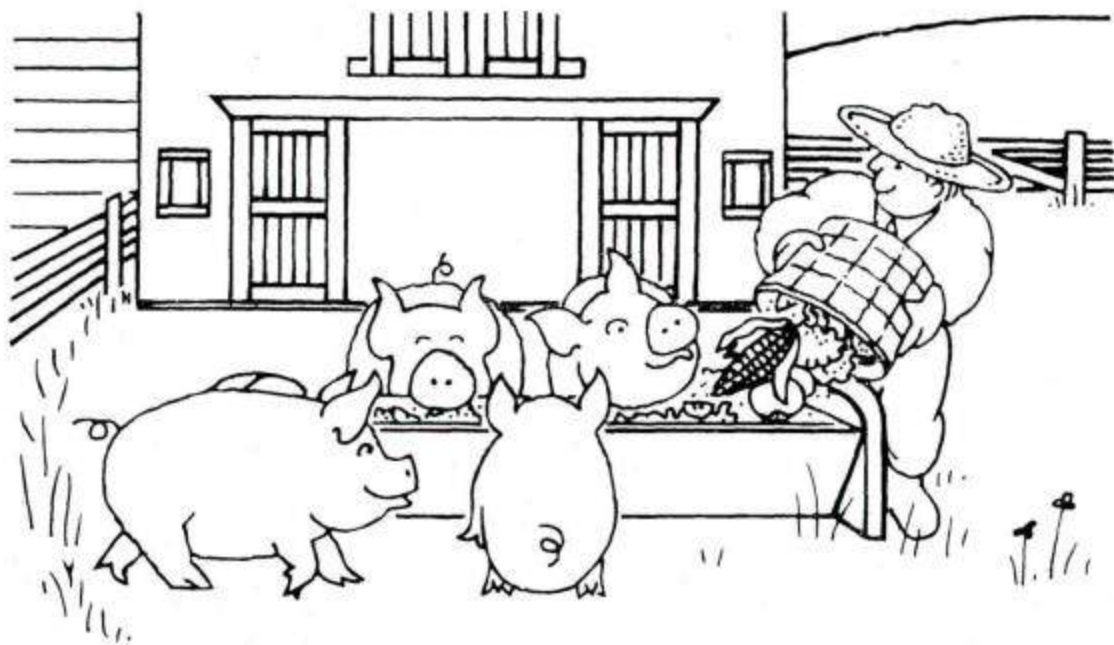


see the little pigs standing in a row.

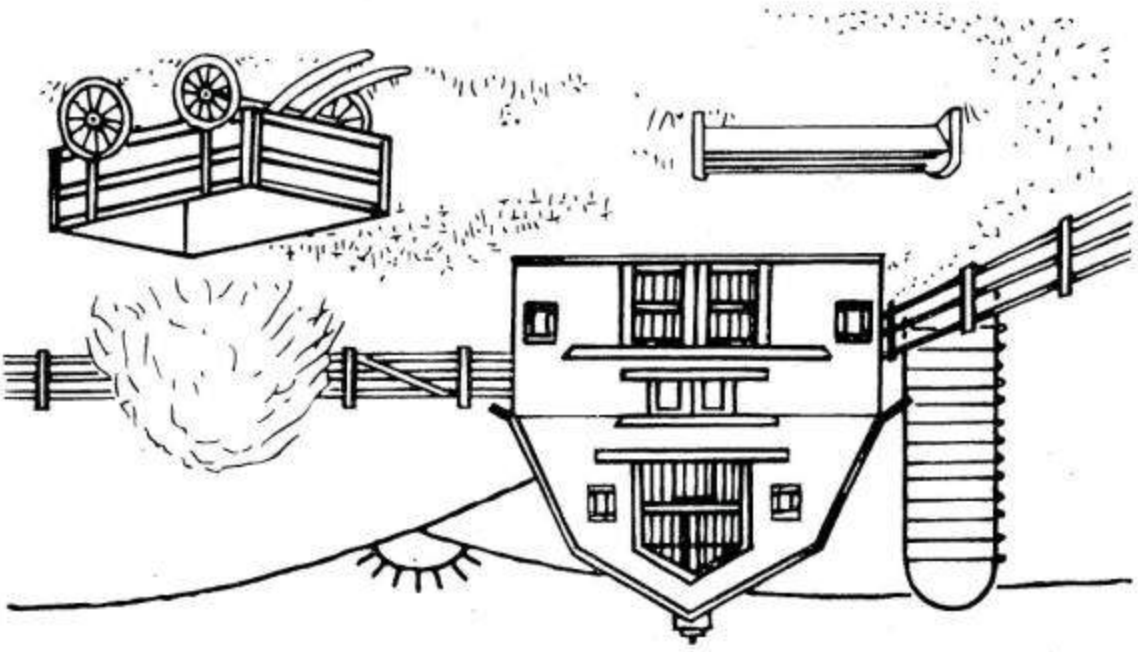




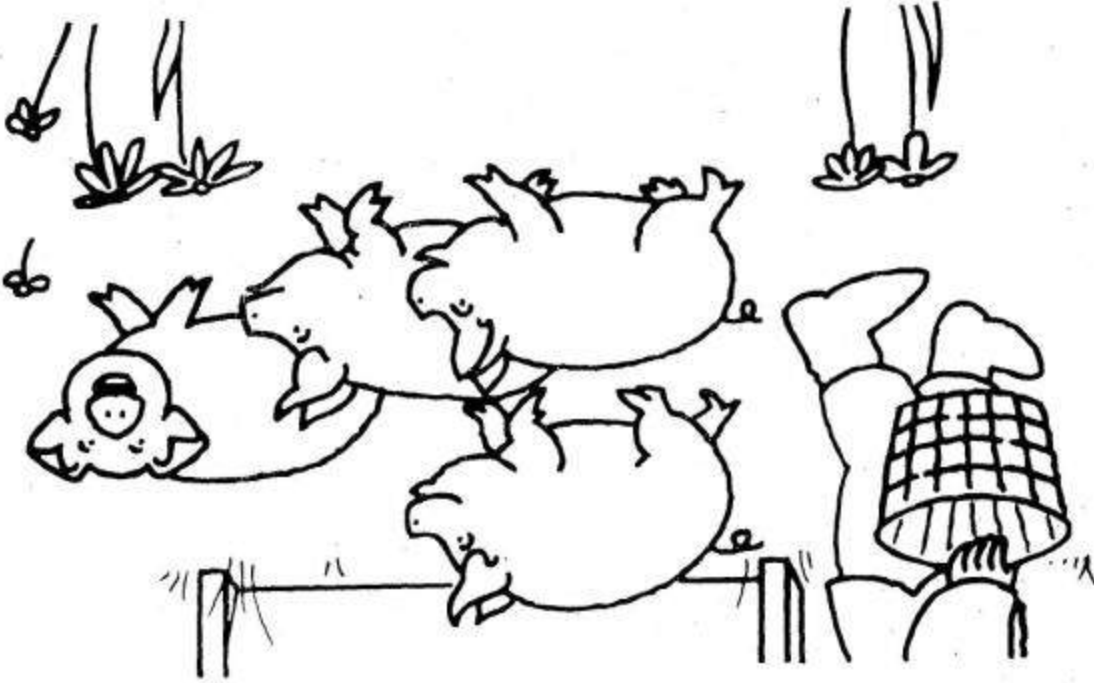
see the little horses standing in a row.



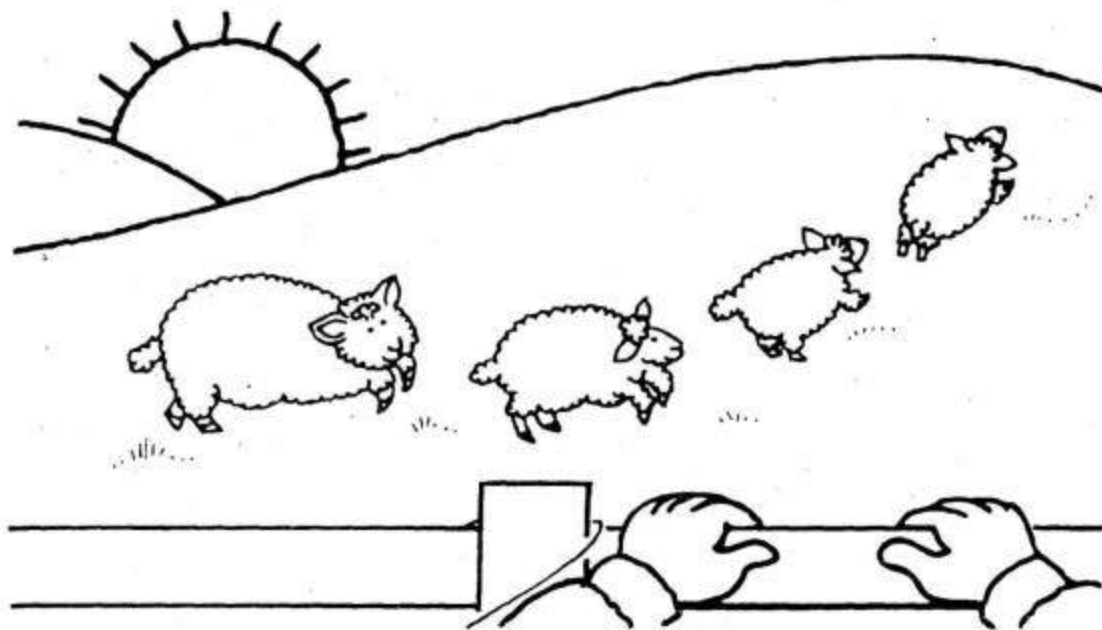
See the busy farmer feeding them their breakfast.



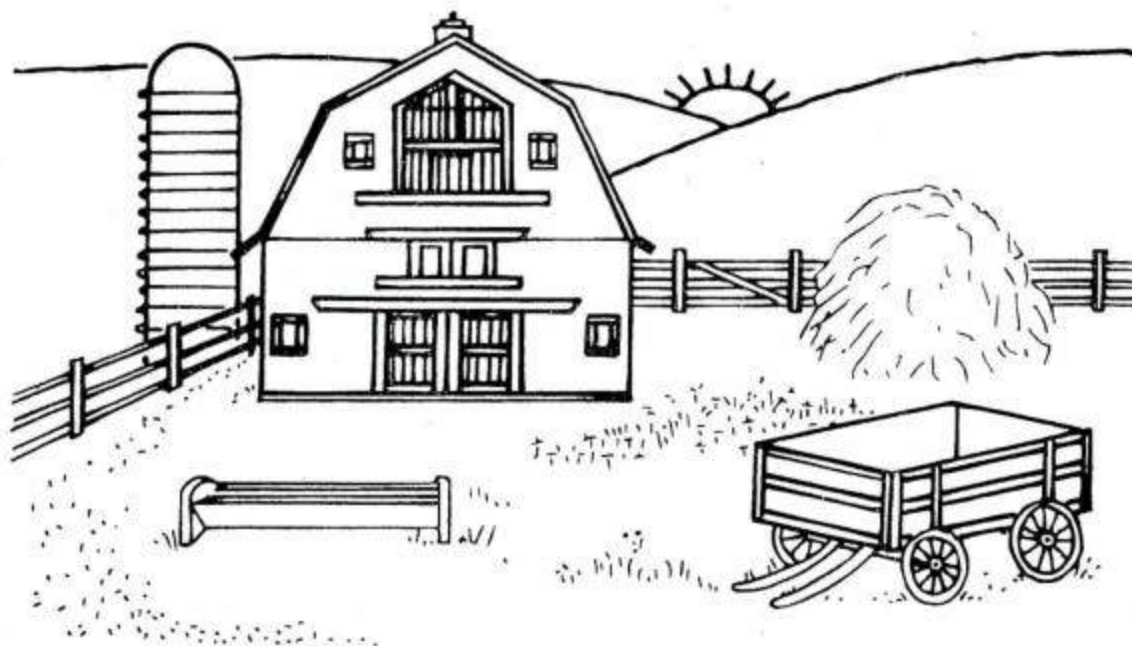
Down on the farm early in the morning,



Oink, oink, oink, oink, off they go.

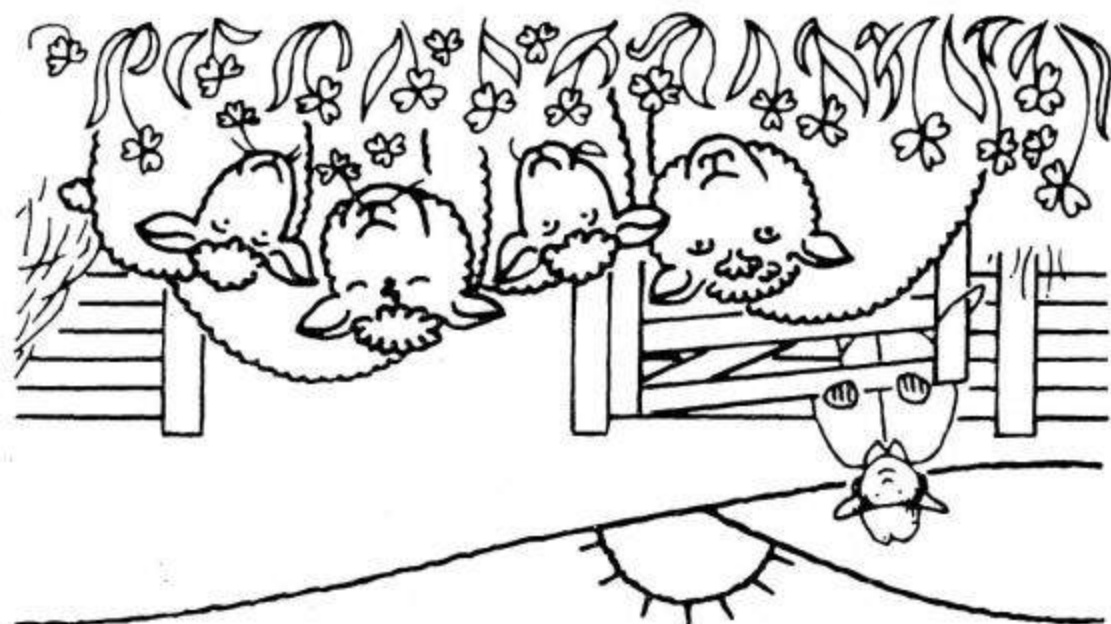


Baa, baa, baa, baa, off they go.

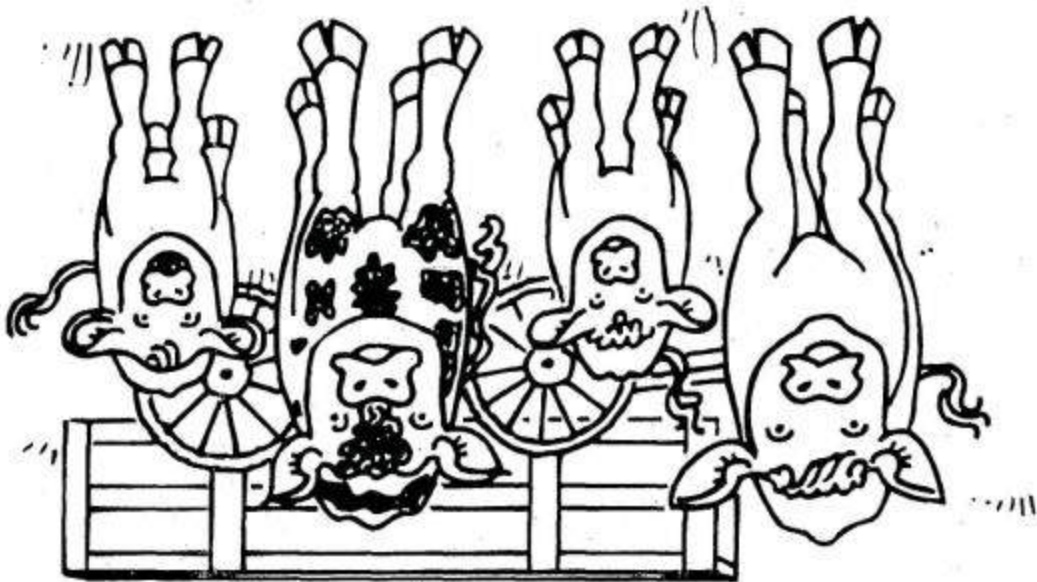


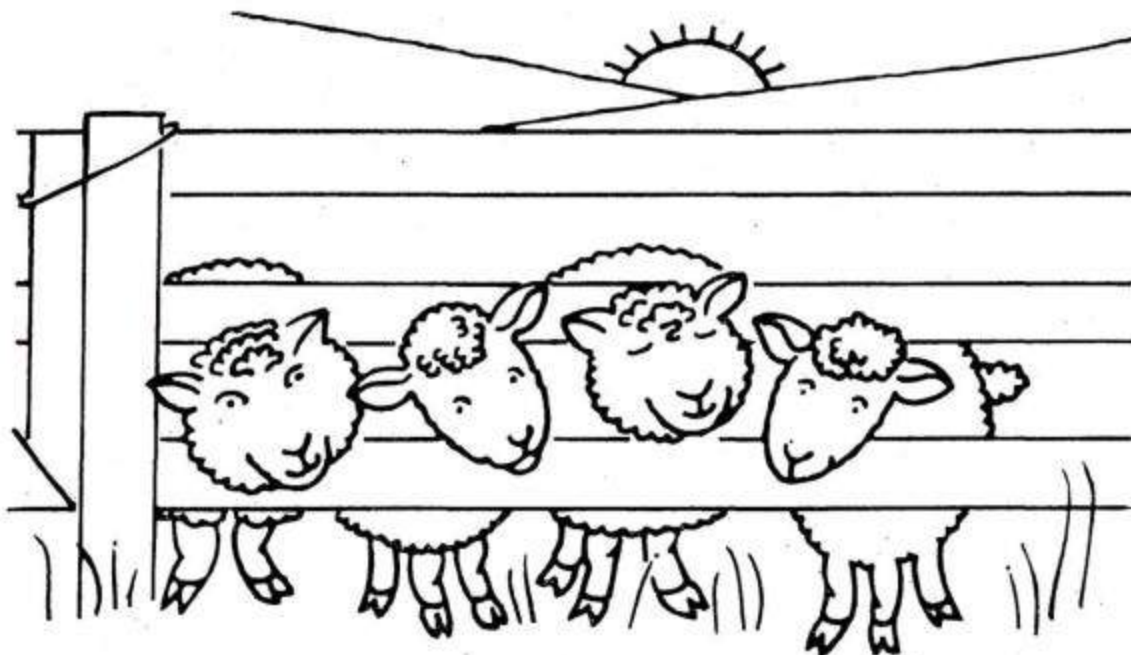
Down on the farm early in the morning,

See the busy farmer feeding them their breakfast.

