

Executive Functioning

Presented by:
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Agenda

- What is Executive Functioning?
- What causes deficits in Executive Functioning?
- Major components of Executive Functioning
- Manifestations of Executive Functioning in everyday life
- Challenges at school and at home
- Strategies for teaching/supporting Executive Functioning skills/needs
- Tips for success

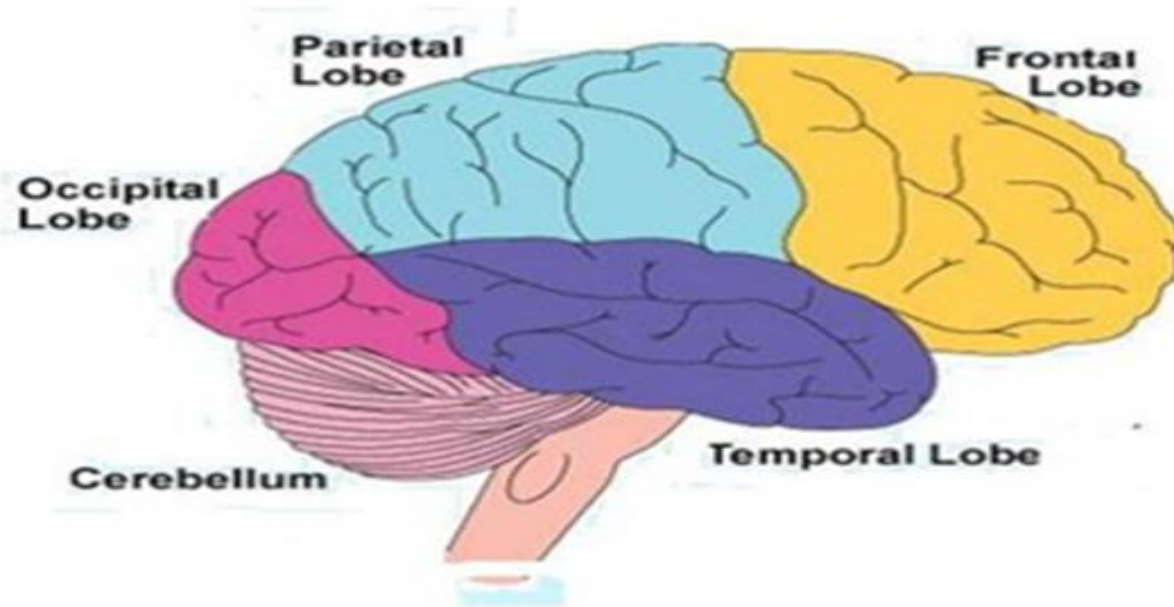
What is Executive Functioning (EF)?

- A set of processes that all have to do with managing oneself and one's resources in order to achieve a goal.
- An umbrella term for the neurologically based skills involving mental control and self-regulation.