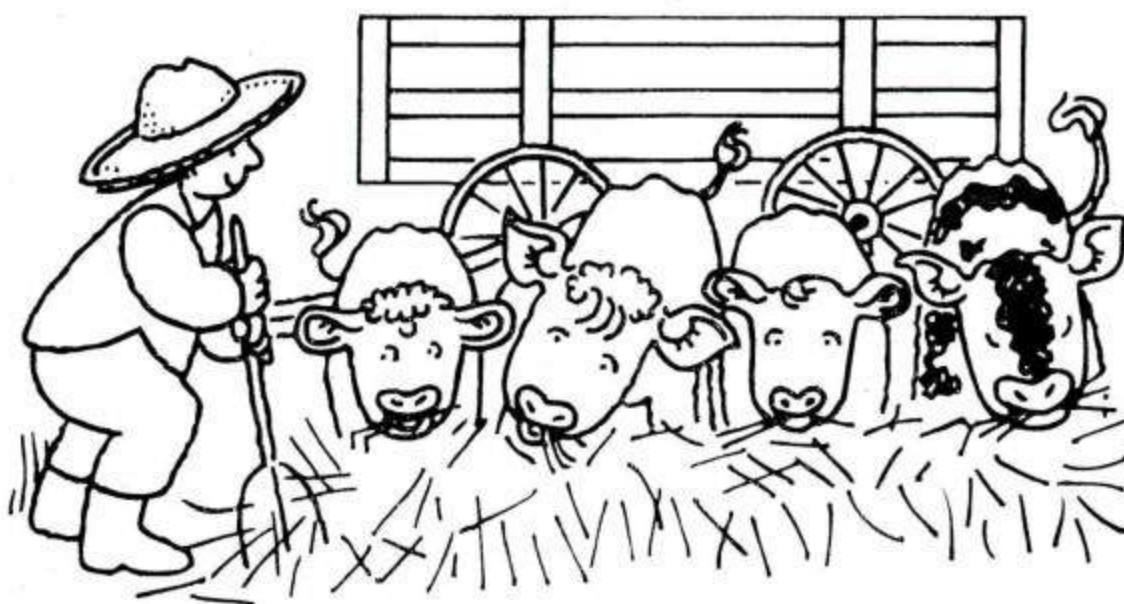


see the little cows standing in a row.

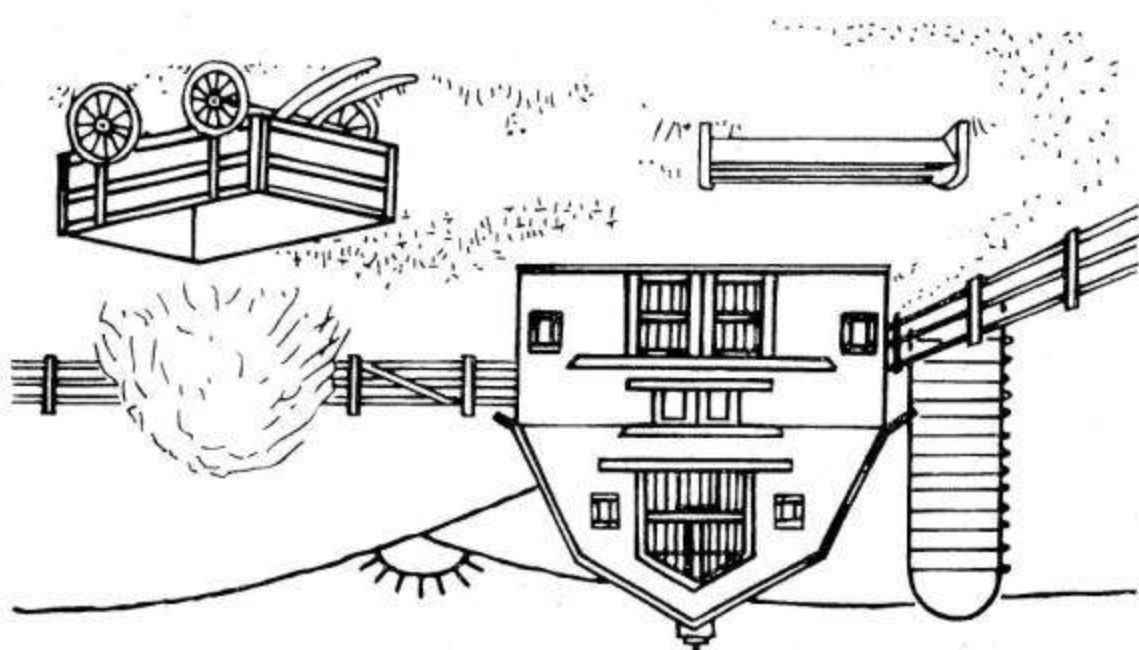




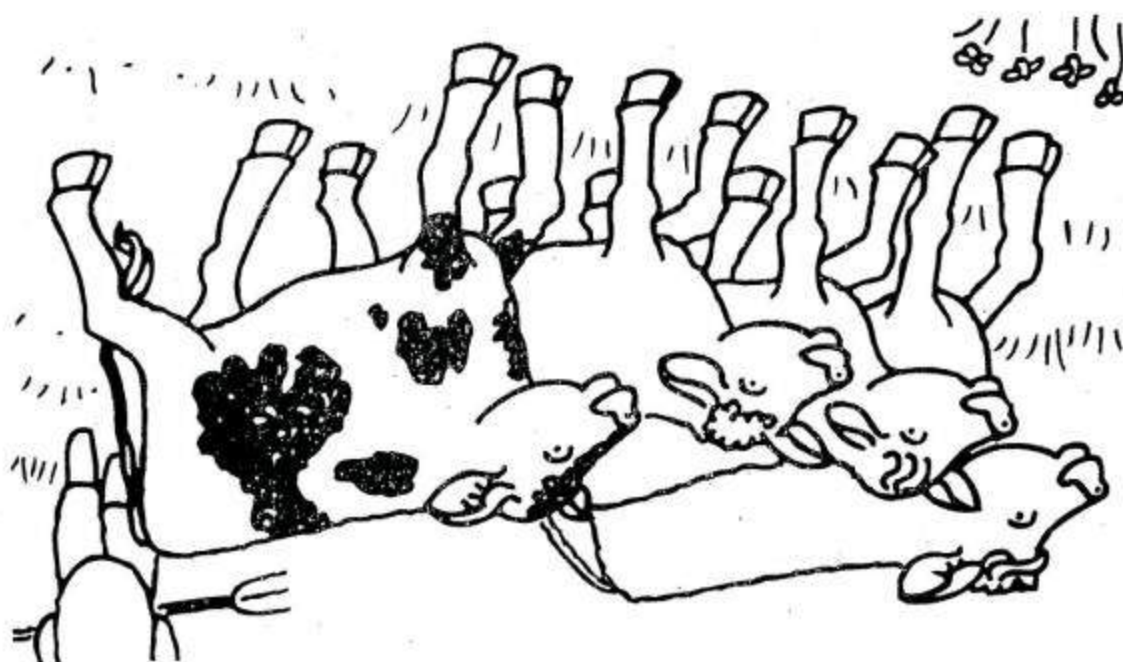
see the little sheep standing in a row.



See the busy farmer feeding them their breakfast.



Down on the farm early in the morning,



Moo, moo, moo, moo, off they go.

The following booklet is designed to place in the copy machine and double side each page. Then simply fold to make the booklet. The folded booklet could be stapled.

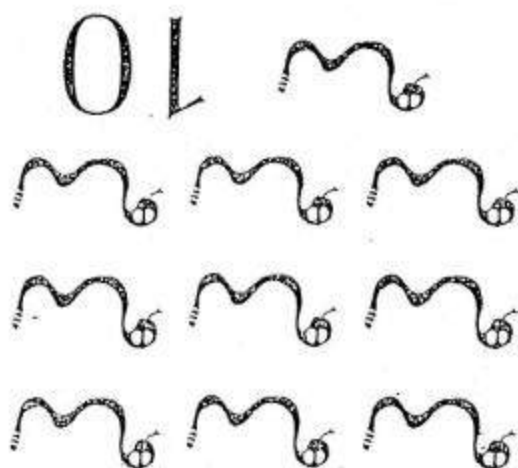
The End

“On the First Day of Farming”

(sung to the tune of “The 12 Days of Christmas”)

By _____

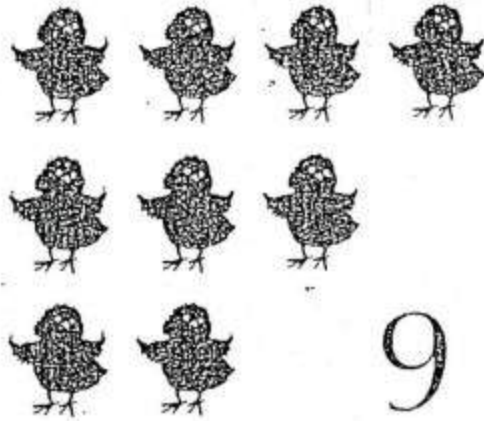
On the tenth day of farming the farmer gave to me, ...
 10 slithering snakes, 9 chicks a-peeping, 8 spiders spin-
 ning, 7 crows a-cawing, 6 quiet mice, 5 pigs in the mud
 ... 4 red roosters, 3 barking dogs, 2 prancing horses, and
 one sheep that went "baa, baa, baa."



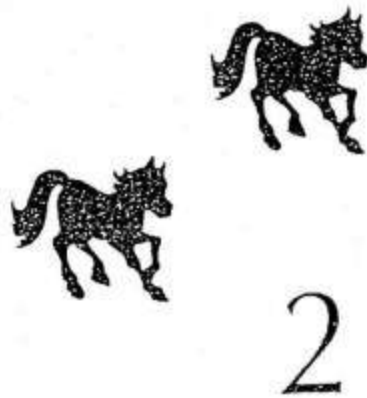
On the first day of farming the farmer gave to me, one
 sheep that went "baa, baa, baa."

1



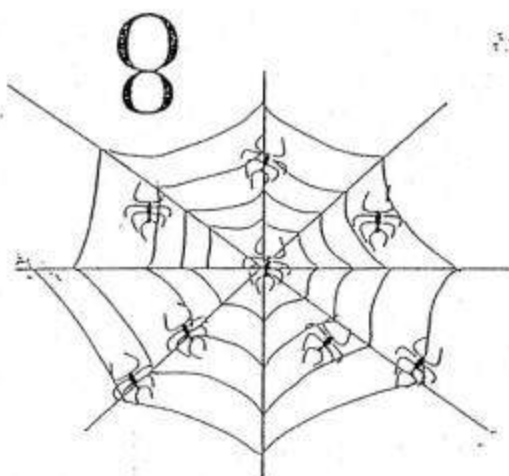


On the ninth day of farming the farmer gave to me, ...
9 chicks a-peeping, 8 spiders spinning, 7 crows a-caw-
ing, 6 quiet mice, 5 pigs in the mud ... 4 red roosters, 3
barking dogs, 2 prancing horses, and one sheep that
went "baa, baa, baa."

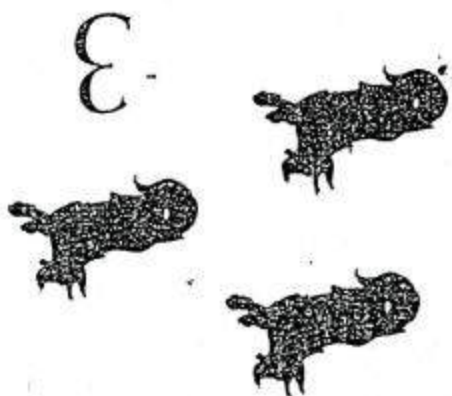


On the second day of farming the farmer gave to me,
... 2 prancing horses, and one sheep that went "baa,baa,
baa."

On the eighth day of farming the farmer gave to me,
 ... 8 spiders spinning, 7 crows a-cawing, 6 quiet mice, 5
 pigs in the mud ... 4 red roosters, 3 barking dogs, 2
 prancing horses, and one sheep that went "baa, baa,
 baa."



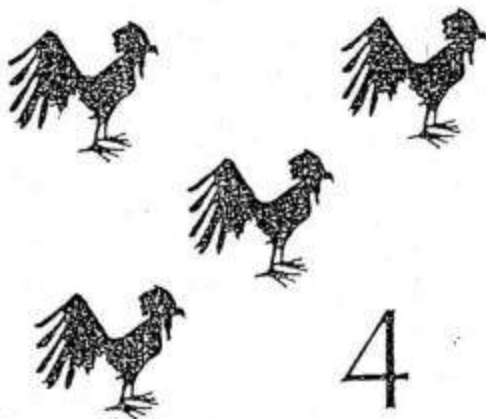
On the third day of farming the farmer gave to me, ...
 3 barking dogs, 2 prancing horses, and one sheep that
 went "baa, baa, baa."





7

On the seventh day of farming the farmer gave to me,
... 7 crows a-cawing, 6 quiet mice, 5 pigs in the mud ...
4 red roosters, 3 barking dogs, 2 prancing horses, and
one sheep that went "baa, baa, baa."

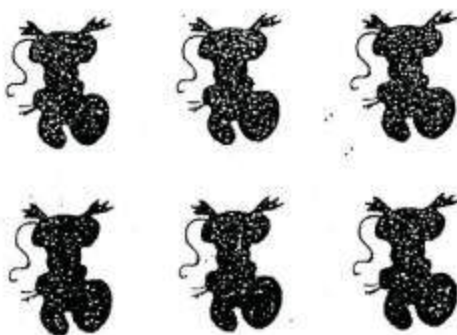


4

On the fourth day of farming the farmer gave to me,
... 4 red roosters, 3 barking dogs, 2 prancing horses, and
one sheep that went "baa, baa, baa."

On the sixth day of farming the farmer gave to me, ...
 6 quiet mice, 5 pigs in the mud ... 4 red roosters, 3
 barking dogs, 2 prancing horses, and one sheep that
 went "baa, baa, baa."

6



On the fifth day of farming the farmer gave to me, ...
 5 pigs in the mud ... 4 red roosters, 3 barking dogs, 2
 prancing horses, and one sheep that went "baa, baa,
 baa."

5



The following booklet is designed to place in the copy machine and double side each page. Then simply fold to make the booklet. The folded booklet could be stapled.

BOOKLET DESIGNED BY: KRISTY BRESSNER

MAKE & TAKE BOOKLET ACTIVITY COMPLIMENTS OF:
LIVINGSTON CO. SOIL & WATER CONSERVATION DISTRICT
AND LIVINGSTON CO. FARM BUREAU

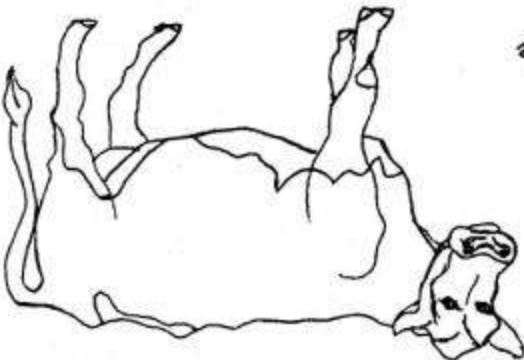


MY VISIT TO THE 4-H FAIR!

BEEF CATTLE

Female (girl) cattle are called cows, while

male (boy) cattle are called bulls. Beef cattle

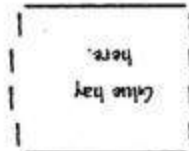


give your family things like hamburgers and steaks,

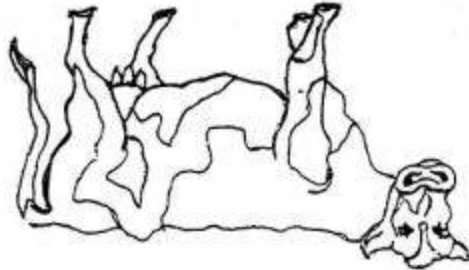
marshmallows, chewing gum, crayons, medicines, leather

shoes, soap, shampoo, cosmetics, film, filters and paint

brushes. Beef cattle like to eat corn, hay, and silage.



In one day Americans eat:
 -170 million eggs
 -40,000 bushels of carrots
 -2.8 million lbs. of fresh
 cucumbers
 -12.5 million lbs. of cheese
 -8,500 tons of fresh lettuce



One acre of corn:

-produces 300 gallons of ethanol
 -sweetens 39,000 cans of soda
 -makes starch for 120 tons of paper
 -provides oil for 240 pounds of margarine

-The average cow produces 40 glasses of milk
 each day.
 -A cow weighs about 1,400 lbs. and eats about
 55 lbs. of food per day.
 -It takes 12 gallons of milk to make 1 gallon of
 ice cream.
 -You could milk about 6 cows per hour by hand,
 but with modern machinery, you can milk up to
 100 cows per hour.
 -Cows provide 90% of the world's milk.
 -Milk delivered to the store today was in the
 cow two days ago.

-----DID YOU KNOW???

Q: Who is the pig's favorite rock star???

A: Mud-donna 😊

Q: What goes ZZUB, ZZUB, ZZUB???

A: A honeybee flying backwards! 😊

Q: What did the cow shout when she got
Stuck in a traffic jam???

A: Moooooove along! 😊

Word Search

A C Q D L S G Y K N D T R M
A U M A C H I N E O P G D A
I F X O R C H A R D W D V L
Z Q T K O D J R N G L A M B
F A R M P L I P E N M I R T
C H A G R I C U L T U R E J
G O C O R N O T E L V Y P U
B I T G M B W H E A T K F O
T S O Y B E A N X A H Y P Z
W G R O C E R Y S T O R E E
P L A V W F T J K O G R T M

Agriculture
Beef
Corn
Cow

Crop
Dairy
Farm
Grocery Store

Hog
Kernel
Lamb
Machine

Orchard
Soybean
Tractor
Wheat

Can you find the words hidden in the word search above? The first one should be easy! Words read both across and up and down. There are no backwards or diagonal words.

DAIRY CATTLE

A dairy cow can drink 35 gallons of water.

eat 20 lbs. of grain, and 35 lbs. of hay a day.

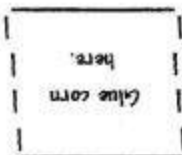
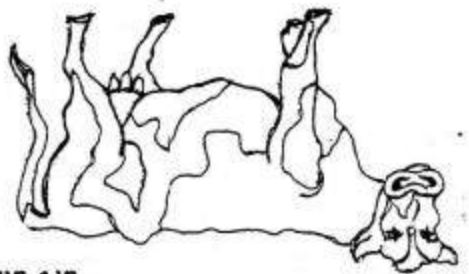
That same day, she can make 62 glasses of milk.

Cheese, butter, ice cream, yogurt, and sour cream

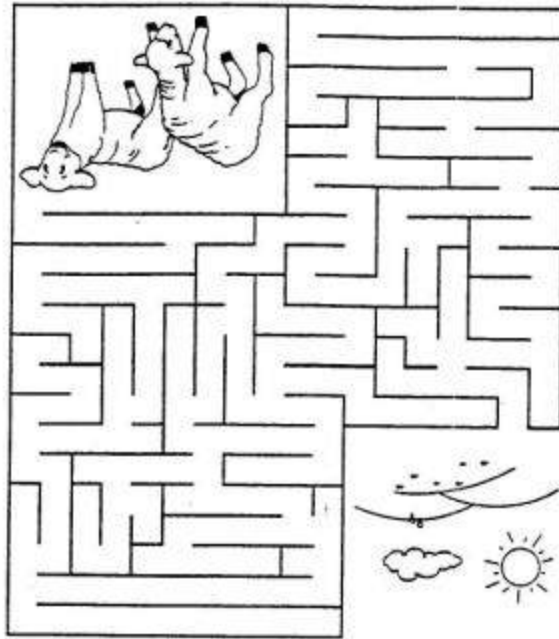
are all made from milk. It takes 10 lbs. of milk to

make 1 lb. of cheese. Dairy cows feed on ground

corn, grain sorghum, oats, and soybean meal.



Can you help the sheep get back to the pasture???



SHEEP

Boy sheep are called rams, girl sheep

are called ewes, and baby sheep are lambs.

They provide us with lamb chops to eat and

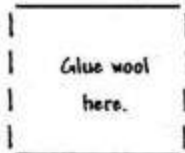
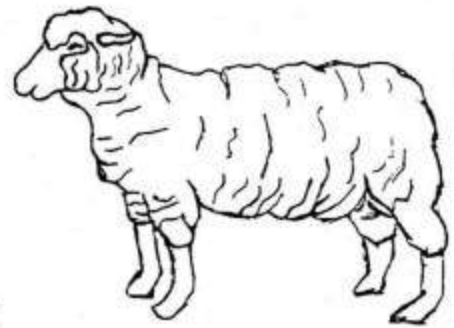
their wool is used for clothes, blankets, carpets,

and felt. A special kind of oil called lanolin is

produced by the sheep's skin and used in hand

lotion, soap, and cosmetics. Sheep are also

used to make piano keys, candies, and gum.



Connect the Dots



POULTRY

Chickens, turkeys, ducks, and geese are all

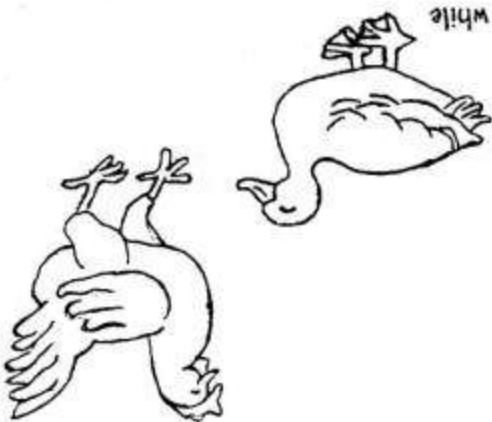
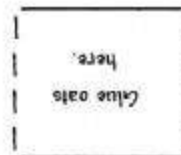
kinds of poultry. Poultry produce eggs,

some of which are used for food, while

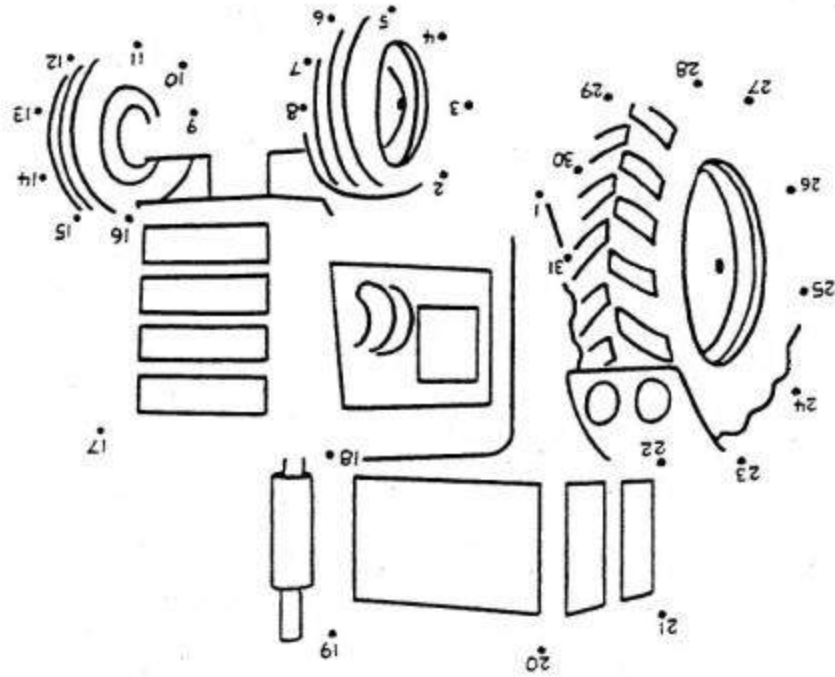
others are used for producing babies.

They like to eat bugs, worms, and

grains like oats, corn, and milo.



Connect the Dots



HORSES

Until the tractor was developed in the early

1900's, the workhorse supplied the power to

pull farm equipment over every acre of soil

planted. Today, horses are still used on cattle

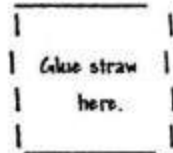
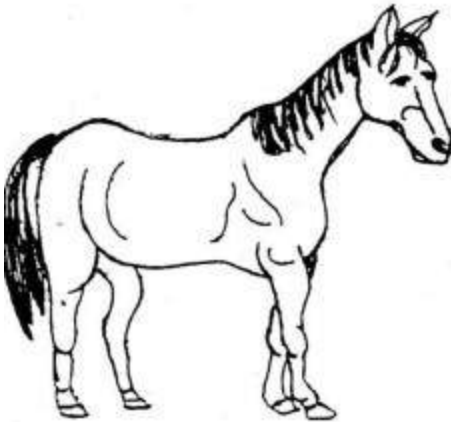
ranches in the western U.S. In larger cities, they

are used to help police patrol busy areas and

they are also used for recreation. Straw,

which comes from wheat or oats, is used for

their bedding and they like to eat hay and oats.



Word Search

A C Q D L S G Y K N D T R M
A U M A C H I N E O P G D A
I F X O R C H A R D W D V L
Z Q T K O D J R N G L A M B
F A R M P L I P E N M I R T
C H A G R I C U L T U R E J
G O C O R N O T E L V Y P U
B I T G M B W H E A T K F O
T S O Y B E A N X A H Y P Z
W G R O C E R Y S T O R E E
P L A V W F T J K O G R T M

Agriculture
Beef
Corn
Cow

Crop
Dairy
Farm
Grocery Store

Hog
Kernel
Lamb
Machine

Orchard
Soybean
Tractor
Wheat

Can you find the words hidden in the word search above? The first one should be easy! Words read both across and up and down. There are no backwards or diagonal words.

Pigs

Pigs give your family ham, sausage,

pork chops, bacon, and hot dogs.

Their skin is also used as leather

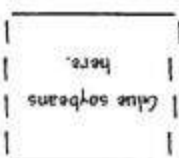
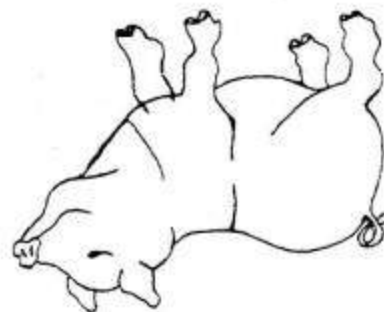
to make shoes and footballs. Doctors

also use pigs to make some medicines and

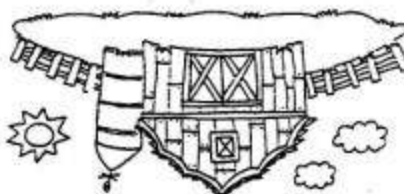
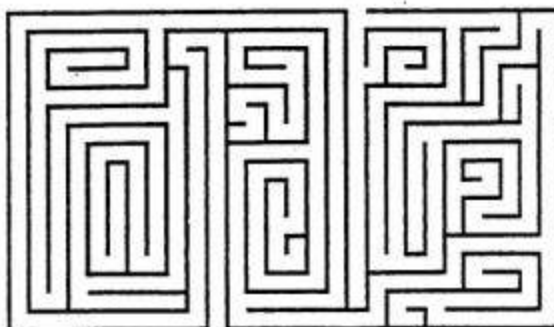
their skin is used for people who have been

burned. Farmers feed pigs corn, barley,

wheat, rye, sorghum, oats, and soybeans.



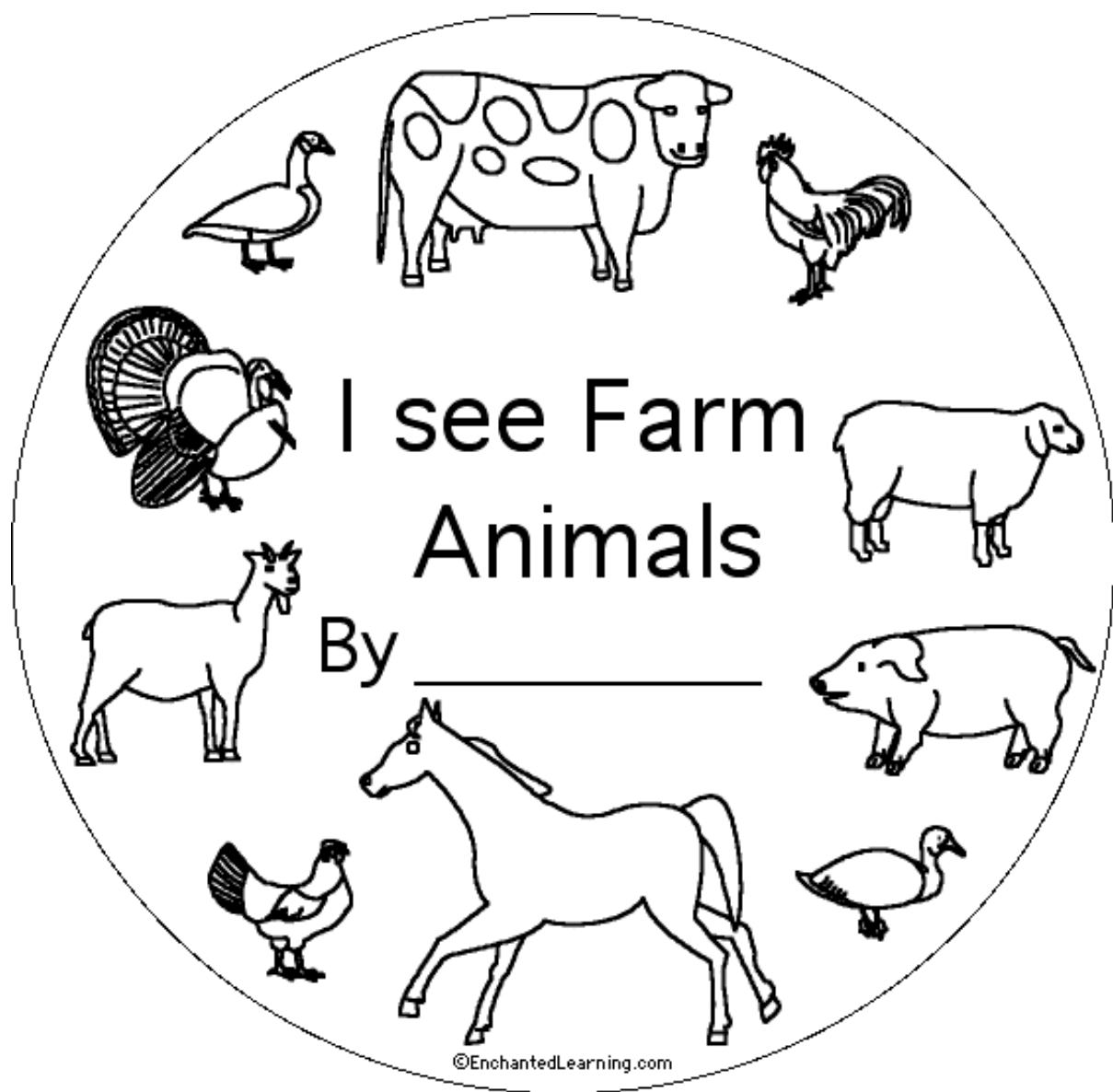
Can you help "Bennie" the soybean find his way from Soytown back to the farm???

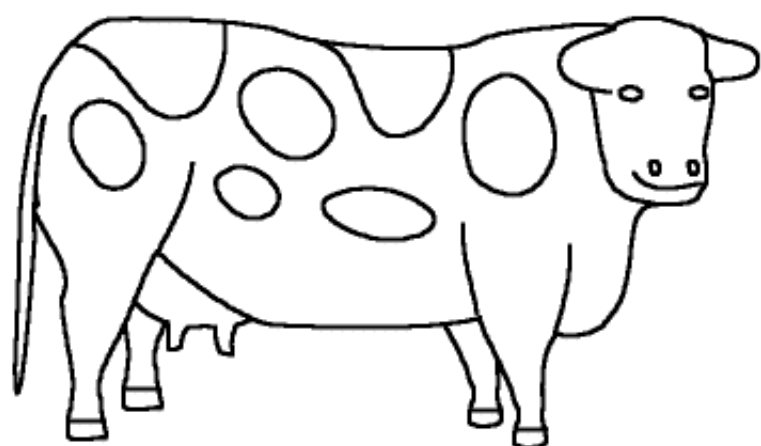


Farm Animals Book for Early Readers

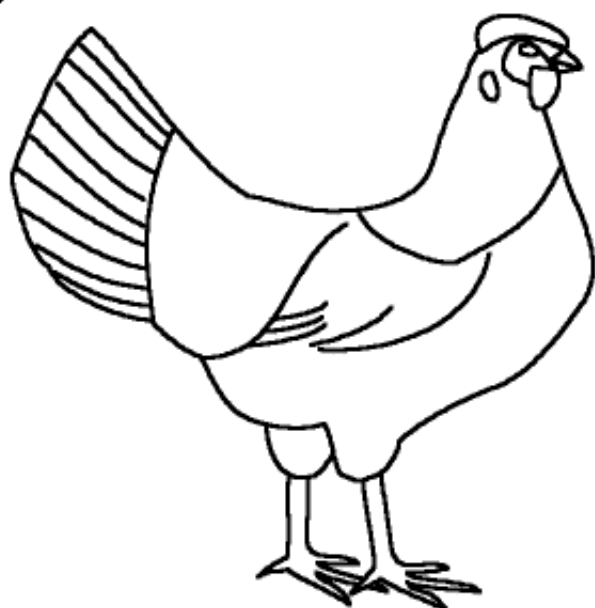
Here are some ideas for using the following pages from Enchanted Learning.

- Have the students cut out each circle. Staple the pages together at the left. Then read the book. Students can color the pages and write the phrase "I see a ..." directly under the printed phrase.
- Have students glue the pictures to small paper plates. Then put them together with brads.
- Using the plate idea with the pictures on, have students write or draw additional information on the front or back. They could describe the animal, what it eats, what products we get from them, etc. They could even glue items such as corn to show one type of food the cow eats.
- Students could string the completed plates together with yarn instead of making a book.
- These pages could be used to make a bulletin board.

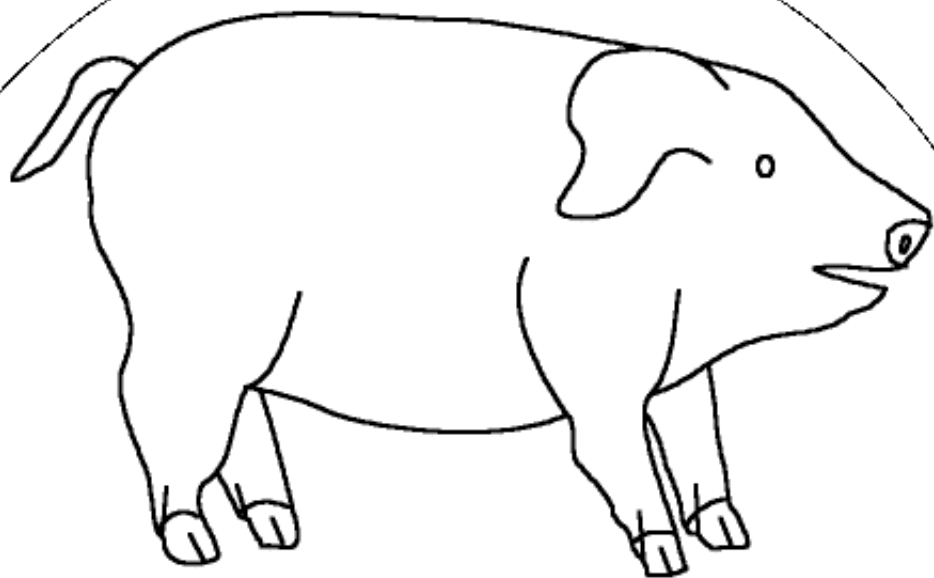




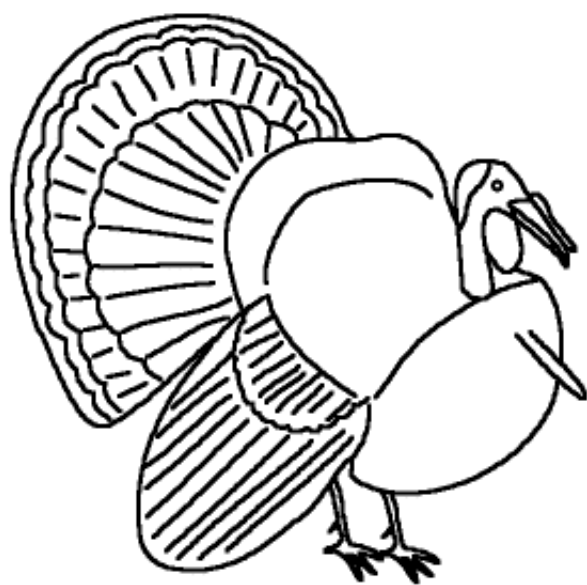
I see a cow .



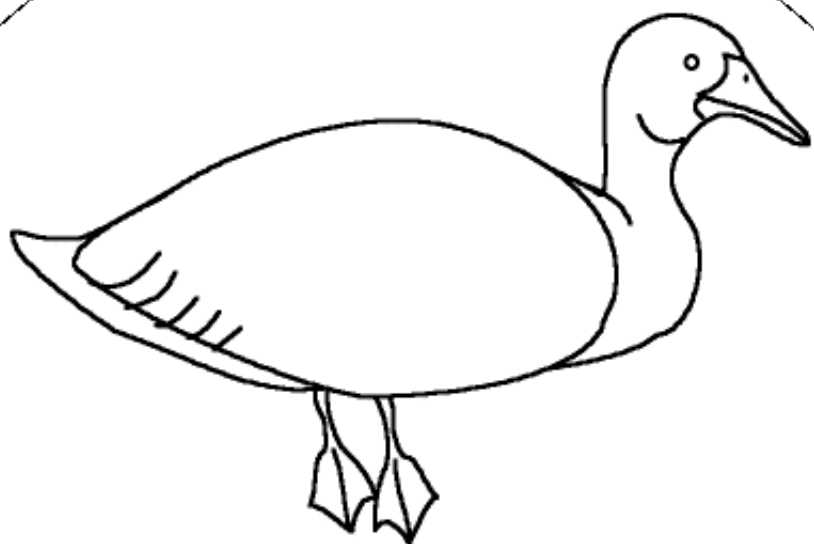
I see a hen .



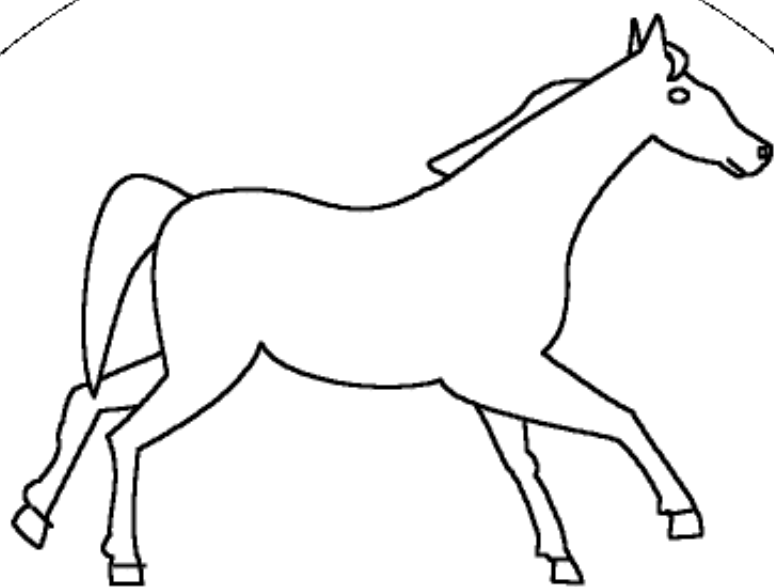
I see a pig .



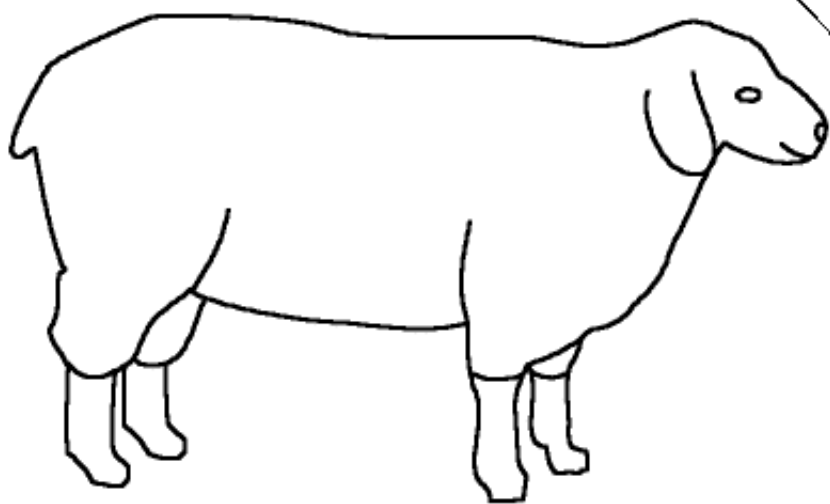
I see a turkey .



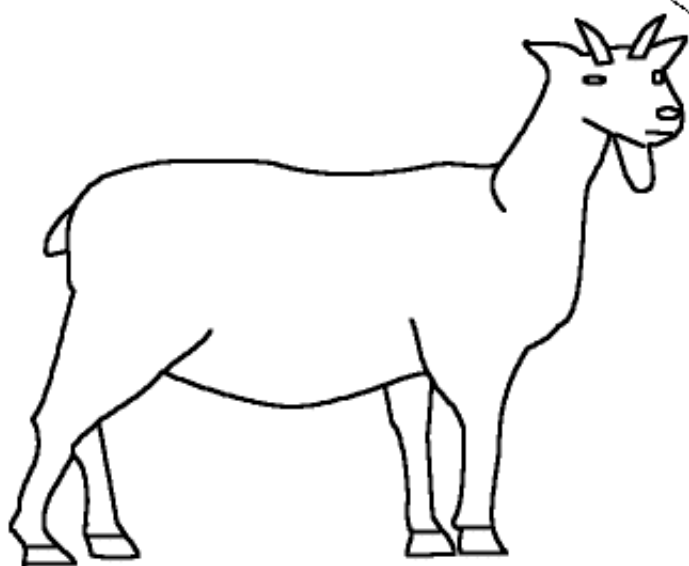
I see a duck .



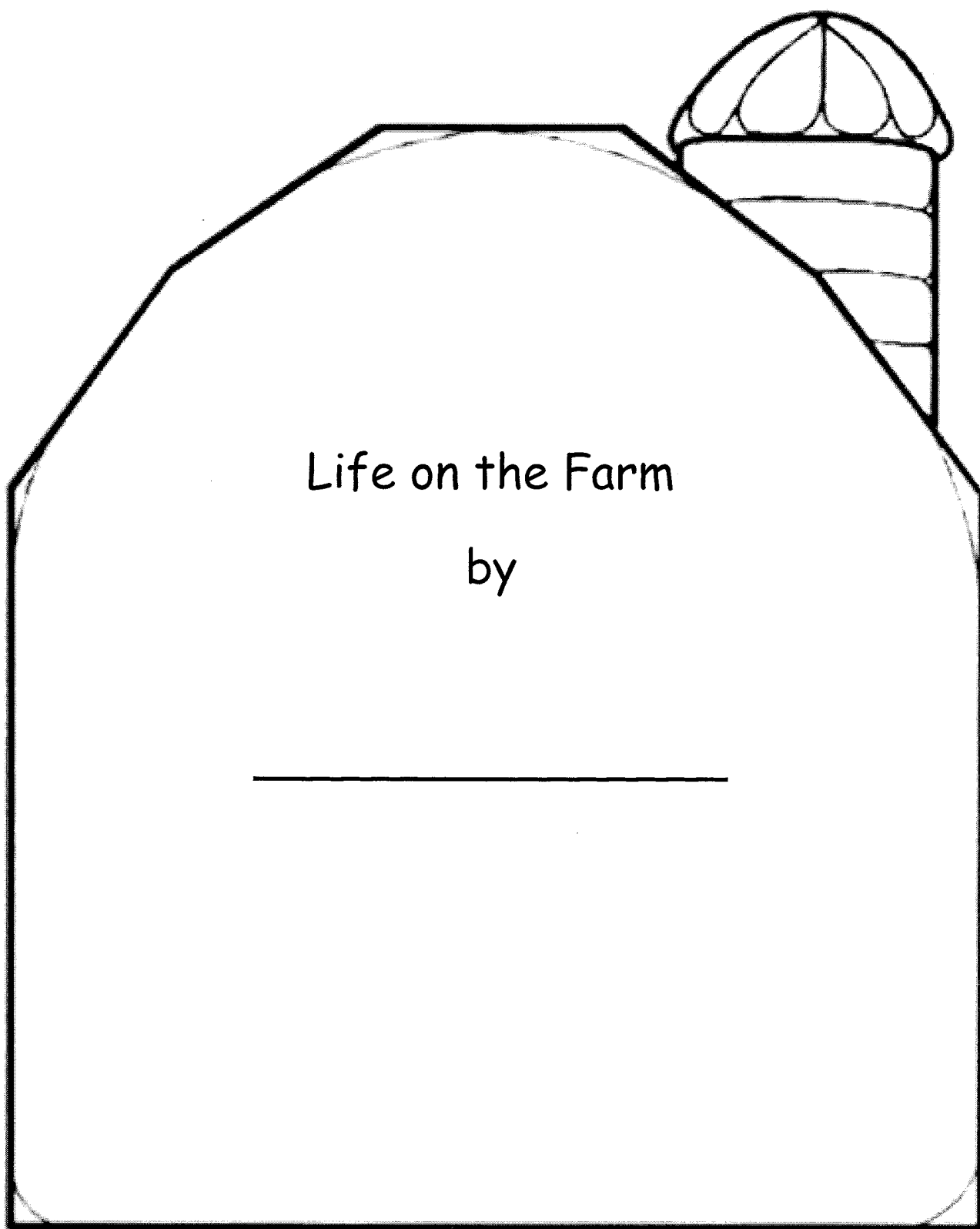
I see a horse .

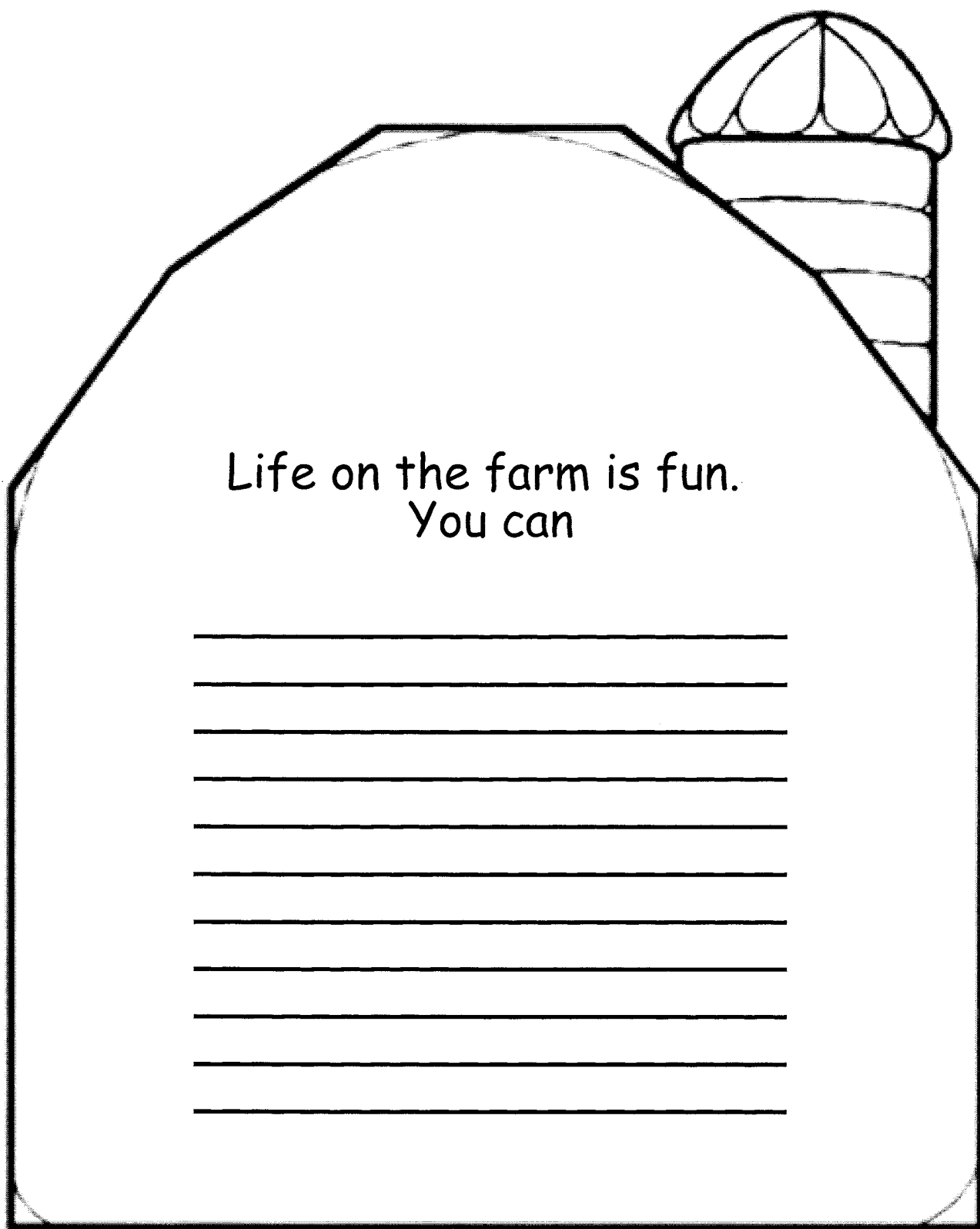


I see a sheep .

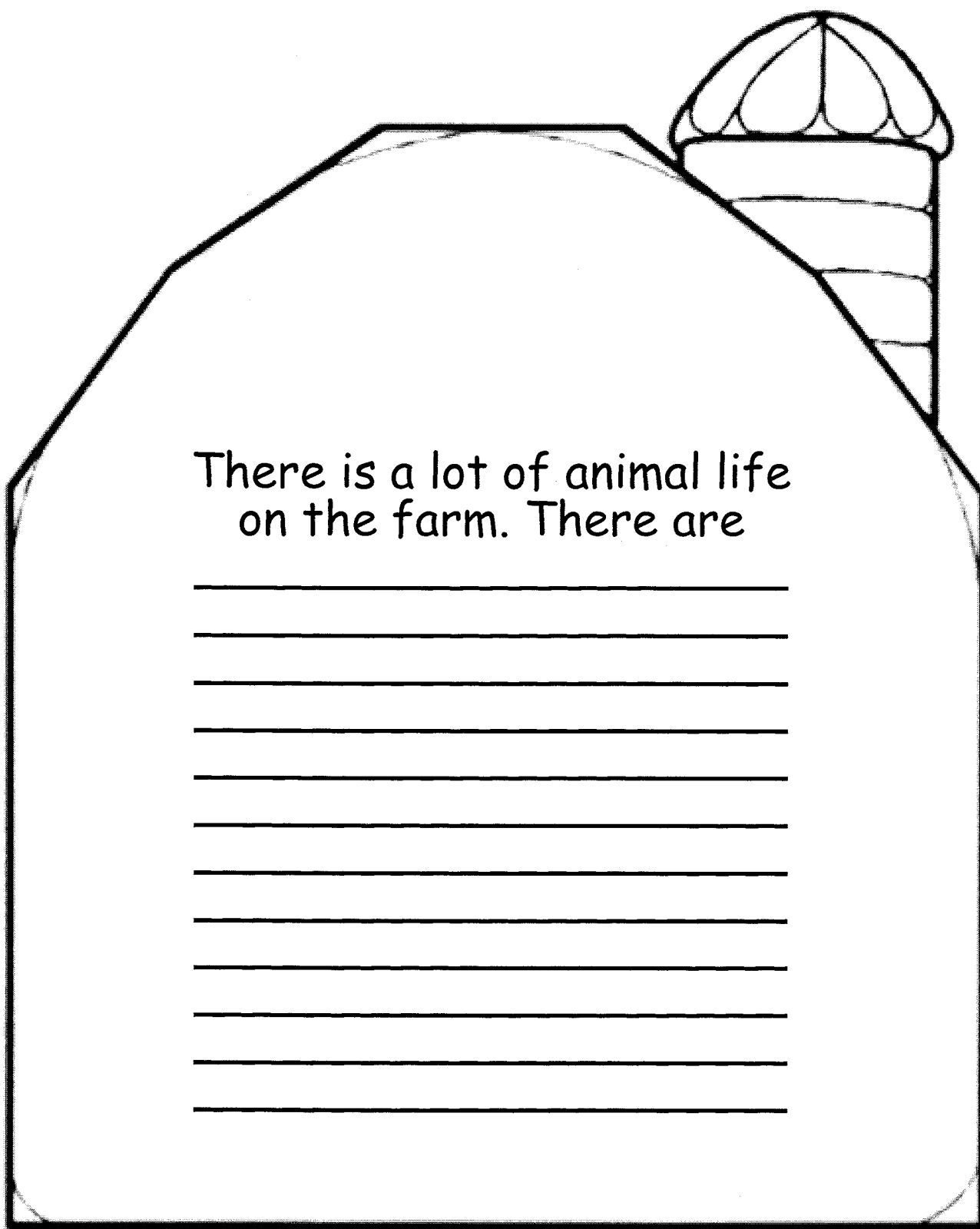


I see a goat .





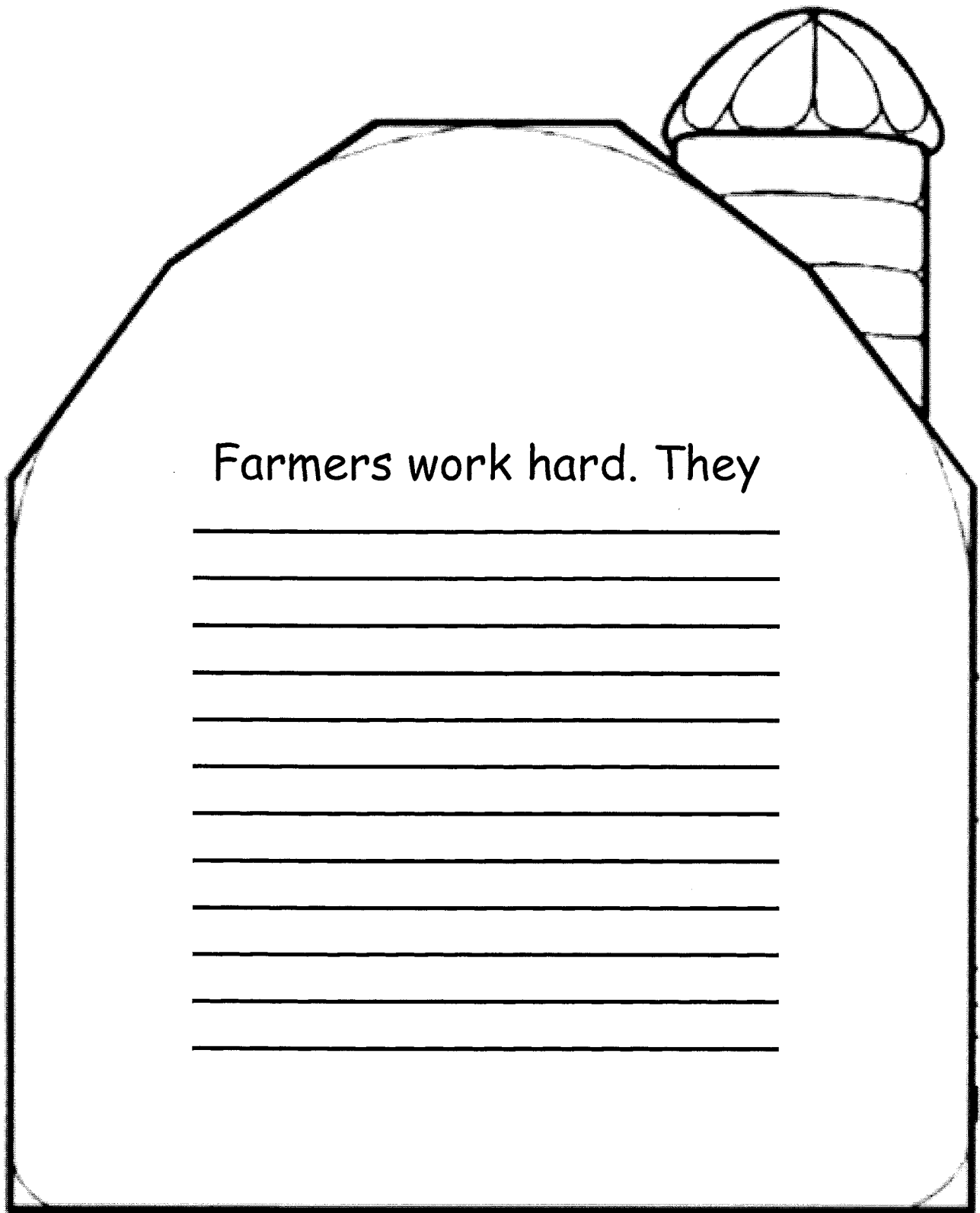
Life on the farm is fun.
You can

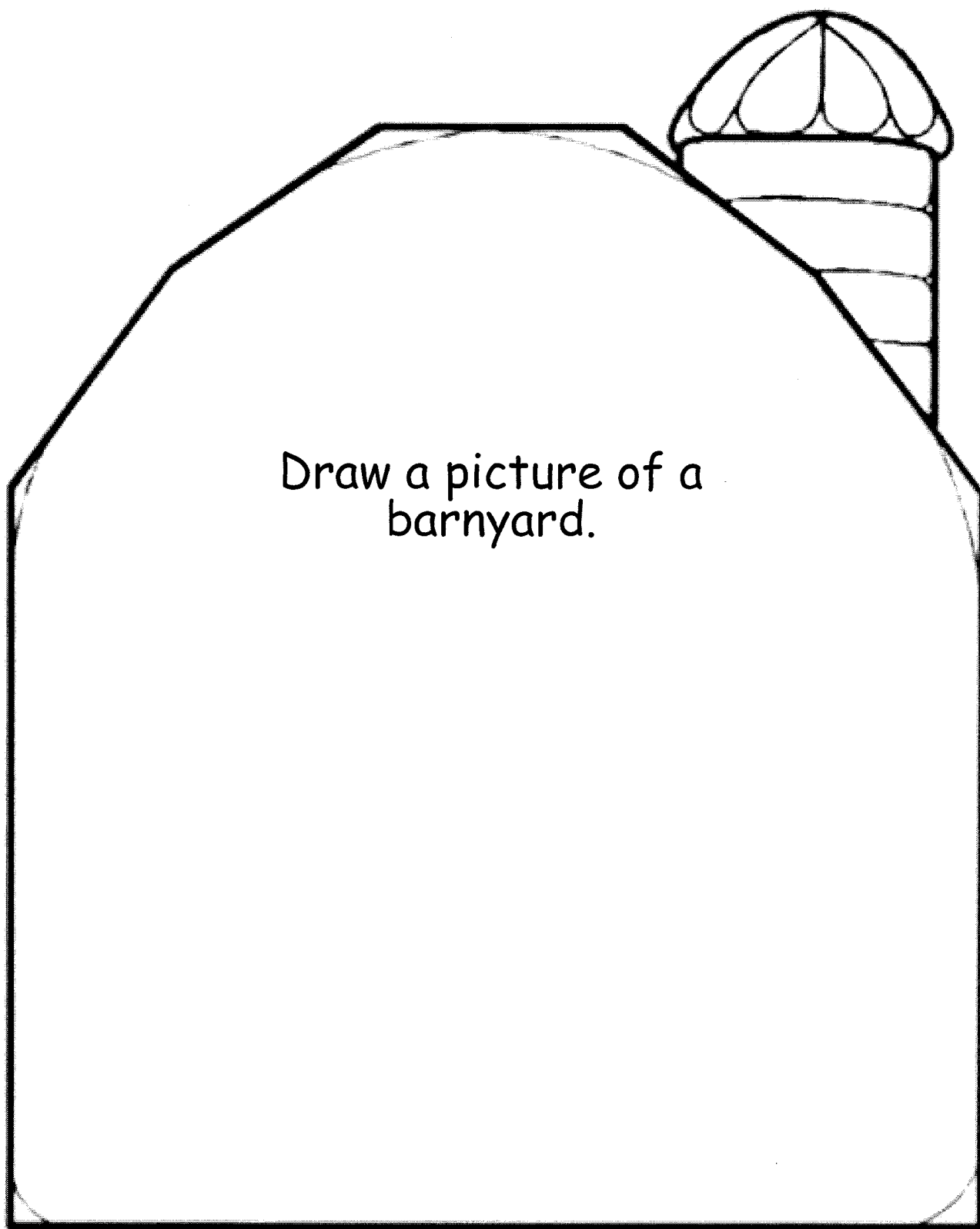


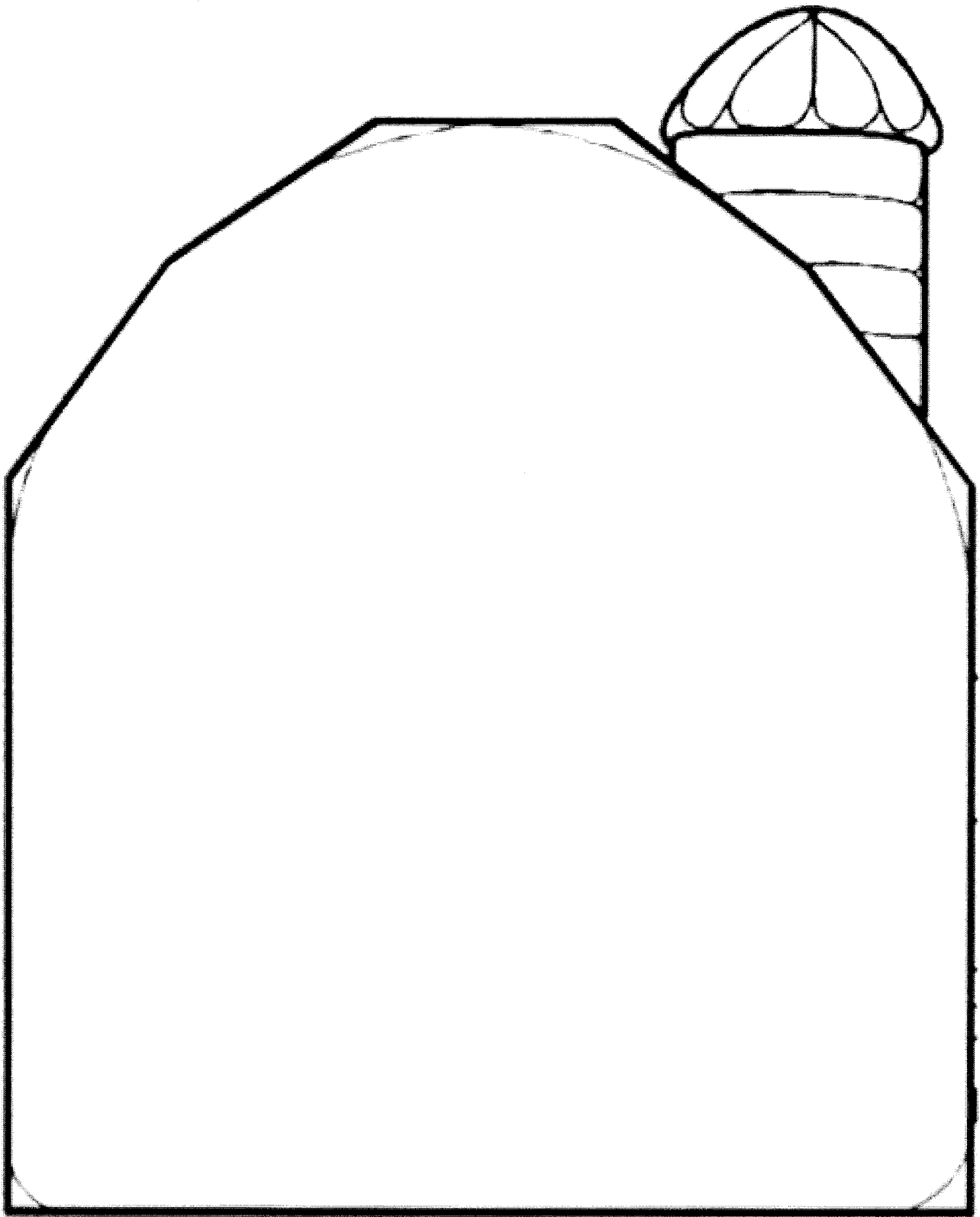
There is a lot of animal life
on the farm. There are



Many things grow in the
farmer's garden. There are

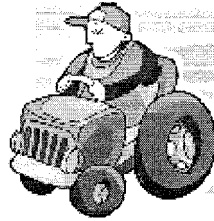






NAME _____ DATE _____

MR. BEN'S FARM



Mr. Ben lives on a farm. He is a farmer. Mr. Ben drives a big tractor. The tractor helps him work. Mr. Ben grows food. He grows corn, potatoes, and beans. I like to go to Mr. Ben's farm. He lets me ride on the tractor with him. It is fun to work with Mr. Ben.

ANSWER THE QUESTIONS.

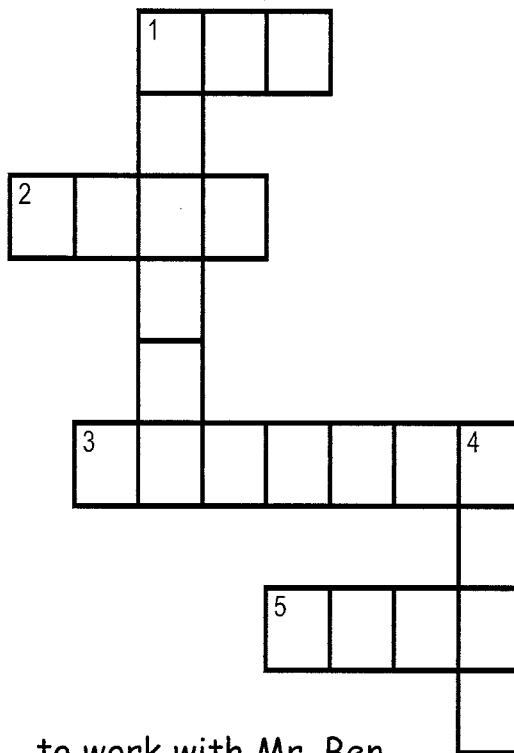
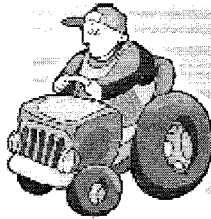
1. What does the tractor help Mr. Ben do? _____

2. What foods does Mr. Ben grow? _____

3. Where does Mr. Ben live? _____

NAME _____ DATE _____

MR. BEN'S FARM CROSSWORD PUZZLE



Across

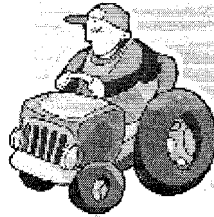
1. It is _____ to work with Mr. Ben.
2. The tractor helps Mr. Ben _____.
3. Mr. Ben drives a _____.
5. Mr. Ben grows _____.

Down

1. Mr. Ben is a _____.
4. I like to _____ on the tractor.

NAME _____ DATE _____

MR. BEN'S FARM WORD SEARCH



Find the words.

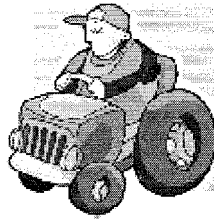
t f g r o w s b z i r f u n v
r a e w v y c s t m h i r a u
a r f c m r b a i r i a c e w
c m f o o d i v s h m p t z o
t e n d s u g w z u a w q y r
o r i d e o y x a k i b h w k
r x w t y a l i k e v a r q l

big	food	grows	like	tractor
farmer	fun	him	ride	work

NAME _____ DATE _____

MR. BEN'S FARM

WORKING WITH WORDS 1



FILL IN THE MISSING LETTERS. USE THE WORDS IN THE BOX TO HELP YOU.

farmer
work

tractor
him

grows
like

ride
food

1. l _ _ k _ _

2. h i _ _

3. _ _ r a c _ _ o r

4. f _ _ _ d

5. _ _ r _ _ w s

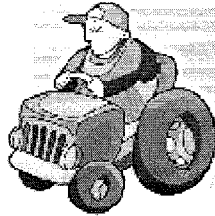
6. r _ _ d _ _

7. _ _ a _ _ m e r

8. w o _ _ k

NAME _____ DATE _____

MR. BEN'S FARM WORKING WITH WORDS 2



Complete the sentences using the words in the box. Please write neatly.

grows	rides	big
farm	drives	tractor

1. Mr. Ben lives on a _____.
2. I like to _____ on the tractor.
3. The _____ helps Mr. Ben work.
4. Mr. Ben _____ a big tractor.
5. Mr. Ben _____ food.
6. The tractor is _____.

NAME _____ DATE _____

ANSWERS TO MR. BEN'S FARM

- PAGE 1:
1. The tractor helps Mr. Ben work.
 2. Mr. Ben grows corn, potatoes, and beans.
 3. Mr. Ben lives on a farm.

- PAGE 2:
- Across: 1. fun, 2. work, 3. tractor, 5. food.
- Down: 1. farmer, 4. ride.

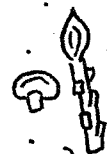
- PAGE 3: NO ANSWERS NEEDED

- PAGE 4:
1. like
 2. him
 3. tractor
 4. food
 5. grows
 6. ride
 7. farmer
 8. work

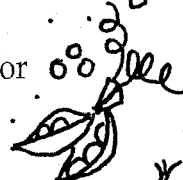
- PAGE 5:
1. farm
 2. rides
 3. tractor
 4. drives
 5. grows
 6. big



Graphing the Farm



For answering the questions below, use farm stickers or die-cut animals for the graphing pieces. Students can color and decorate for an added touch.



GRAPH I

Do you or would you like to live on a farm?

Yes	No

GRAPH II

Which vegetable grown on the farm is your favorite?

corn	
beans	
potatoes	
zucchini	
carrots	

GRAPH III

Graph vegetables that grow *above* and *below* the ground.

Above	Below
corn	radishes
cabbage	potatoes
green beans	carrots
tomatoes	peanuts
zucchini	
cucumbers	

GRAPH IV

Question: Which farm animal is your favorite?

cow	pig	horse

**Try!
THIS!**

GRAPH V

Extra for rural communities: Which brand of tractor do you use on your farm?

John Deere	White	International



Taking the Dog for A Walk!

Skills:

-  Map skills: Using directions and a map key
-  Listening
-  Directions: N, S, E, W
-  Positions: Left and Right

Preparation:

Make enough copies of the dog on page 74 and the Farm Map on page 80 for each student to have one.

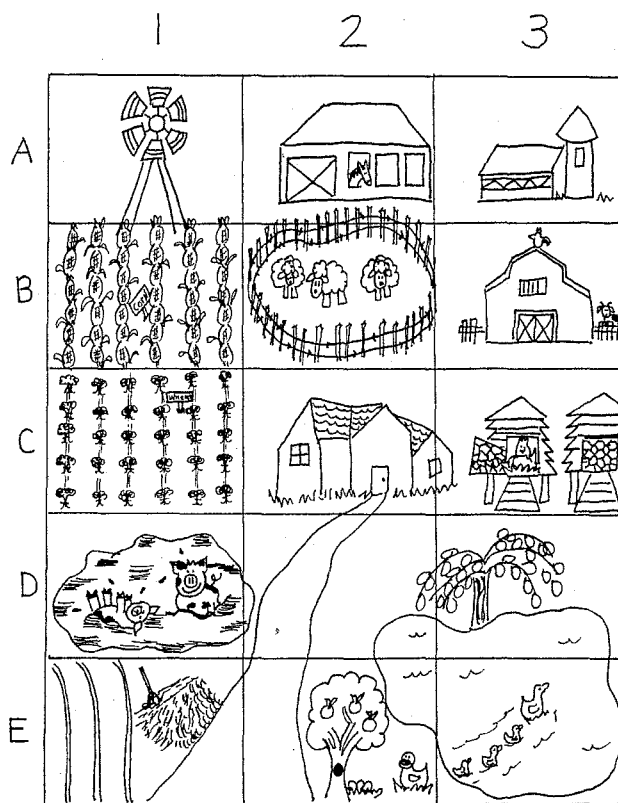
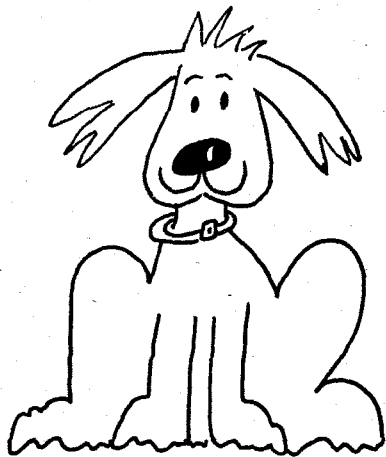
Variation: You may want to enlarge for younger students and use the big map for a whole group activity.



Activity:

Have the students color their maps and dogs. Afterwards, locate and discuss the different places on the farm. Give the students a direction to find on the map and have them move their dogs to the appropriate place.

Please Note: If teaching Pre-Kindergarten, you may want to white out several places to make it easier.



Possible Questions:

Pre-K

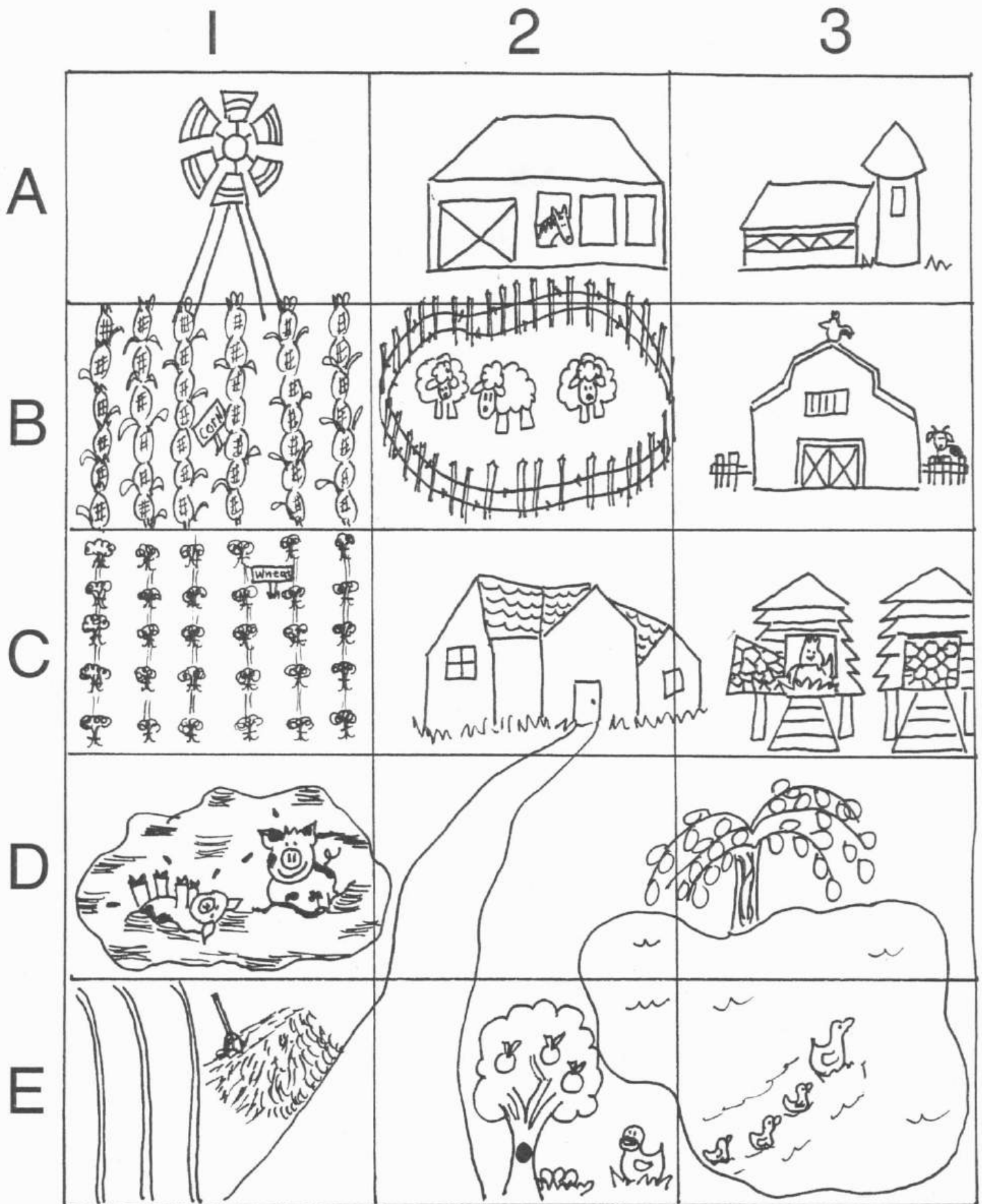
- Where is the barn?
- Point to the house.
- What is to the left of the house?

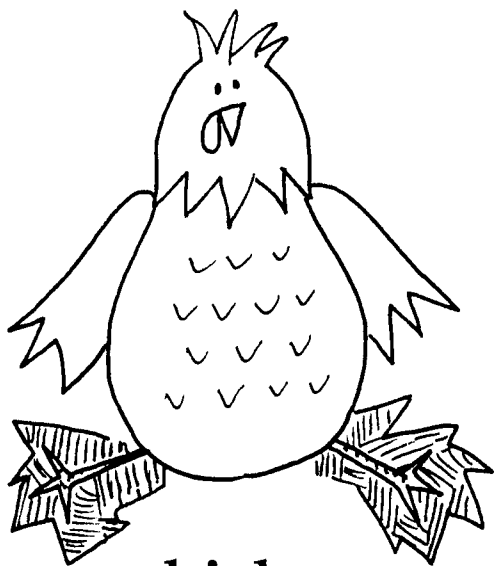
1st

- Where is the orchard?
- What is south of the orchard?
- The pasture is ____ of the barn.

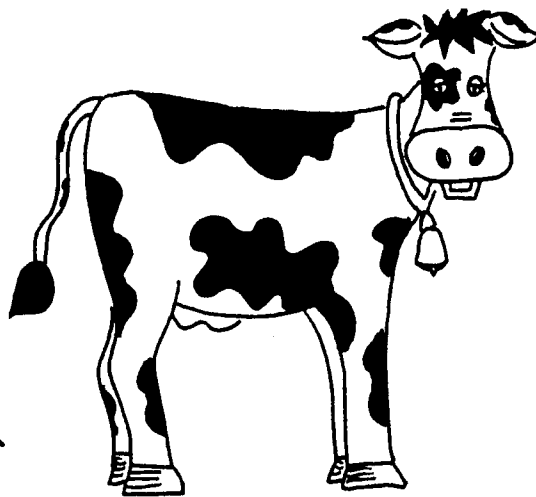
2nd

- If the farmer went north from the house, where would he end up?
- Tell how the farmer would get from the house to the barn.

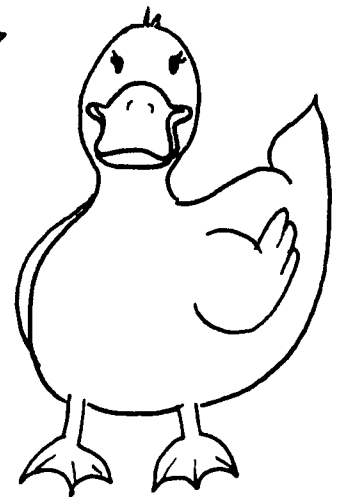




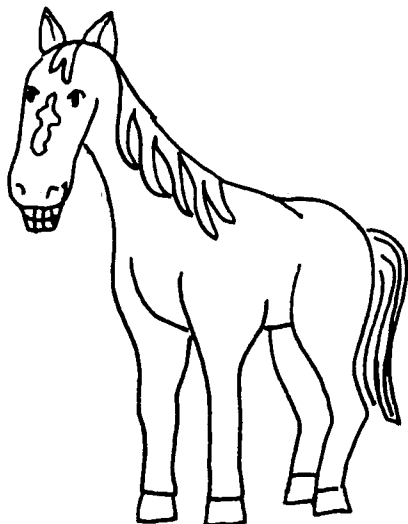
chicken



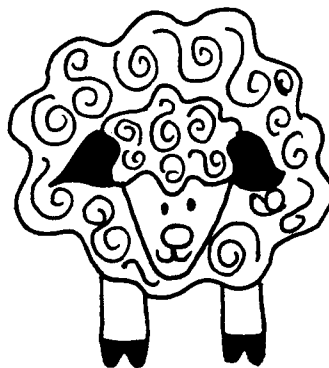
cow



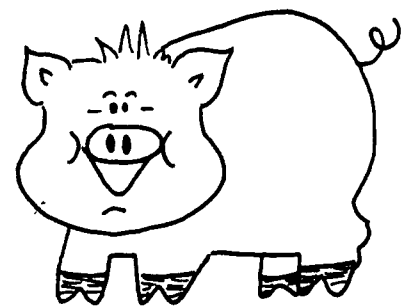
duck



horse



sheep



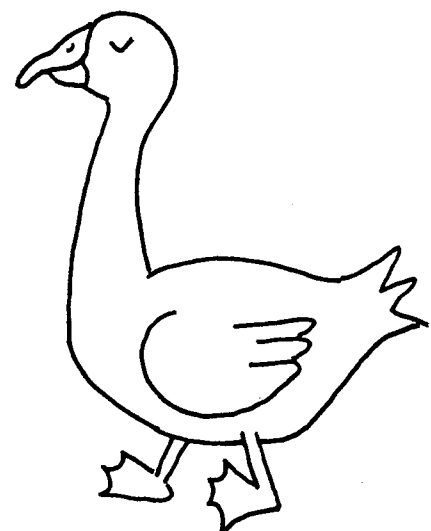
pig



cat



dog



goose

Farm Animal Vocabulary and Fact Sheet

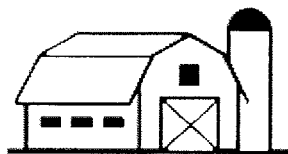
Horses:	Newborn — Foal Young Male — Colt Young Female — Filly Adult Female — Mare Adult Male — Stallion Adult Male — (Neutered) — Gelding
Cows:	Baby — Calf Adult Female — Cow Adult Male — Bull Young Female Calf — Heifer Feeder Male — Steer
Sheep:	Baby — Lamb Adult Female — Ewe (pronounced “you”) Adult Male — Ram
Hogs:	Baby — Pig Adult Male — Boar Adult Female — Sow Feeder Male — Barrow Feeder Female — Gilt
Domestic Rabbits:	Baby — Bunny Adult Female — Doe Adult Male — Buck
Chicken:	One hen’s group of baby chickens (6-14) — Brood Baby — Chick Male Less than a Year Old — Cockerel Female Less than a Year Old — Pullet Adult Female — Hen Adult Male — Rooster Flock — Group of Chickens

Farm Animal Families, Feed & Products Chart

Name	Male	Female	Baby	Home	Feed	Products
Cattle	Bull	Cow	Calf	Barn	Grass Hay Corn	Cream, Butter Cheese, Meats (Beef, Veal) Hides (Leather)
Goat	Billy or Buck	Nanny or Doe	Kid	Barn	Grass Grain	Milk Leather
Hog (swine)	Boar	Sow	Pig	Hog Farrowing House	Grains Mash	Meat (Pork, Bacon) Hides
Horse	Stallion	Mare	Foal	Barn	Hay Grass Oats	Work Pleasure Transportation
Sheep	Ram	Ewe	Kid	Barn	Grass Hay Grain	Wool Hides Meat (Lamb, Mutton) Lanolin
Chicken or Poultry	Rooster	Hen	Chick	Chicken House	Grains Mash Insects Gravel, Oyster Shells	Meat Eggs
Duck	Drake	Hen	Duckling	Poultry House	Grass Grain Insect Hay	Meat, Eggs Feathers (Down)
Geese	Gander	Goose	Gosling	Poultry House	Grain Grass Insects	Meat, Eggs Feathers (Down)
Turkey	Tom	Hen	Poult	Poultry House	Grass Grains Insects Mash	Meat Eggs



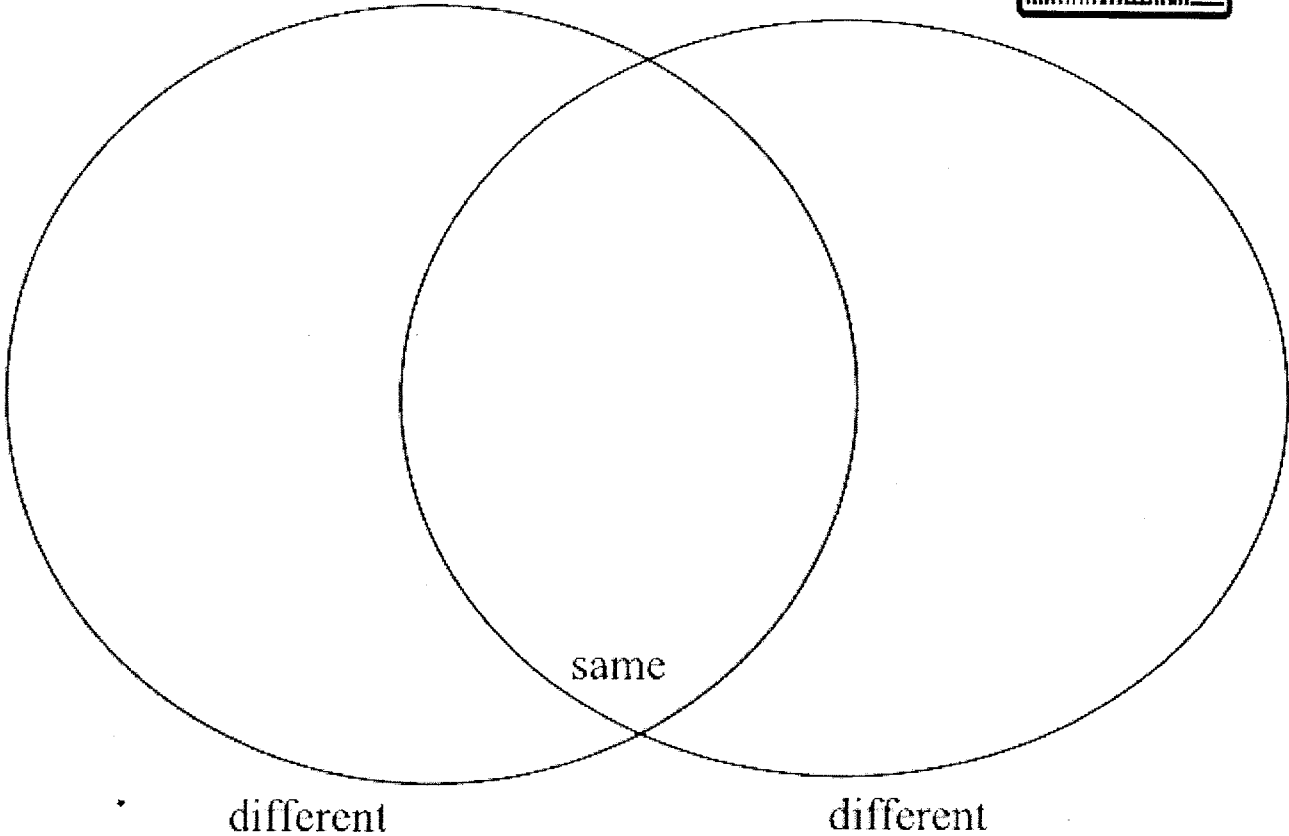
Use the Venn diagram to compare farms and cities. In the outer circles, write what is different about the two. In the center, write about what they have in common.



Farm



City



Farm Verbal Analogies

Name _____



Think about how the first pair of words are related to each other. Then, look at the next word and find the word that is related to it in the same way. Mark your answer.



1. cow --> mammal : chicken -->
☒ bird ☐ dinner ☐ feather ☐ delicious ☐ egg
2. milk --> cow : eggs -->
☐ feather ☐ lamb ☐ chicken ☐ pie ☐ orange
3. sheep --> lamb : cow -->
☐ ewe ☐ plant ☐ calf ☐ horse ☐ steed
4. rabbit --> hop : horse -->
☐ sit ☐ slither ☐ mare ☐ run ☐ crawl
5. turkey --> gobble : cow -->
☐ meow ☐ moo ☐ oink ☐ neigh ☐ noisy
6. wall --> door : fence -->
☐ gate ☐ ceiling ☐ meadow ☐ pasture ☐ closed
7. herd --> cows : school -->
☐ pigs ☐ horses ☐ fish ☐ chickens ☐ crows
8. pork --> pigs : beef -->
☐ sheep ☐ lamb ☐ chickens ☐ fish ☐ cows
9. dog --> paw : horse -->
☐ cob ☐ colt ☐ mare ☐ hand ☐ hoof
10. goldfish --> aquarium : horse -->
☐ house ☐ forest ☐ silo ☐ barn ☐ room

©EnchantedLearning.com

Farm Verbal Analogies Answer Key

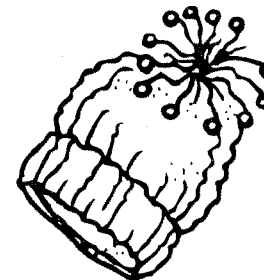
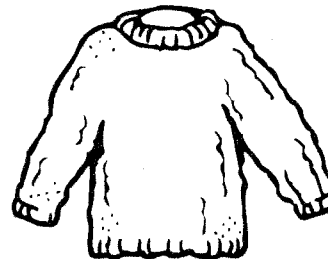
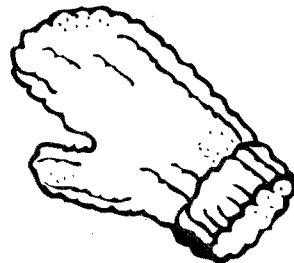
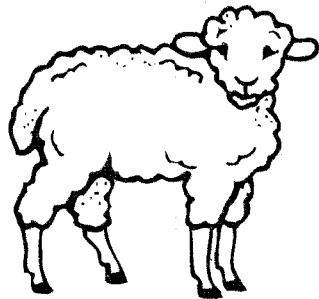
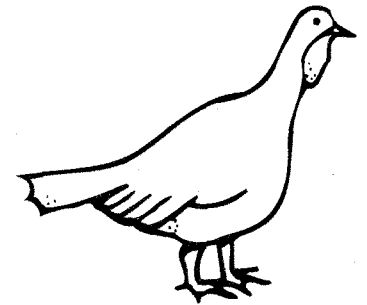
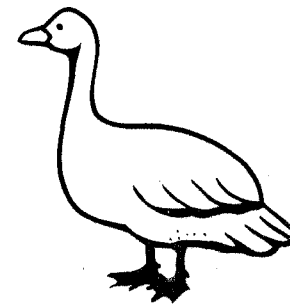
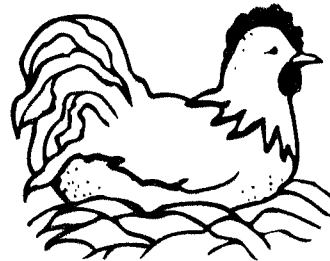
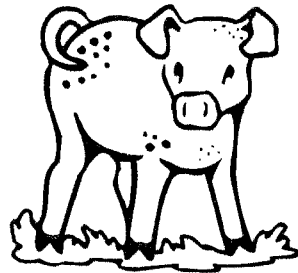
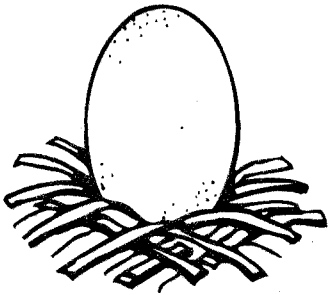
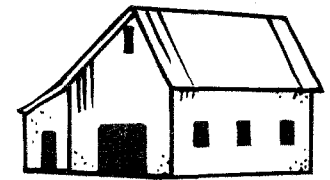
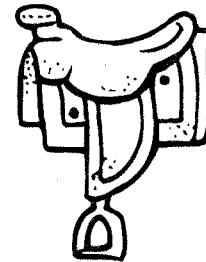
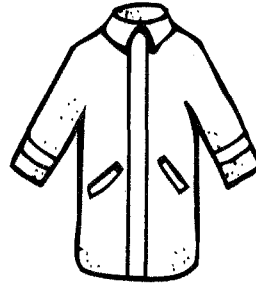
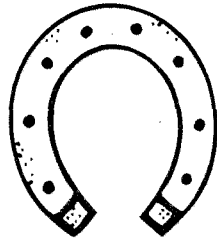
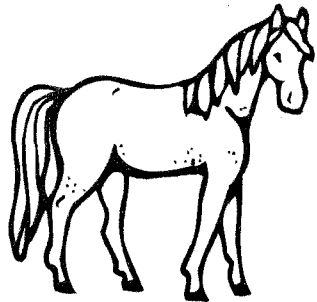
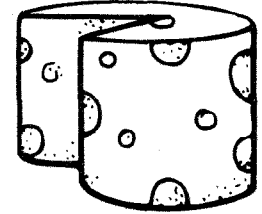
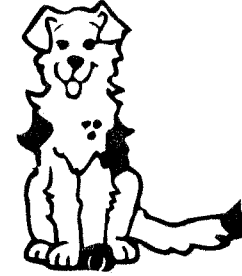
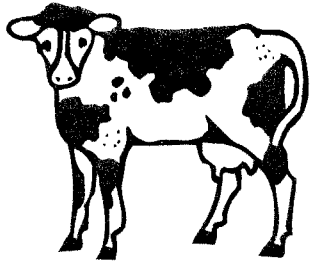


Think about how the first pair of words are related to each other. Then, look at the next word and find the word that is related to it in the same way. Mark your answer.

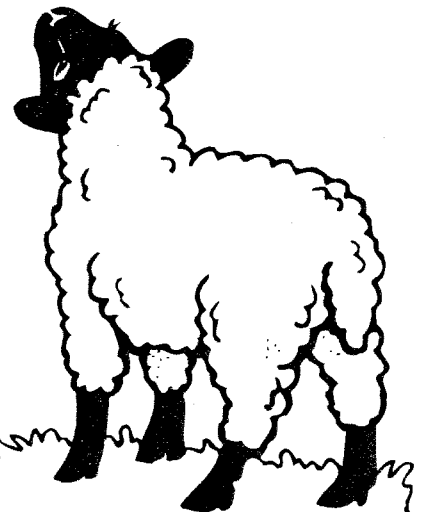
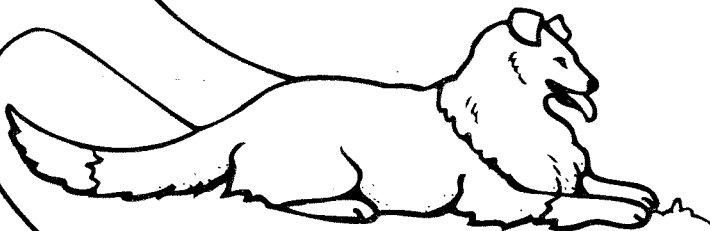
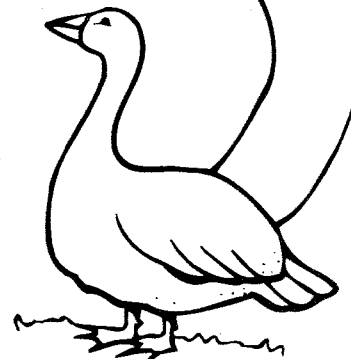
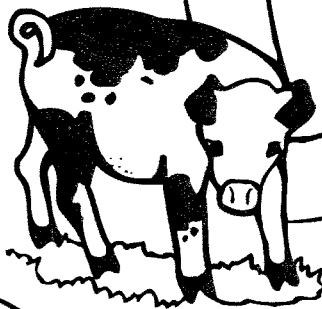
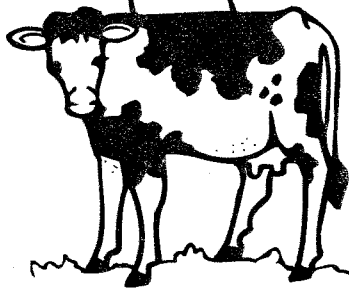
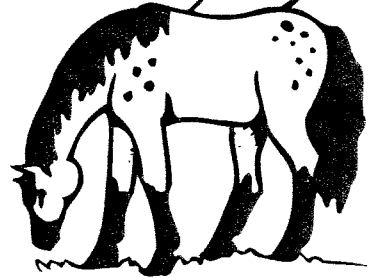
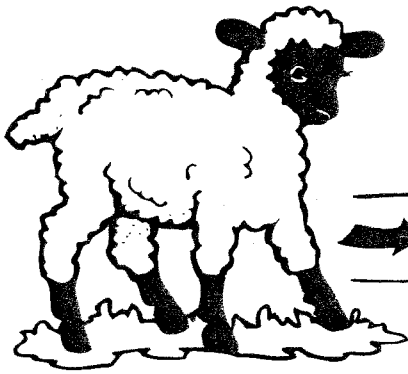


1. cow --> mammal : chicken -->
☒ bird ☐ dinner ☐ feather ☐ delicious ☐ egg
2. milk --> cow : eggs -->
☐ feather ☐ lamb ☒ chicken ☐ pie ☐ orange
3. sheep --> lamb : cow -->
☐ ewe ☐ plant ☒ calf ☐ horse ☐ steed
4. rabbit --> hop : horse -->
☐ sit ☐ slither ☐ mare ☒ run ☐ crawl
5. turkey --> gobble : cow -->
☐ meow ☒ moo ☐ oink ☐ neigh ☐ noisy
6. wall --> door : fence -->
☒ gate ☐ ceiling ☐ meadow ☐ pasture ☐ closed
7. herd --> cows : school -->
☐ pigs ☐ horses ☒ fish ☐ chickens ☐ crows
8. pork --> pigs : beef -->
☐ sheep ☐ lamb ☐ chickens ☐ fish ☒ cows
9. dog --> paw : horse -->
☐ cob ☐ colt ☐ mare ☐ hand ☒ hoof
10. goldfish --> aquarium : horse -->
☐ house ☐ forest ☐ silo ☒ barn ☐ room

Draw a circle around the picture that does not belong.



Help the lamb find its mother.



Farm Animal Report

Name _____ Date _____

Name of animal _____

Where does this animal live on the farm?

Why is this animal being raised on the farm?

Write some facts about this animal.

Draw a picture of your animal.

Have you ever visited a farm? Perhaps you live on a farm. Think about what you see on a farm. Describe what you see, smell, and hear.

On the farm I see

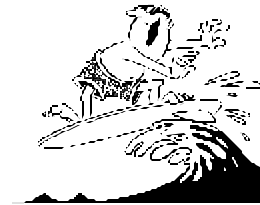
On the farm I hear

On the farm I smell

When I go to a farm I can

Going surfing on the internet?

Check out some of the following web sites:



General Agriculture

<http://www.ageducate.org> (Educating about Agriculture)

<http://www.agclassroom.org> (USDA Ag in the Classroom)

<http://www.agintheclassroom.org> (IL Farm Bureau Ag in the Classroom)

<http://www.agday.org> (National Ag Day)

http://danpatch.ecn.purdue.edu/~epados/ag101/src/main_f.htm (Ag 101-brief overview of American Agriculture)

<http://www.urbanext.uiuc.edu/SchoolsOnline/index.html> (U of I Urban Extension - lots of topics for youth)

<http://www.usda.gov/wps/portal/usdahome> (U.S. Dept. of Agriculture has youth resources located under "Education & Outreach")

<http://www.ars.usda.gov/is/kids/> (USDA Agricultural Research Service Science 4 Kid's)

http://www.nass.usda.gov/Education_and_Outreach/NASS_Kids/index.html (USDA Statistics kid's page)

<http://soil.gsfc.nasa.gov/index.html> (Soil Science Education - all ages)

<http://www.nrcs.usda.gov/feature/education/squirm/skworm.html> (S.K. Worm answers students' questions about soil)

<http://www.state.il.us/agr/kidspage/> (IL Department of Agriculture kid's page)

<http://www.state.il.us/kids/> (kid's pages include natural resources and the environment)

<http://ext.vt.edu/resources/4h/virtualfarm/main.html> (Virtual farms)

<http://www.cyberspaceag.com/> (CyberSpace farm tours -various topics)

<http://www.fs4jk.org/> (Farm Safety 4 Just Kids home page)

Animals & Insects

<http://chickscope.beckman.uiuc.edu/> (Beckman Chick Scope home page)
<http://www.aeb.org> (American Egg Board - has teachers, kids and family sections)
<http://burgertown.kidscom.com> (Beef kids page)
<http://www.moomilk.com/> (trivia, virtual tour of a dairy farm and more)
<http://www.dairyfarmingtoday.org/> (dairy resources for youth, adults, and educators)
<http://www.pork4kids.com/> (Pork kid's page, teacher's section, virtual farm tour, and more)
<http://www.sheep101.info/> (Sheep 101)
<http://www.extension.org/horses> (Horse Quest)
<http://goatdairylibrary.org/Pages/Goats%20In%20The%20Classroom.htm> (Goat library)
<http://honey.com/> (National Honey Board's page)
<http://gears.tucson.ars.ag.gov/ic/index.html> (information on honeybees; a virtual tour through a bee's eyes)
<http://www.eatturkey.com/consumer/history.html> (Turkey facts and history)

Crops, Commodities & Plants

<http://www.ncga.com/education/main/index.asp> (National Corn Growers has curriculum available and has a kid's page)
<http://www.ilcorn.org/Education/education.html> (IL Corn Growers education page)
<http://www.ilsoy.org/education/> (IL Soybean Association-Soy Island - an interactive program to learn about soybeans)
<http://www.wheatmania.com/> (Kansas Wheat - consumer section has educational resources)
http://www.oznet.ksu.edu/pr_aawf/ (Wheat information and watch it grow)
<http://popcorn.org/index.cfm> (Popcorn Board)
<http://www.bestapples.com/kids/index.shtml> (Washington apples kid's page)
<http://www.urbanext.uiuc.edu/pumpkins/> (U of I Extension pumpkins and more - lots of links too)
<http://www.cranberries.org> (Cranberries - information, bog tours, history and more)
<http://www.aboutpeanuts.com/> (Peanuts - information, kid's corner, educational materials)
<http://www.ncsweetpotatoes.com> (Sweet potatoes - information, educational items, kid's page)

Dates to Celebrate Agriculture



January

National Biotechnology Month
(www.whybiotech.com)
National Oatmeal Month
National Soup Month

February

Food Check-Out Week (early Feb.)
(<http://www.fb.org>)
Celebration of Chocolate Month
National Cherry Month
National Snack Food Month
Potato Lover's Month

March

March 1 National Pig Day
(www.pork4kids.com)
mid-March National Agriculture Week
(www.agday.org)
March 21 National Agriculture Day
National Nutrition Month
(www.nal.usda.gov/wicworks/spotlight/NNM.html)
National Noodle Month
National Peanut Month

April

National Garden Month
National Pecan Month
Earth Day - April 22
Arbor Day - last Friday in April
National DNA Day - April 25
(www.genome.gov/DNAday/)

May

National Asparagus Month
National Barbecue Month
National Egg Month
National Hamburger Month(www.zip4tweens.com)
National Herb Month
National Salad Month
National Salsa Month
National Strawberry Month

June

National Beef Steak Month (www.teachfree.com)
Dairy Month (www.dairyfarmingtoday.org)
Turkey Lover's Month
National Fresh Fruit & Vegetable Month
National Rose Month

July

National Baked Bean Month
National Blueberry Month
National Ice Cream Month
National Hot Dog Month
National Picnic Month



August

National Catfish Month
National Peach Month

September

mid-September National Farm Safety &
Health Week www.fs4jk.org or www.nsc.org
National Chicken Month
National Food Safety Education Month
National Honey Month
www.honey.com/kids
National Mushroom Month
National Rice Month (www.amrice.com/10-0.cfm)

October

National Apple Month
National Pasta Month
National Pizza Month
National Popcorn Month (www.popcorn.org)
National Pork Month (www.pork4kids.com)
National Seafood Month

November

mid-November National Farm-City Week
(www.farmcity.org)
Peanut Butter Lover's Month

From the Educating About Agriculture web site
<http://www.ageducate.org>

Learning Stations or Centers Ideas

Many learning stations or center may be used throughout your farm unit. Here are a few ideas. Students may have items they can bring from home to use.

- ✓ Farm model – could be made by the students (see Build a Farm in the Arts & Craft section)
- ✓ Farm animal models
- ✓ Farm equipment models
- ✓ Crop samples
- ✓ Farm puzzles
- ✓ Farm games
- ✓ Farm books/reading area
- ✓ Dress up area – items associated with various agricultural jobs and farm chores
- ✓ Weaving center
- ✓ Computer center to explore agricultural web sites
- ✓ Listening center for farm related songs or books
- ✓ Writing center – offer idea starters, reproducibles, etc.
- ✓ Math center – farm manipulatives
- ✓ Kitchen and food items

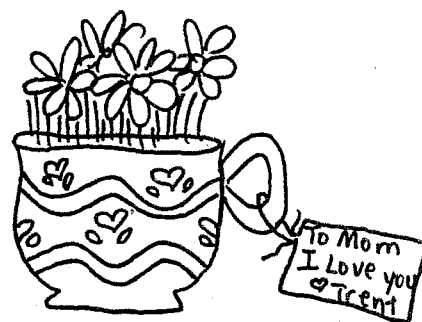
Year 'Round Farming

The story, *Farming* by Gail Gibbons explains how farmers are busy all year long. Even after the planting, growing, and harvesting are finished, there is much work to be done with the animals and machinery maintenance. After completing your FARM unit, remind the students that every time a seasonal change occurs, farmers are changing many things on their farms. Plan on having the students do an activity or have a "farm" day during the year *each time you discuss a new season*. (One suggestion is to make a class poster with the four seasons and activities listed from each season. Hang the poster where all students can see it and refer to it throughout the year.)

The following are some ideas for *each season*. (They are continued on the next page.)

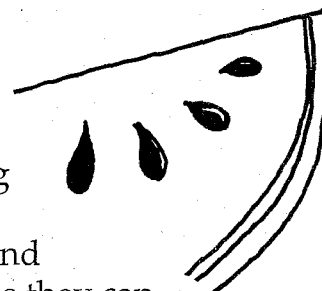
Spring:

- Visit a farm or contact a local veterinarian to bring in newborn animals.
- Plant some flowers in a small pot or cup that will grow and bloom by Mother's Day. (For example: marigolds, pansies, zinnias)
- Plant vegetables in a see-through jar and record your findings. When they are ready to pick, have a taste sampling.
- Plant grass seed in a hollowed out potato or empty eggshell. *Note: Because grass seed grows quickly, shortly your students can give your new classmate a "haircut" or style.*
- Try to plant a school "garden" or a miniature classroom garden in an egg carton. Each student is a farmer and is responsible for his/her own crops. This includes: planting, watering, giving sunlight and recording daily the observations of their crops. When the garden or crops are grown, take them home to continue growing. (Tip: Hearty-growing plants are: green beans, radishes, cucumbers, carrots and peppers.)



Summer/End of School:

- Have potato sack relay races.
- Make "broomstick" horses and have horse relay races.
- Ask your rural-area students to bring pictures of upcoming 4-H fair projects that include animals and plants.
- Have a watermelon-eating contest! Slice up watermelons and give the students two minutes to eat as many small slices as they can.

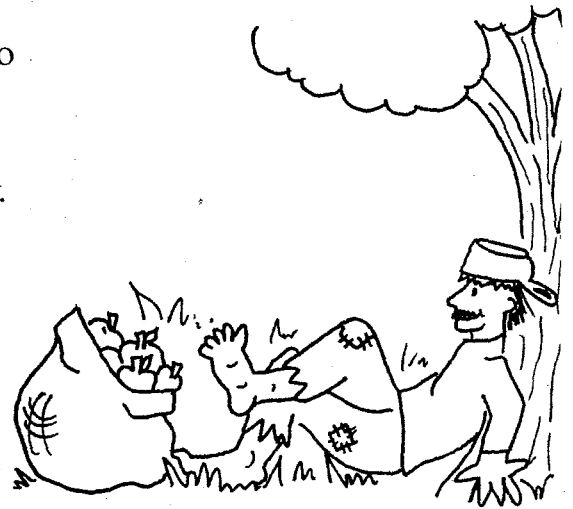
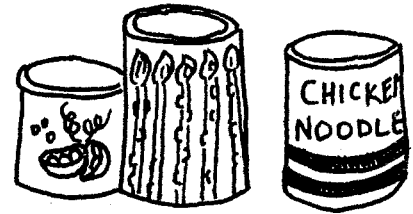


Year 'Round Farming

(Continued)

Fall:

- Brainstorm various canned foods and make a class list.
- Have everyone bring to school a canned food item. Graph your findings and then donate the food to your local food pantry or charity.
- Go through the steps of canning fresh vegetables as a group. (You could include mothers, grandmothers or anyone else who can demonstrate the steps.)
- Johnny Appleseed Day is September 26th, so don't forget activities for his special day. Since apples are picked in the fall, make apple cider, applesauce, or an apple pie to eat as a treat!
- When it's close to Halloween, have a pumpkin-carving contest. (Save the seeds to cook and eat as a snack!)

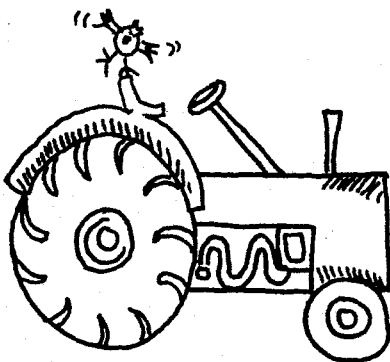


Winter:

Special Note: During the winter, farmers are busy indoors. Here are some indoor activities to help pass the long winter days!

Encourage students to bring toy tractors or you may need to provide some. Use the tractors for the following activities:

- Graph the different kinds and/or colors of tractors. (John Deere, White, International, green, red, white)
- Size them up! Place them in sequential order (as a class or in small groups) from the smallest to the largest.
- Have toy tractor races. Which tractor was the fastest? The slowest? Time the races and record the time!
- Illustrate your tractor doing something on the farm. Write about it.



How Does Your Farm Grow Unit

Jane Hemann from Mt. Olive Elementary teaches a 10 week Inquiry Based Learning Unit that she wrote to her first grade students in which they discover where their food comes from. This unit is on-line at

www.lites.lth5.k12.il.us/finae_units/1st/gardengrow/template.pdf

(to see the complete unit, click on the link in the top right corner).

The writing and revising of this unit was a three year on going process of piloting and collecting data in the classroom. Students spend time researching in nonfiction books and on the internet about farm family responsibilities and various farm animals.

Students each make a model of a farm and purchase land, animals, buildings, and fence for their farms based on their research about farms. An intensive study of food production then begins in which students learn about and make bread, ice cream, butter, applesauce, pizza, and other products. Students are exposed to other diverse farming operations such as fruit, tree, fern, sea food, etc. to enhance their understanding of agriculture. At the end of the unit, students have written reports on the responsibilities of farm family members, the importance and uses of each farm animal, and the uses of a variety of crops. Costumes are made and students are chosen to report their use on the farm of the above categories. A video is made and sent to other classrooms in the school and other schools in several states. A parent night is held in which students act and read their reports and share all that they have learned by using their model farm.

Family Farm

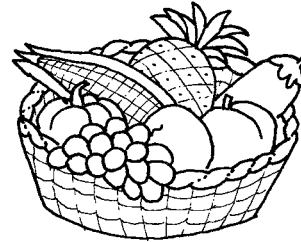
by Thomas Locker

Summary

The family is in danger of losing their farm because they are not making enough money from the sale of milk and corn. Father takes a job in a factory, and Mother and the children contribute by raising and selling pumpkins and flowers.

Concepts:

- The food we eat comes from a farm.
- The farmer and his family have many jobs.
- A farm raises crops and animals.



Concept Activities:

- Let students cut out magazine pictures of food and glue them to posters labeled fruit, vegetable, meat, grain.
- With the children make a list of the jobs of the farmer in the book.
- Role play activities, such as planting seeds, feeding chickens, fixing a tractor, and selling pumpkins and flowers at a roadside stand. Copy this chart onto the board. Let the class help finish this list of family members' chores.

Father	Mother	Grandpa	Sarah and Mike
factory work	plant flowers	milk cow	feed pigs
milk cows	plant pumpkins	clean barn	work at farm stand

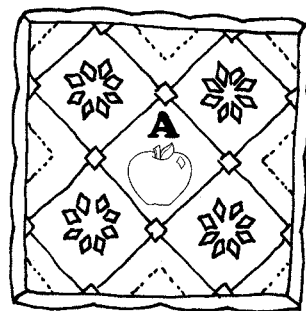
- If you live in or near a farming community, list the animals and crops that are grown there. Find pictures of them and show them to the students. Try to arrange a visit to a local farm to see live animals.
- Use the vocabulary word and picture cards on pages 8 and 9 to make sentences that emphasize these concepts or for matching and writing activities.

Additional Activities:

1. Determine with your students the setting for this story. In what state might it take place? How do you know? Also discuss the need to raise money to keep the family farm. At the end of the story, each problem will have a clear solution. Discuss the solutions to the problems with your students. If appropriate have them write or illustrate the problems and their solutions.
2. Invite a farmer to visit your classroom to talk about his or her work. Encourage children to ask about how a tractor is used. Ask what is the best/worst thing about living on a farm.

Family Farm (cont.)

Additional Activities (cont.)



3. Make a list of farm products for each letter of the alphabet. Ask each child to draw a farm product along with its letter on a six-inch (15 cm) square of paper. Glue the pictures in alphabetical order to a large paper. Cut around the border to make an ABC quilt of farm products.
4. Ask children if they have ever attended a county fair. What kinds of products and activities did they see? Discuss what was expected from Sarah and Mike in raising their calf, Derinda. Do you think Derinda will be a winner? Have children explain their answers.
5. Complete the Farm Riddle Book on page 7 with the children.
6. Read the poem "Farm Day" on page 11. Have the children repeat the animal sounds.
7. Let students complete the work sheet on page 12, matching the animals and crops.
8. Show the pictures in the book of the farm family's roadside stand. Ask your students if they have ever shopped at such a place. Compare and contrast that experience with shopping at a supermarket. Distribute the work sheet on page 13 for practice reading numerals and drawing sets.
9. Give children an opportunity to help the farmer find his way through the pumpkin patch maze on page 16.
10. Prepare the matching game on page 10. The game pieces may be used for matching like pictures, words and pictures, or sets and numerals.
11. What jobs do the children do to help on the farm? What job would be the most fun? Would your students like to live on a farm? Why? Why not?
12. Complete a chart with information from the story. Example: Plants and Animals.
13. Explain that plants need sun, water, and rich soil to grow. What would happen to a farmer's crops if there was no rain for a long time? No sunshine? Poor soil? Complete the work sheet on page 14.
14. Invite your students to save seeds from foods they eat at home, dry them on paper toweling, and bring them to share with the class. Glue each different kind of seed to a card, showing the name and a picture of the food that the seed produces.

Culminating Activities:

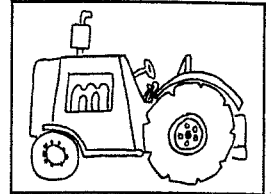
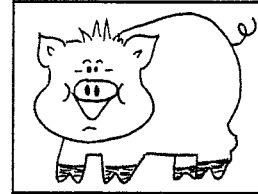
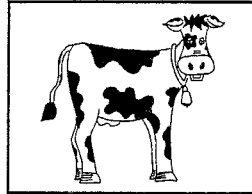
1. Use the directions on pages 17 and 18 to plant several kinds of farm products. Make picture charts to show the growth of each plant. Follow them for several weeks.
2. Sing "Old McDonald Had a Farm" and "The Farmer in the Dell" on page 77.

More Mini Farm Picture Ideas

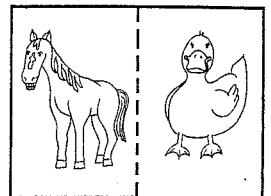
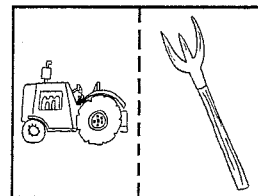
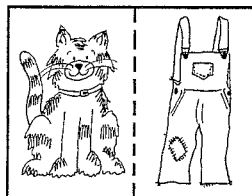
(Mini-Farm pictures are found on pages 74 and 75.)

Use the mini farm pictures for...

 **Alphabetical order**

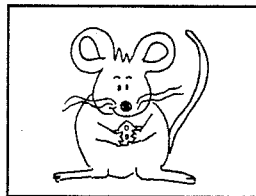


 **Classifying:**
animals/non-animals;
machinery/ non machinery;
birds/mammals, etc.

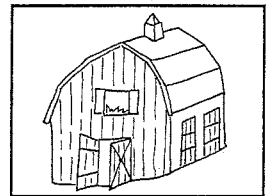


 **Making rebus sentences or stories**

The



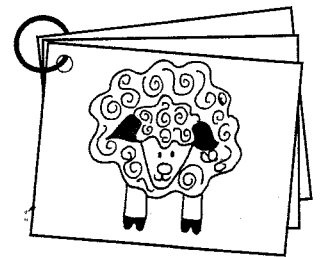
lives in the



.

 **Word Cards for a Book!**

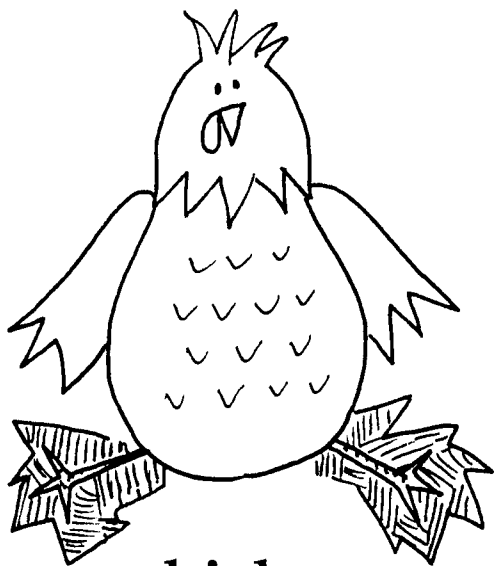
Color, cut out, mount the pictures on index cards. Print the words on the backs of the cards. Laminate. Punch a hole in the card and use a silver loop for holding cards together. Use in the writing center or for journals.



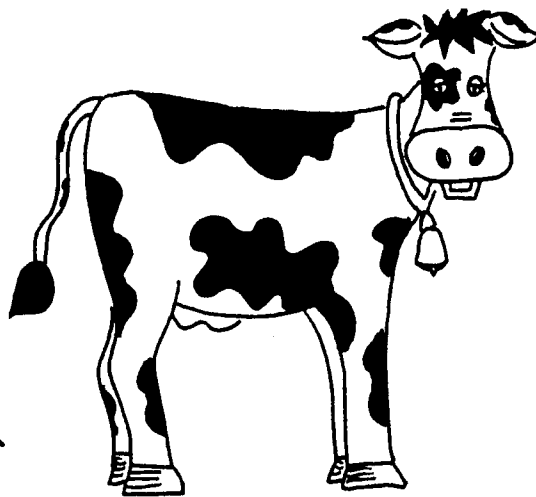
 **Pictographs**

Which farm animal is your favorite?

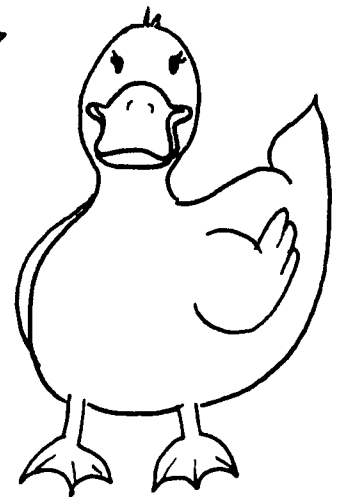
cow				
pig				
horse				
sheep				



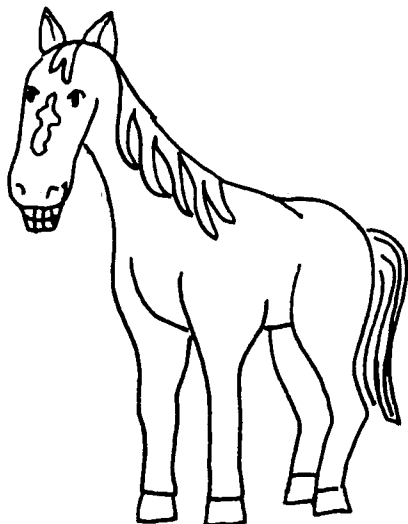
chicken



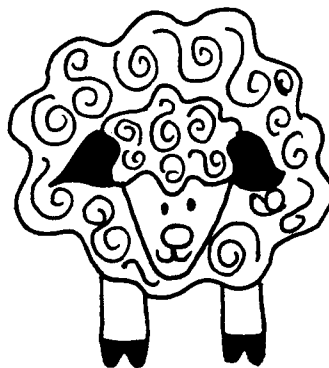
cow



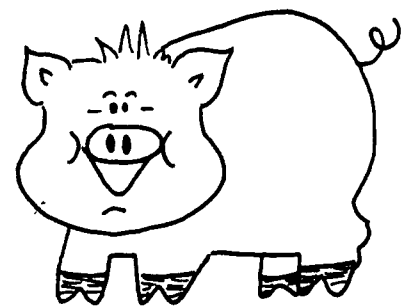
duck



horse



sheep



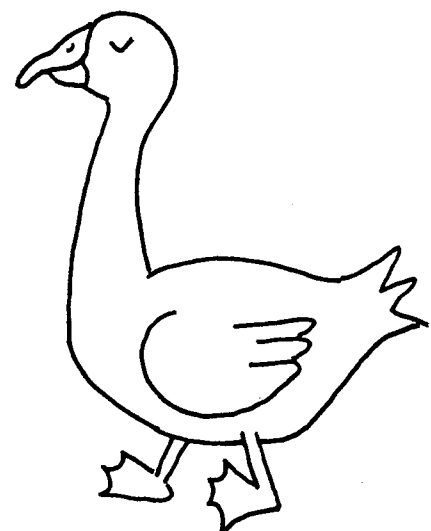
pig



cat



dog



goose

A - Maizing Corn!



Illinois ranks in the top three states in corn production every year. Although we know it best as corn, it is called *maize* throughout most of the world.



An ear of corn has approximately 800 kernels. There are 56 lbs of corn in a bushel.



There are three types of corn. The most common type is field corn, called dent corn because as the kernel dries it creates a dent in the hard outer shell. This corn is used for livestock feed (58%), edible foods, non-food, and the production of Ethanol.

Plastics	Aspirin	Ethanol fuels	Corn Syrup	Vitamins
Chips	Relish	Catsup	Baby Food	Soda
Paint	Tires	Margarine	Chocolate	Paper
Crayons	Batteries	Bookbinding	Fireworks	Detergents
Textiles	Wine	Vinegar	Surgical Dressing	Powdered Sugar
Flours	Makeup	Lotion	Chewing gum	Marshmallows



Other types of corn are sweet corn and popcorn. We eat sweet corn before the kernels have matured and are still sweet to eat. Popcorn is the smallest kernel. When the kernel is heated, the water inside the kernel causes the shell to burst, turning the kernel inside out!

Soy Many Possibilities with Soybeans!



Soybeans grow on short bushy plants that are three to five feet tall. The average plant has 60-80 pods each holding three pea-sized soybeans. Soybeans are dicots and members of the legume family. Every year, Illinois farmers plant enough soybeans to cover almost 10,000 football fields.



The United States produces more soybeans than any other country. In 2004, farmers across the U.S. harvested about 3.14 billion bushels of soybeans. Over 1 billion bushels of soybeans were exported to countries including China, Japan, the European Community, and Mexico.

Products made from soybeans:

Non-Food:

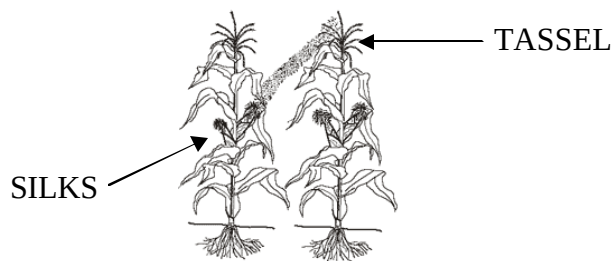
Cosmetics	Ink	Glue	Medicine	Car Wax
Sunscreen lotion	Soap	Weed Killer	Crayons	Paint
Biodiesel	Plywood	Candles	Body lotion	Cleaners

Food:

Cooking Oil	Mayonnaise	Animal Feed	Pet Food	Cereal
Candy	Margarine	Coffee Creamer	Salad Dressing	Baby Food
Chocolate	Pancake mix	Diet Drinks	Soy Milk	Coffee

A-MAIZING CORN!

- ✿ Illinois ranks in the top three states in corn production every year. Although we know it best as corn, it is called *maize* throughout most of the world.
- ✿ An ear of corn has approximately 800 kernels. There are 56 lbs of corn in a bushel.
- ✿ The number of kernels per ear is based on the pollination of the *silks*. These tiny strands are the female part of the plant. Every silk is responsible for one kernel. The male part of the plant is the *tassel*, where the pollen is made. If the ear of corn is full of kernels, then all the silks were successfully pollinated.



- ✿ Corn is planted in the spring and harvested in the fall. Between planting time and harvest, farmers are busy caring for the fields to keep insects and weeds out of the corn. Farmers may apply chemicals, called pesticides, to prevent insects or weeds from harming their crops.
- ✿ Farmers harvest corn when it is mature and dried until the kernel moisture is between 20-25%. In the past, harvesting was done by hand and took lots of time. However, farmers now use combines to harvest the corn. A combine costs about \$240,000. A combine can harvest one acre of corn in one minute (about one football field)! Once the corn has been harvested, it is then transported to the grain elevator by wagon or truck where it is stored until marketed.
- ✿ There are three types of corn. The most common type is field corn, called dent corn because as the kernel dries it creates a dent in the hard outer shell. This corn is used for livestock feed, edible foods, non-food, and the production of Ethanol.

Other uses of corn: 58% animal feed, 42% non-animal feed

Plastics	Aspirin	Ethanol fuels	Corn Syrup	Vitamins
Chips	Relish	Catsup	Baby Food	Soda
Paint	Tires	Margarine	Chocolate	Paper
Crayons	Batteries	Bookbinding	Fireworks	Detergents
Textiles	Wine	Vinegar	Surgical Dressing	Powdered Sugar
Flours	Makeup	Lotion	Chewing gum	Marshmallows

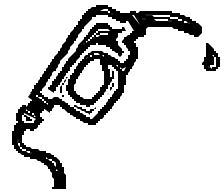
- ✿ Other types of corn are sweet corn and popcorn. We eat sweet corn before the kernels have matured and are still sweet to eat. Popcorn is the smallest kernel that has a tiny bit of water inside the kernel. When the kernel is heated, the water bursts, turning the kernel inside out!

Soy Many Possibilities with Soybeans!

-  Soybeans grow on short bushy plants that are three to five feet tall. The average plant has 60-80 pods each holding three pea-sized soybeans. Soybeans are dicots and members of the legume family. Every year, Illinois farmers plant enough soybeans to cover almost 10,000 football fields.
-  The United States produces more soybeans than any other country. In 2004, farmers across the U.S. harvested about 3.14 billion bushels of soybeans. Over 1 billion bushels of soybeans were exported to countries including China, Japan, the European Community, and Mexico.
-  Farmers plant the seeds in the spring and harvest soybeans in the fall. In between, farmers stay busy. They give soybeans nutrients and try to prevent insects and weeds from harming the plants as they grow. They continually manage all aspects of their operation including marketing and machinery maintenance.

HOW DO YOU GET FUEL FROM SOYBEANS??

After harvest, soybeans are brought to the processing plant where they are cleaned and cracked. The hull, which is the outer shell of the bean, is removed. Hulls will be used as additives for breads, cereals, snacks, and livestock feed.



 After the hull is removed, the soybeans are rolled into flakes. The flakes are either used for animal feed or pressed and the natural oil is removed. The flakes without oil can be ground into flour.

 The oil taken from the bean is purified and made into *industrial or edible* (good to eat) *oil*. The industrial oil is used to make soaps, candles, crayons, paints, and fuel for diesel engines called **biodiesel**.



Products made from soybeans:

Non-Food:

Cosmetics	Ink	Glue	Medicine	Car Wax
Sunscreen lotion	Soap	Weed Killer	Crayons	Paint
Biodiesel	Plywood	Candles	Body lotion	Cleaners

Food:

Cooking Oil	Mayonnaise	Animal Feed	Pet Food	Salad Dressing
Candy	Margarine	Coffee Creamer	Cereal	Baby Food
Chocolate	Pancake mix	Diet Drinks	Soy Milk	Coffee

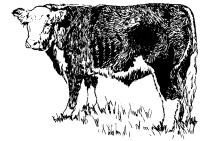


The Scoop on Plants and Soils

- ⌘ **Illinois has more than 700 different soil types. The official State Soil of Illinois is Drummer. On average, 500 years is needed to form 1 inch of topsoil.**
- ⌘ **Soil is a mixture of organic matter, mineral matter, air and water. Five soil-forming factors are: parent material, weathering, climate, plants and animals, slop and drainage of the land.**
- ⌘ **Soil is naturally removed by the action of wind and water, called erosion. Soil erosion may affect both agricultural areas and the natural environment, and is the most widespread of today's environmental problems.**
- ⌘ **Farmers control soil erosion with their agricultural practices. Farmers must test soil to determine the amount of nutrients in the soil. Levels of these nutrients must be adjusted for a healthy crop. Farmers rotate crops to replace nutrients, and/or add fertilizer to ensure proper nutrient balance.**
- ⌘ **Most life on earth depends upon the soil as a direct or indirect source of food.**
- ⌘ **Plants need light, air, water, soil or some media to grow in, nutrients, space, proper temperature, and time to grow. Photosynthesis is the process by which plant cells convert light into energy (food).**
- ⌘ **In Illinois, the primary crops farmers grow are corn and soybeans.**
- ⌘ **Corn can be made into animal feed, fuel, solvents, charcoal, insulation, adhesives, plastics, and many more by-products.**
- ⌘ **Soybeans are produced for food, livestock feed, consumer and industrial products such as biodiesel fuel, soybean crayons, soy ink, building materials, and cooking oils.**

More than What “Meats” the Eye

- ✓ Cattle and hogs are the primary livestock industry in Illinois. Illinois ranks 4th in hog production!
- ✓ Cattle are called ruminants. They have a special stomach so they can digest roughages (grass or hay). There are four compartments in the ruminant stomach called the 1) rumen 2) reticulum 3) omasum 4) abomasum.
- ✓ Tiny microorganisms in the stomachs help cattle digest the roughage they eat. To break down the grass and hay, cattle must “burp up” a mixture of what they have already eaten. It is called a “cud” and is about the size of a baseball. Cows may spend as many as eight hours a day chewing their cud.
- ✓ Cattle and hogs both need a well balanced diet just like humans with energy, protein, and nutrients



What do they eat?

CATTLE = 25 lbs/day
Grass or Hay, fiber
Cracked corn, for energy
Silage - entire plant chopped into feed
Vitamins & Minerals, for growth & health
Soybean Meal, for protein
Water - 30 gallons per day!

HOGS = 5-8 lbs/day
Ground corn, for energy & growth
Soybean Meal, for protein
Vitamins & Minerals, for growth & health
Water - 2-3 gallons/day

Why Eat Meat?

- ✓ Cattle are used for meat called **beef**. Hogs are used for meat called **pork**. Beef and pork are both good sources of zinc, iron, protein and B-vitamins.
- ✓ Compared to 10 years ago, pork has 30% less fat, 14% fewer calories, and 10% less cholesterol.
- ✓ Four grades of beef are Prime, Choice, Select and Standard. Grades of beef are selected by external fat and internal fat (called marbling). External fat is considered to be undesirable, while internal fat is essential for flavor, tenderness and juiciness of the meat. Grades were established to create a uniform eating experience of all cuts of beef. So no matter which store you go to, Choice beef should taste about the same anywhere.

Other by-products of hogs and cattle:

Leather	Chewing Gum	Animal Feeds	Glue
Medicines	Buttons	Plastics	Paintbrushes
Plywood	Adhesive	Insulation	Upholstery
Cosmetics	Antifreeze	Cellophane	Floor Waxes
Cement	Crayons	Matches	Linoleum
Insulin	Surgical Dressings	Sausage Casings	Combs
Gelatin	Deodorants	Insecticides	Margarine

The World of **FABRICS**

- ❖ **Fabric** is cloth made of fibers. It is the material used for making clothes, curtains, tablecloths, sheets and many other items we use everyday.
- ❖ **Fibers** are the strings that are twisted together to make yarn or thread and fabric. There are two groups of fibers: natural fibers and manmade fibers.



Take a ball of cotton and pull it apart; you will find that the fibers are short, hair-like threads. Many of these threads of fibers can be twisted together to form a yarn. You could form a yarn yourself by twisting some of the cotton fibers together until you have a long thread. Yarn is used to make fabric.

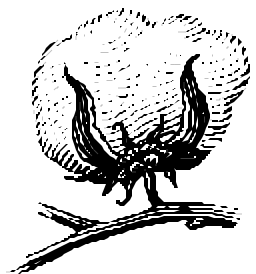
- ❖ Animal and vegetable fibers are called natural fibers because they are found in nature. Two most common animal fibers are wool and silk. Wool comes from sheep and silk comes from the cocoon spun by the silkworm.
- ❖ Manmade fibers are made by chemical processes. Examples include: acetate, acrylic, spandex, nylon, polyester, and rayon. Manmade fibers are used most often in clothing and home furnishings.
- ❖ Wool is harvested from the sheep by shearing, which is shaving the wool just like giving the sheep a hair cut. The advantage of wool is that it is a renewable resource, meaning it grows back several times over the course of the sheep's life and can be sheared once a year, usually in the spring.
- ❖ Shearing sheep is important not only for the wool production, but to keep the sheep healthy, clean and comfortable. During hot weather, sheep are susceptible to heat stress so shearing sheep cools them off. Imagine wearing a winter coat in the summer!
- ❖ Sheep also need to be sheared to keep their coat free of mud and fecal matter that accumulates over time.
- ❖ Vegetable fibers most commonly known are cotton and flax (linen).
- ❖ Cotton is grown primarily in the southern United States. Cotton is planted in March and April, and harvested in late fall. Cotton is harvested with a picker and a stripper. The picker pulls the cotton from the boll, the stripper slices the boll and the leaves from the stalk.



Did you know?

US paper currency isn't paper at all... It is made with a blend of 75% cotton and 25% linen! That makes it much more durable.

A 480 pound bale of cotton can be made into 313,600 \$100.00 bills!



Suggested Additional Resources

Heartland by Diane Siebert ISBN 0064432874 \$6.95 (may be reprinted fall 2008)

Farm board book (Let's Look series) by DK Publishing ISBN 0075661750 \$4.99

Farm Animals by Jennifer Blizin Gillis ISBN 0756506700 \$14.95

Farm Machines by Jennifer Blizin Gillis ISBN 0756506727 \$14.95

Farm Tractors by Kristin L. Nelson ISBN 0822506076 \$6.95

Tractores Agrícolas by Kristin L. Nelson (Spanish version) ISBN 0822566451

Searching for Real Illinois: A Look at Illinois Agriculture brochure available from
Illinois Agriculture in the Classroom

farm animal models - Schleich models are very realistic (available at farm
supplies, and others) \$1.99 and up

farm equipment - small models such as 1/32 scale \$2 and up