Executive Functioning

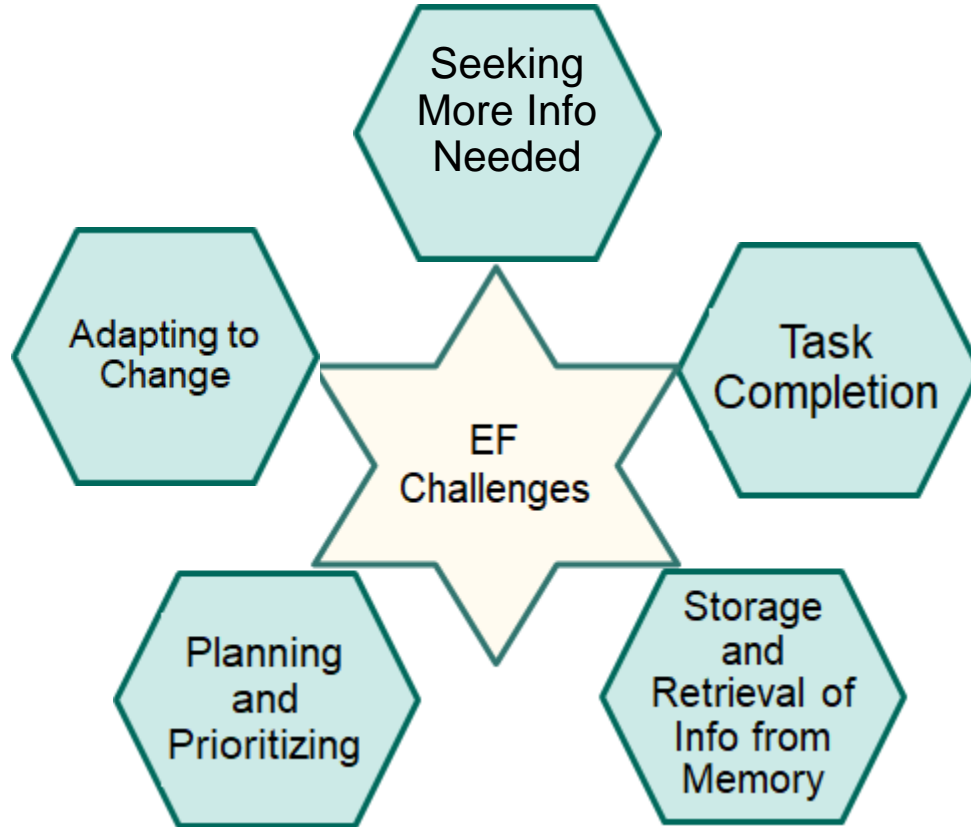
The Causes of Deficits in Executive Function



Major Components of Executive Functioning

	Flexibility	The ability to change your mind and make changes to your plans as needed.
	Leveled Emotionality	The ability to emotionally self-regulate and avoid extensive mood swings
	Impulse Control	The ability to control your impulses, such as waiting to speak until called upon
	Planning/Organizing	The ability to make plans and keep track of time and materials so that work is finished on time
	Problem Solving	The ability to know when there is a problem that needs to be solved, generate solutions, select one, and evaluate the outcome

Executive Functioning Challenges



How are EF Challenges Manifested in Everyday Life?



Flexibility

- Resistant to change in routine
- Difficulty making transitions
- Difficulty shifting topic/activity
- Concrete thought processes
- Ability to see only one solution to a problem
- Difficulty coping with unseen events



Planning/Organizing

- Inability to break down long-term assignments into parts
- Difficulty completing long-term projects
- Difficulty estimating time needed for task completion
- Challenges with organizing binder/backpack/desk/locker
- Failure to turn in completed homework
- Difficulty identifying what material to record in note-taking
- Difficulty organizing thoughts
- Caught up in details without seeing the big picture
- Difficulty getting started



Leveled Emotionality

- Extreme reactions to seemingly minor events
- Low tolerance for frustration
- Difficulty tolerating mistakes
- Behavioral outbursts
- Poor coping strategies



Problem Solving

- Difficulty identifying that there is a problem that needs to be solved
- Tendency to focus on one aspect of a problem, to the exclusion of other components
- Inability to identify the most important parts of a problem
- Resistant to seeking help, when needed
- Tendency to become "stuck" on one solution and won't try other possible strategies
- Difficulty generalizing skills and knowledge to other situations and environments



Impulse Control

- Lacks self-monitoring
- Blurts out answers in class
- Interrupts others
- Does not consider consequences before acting
- Unaware of how his actions affect others
- Easily distracted by internal and external stimuli

Executive Functioning Challenge

Area of Deficit

1. Carter was assigned to create a diorama that involved the rainforest and it was due on Wednesday, May 29th. Carter figured it would only take him one day to put his ideas down and get the diorama created. On Tuesday afternoon when he looked for a box and material he needed of the assignment, he could not find anything in his house

2. John is in 6th grader who follows the block schedule of the school. There is a two-hour delay one winter day, which changed the length of each class. When the bell rang after History class, John becomes very loud and paces the room. He does not want to leave to go to his next class.

3. Sarah is playing jeopardy in her history class and had the most points. She has buzzed in to answer, Which group established the town of Werowocomoco?. She provided the answer, "English settlers". When she was told that the correct answer was 'Spanish missionaries', she knocked her chair over and left the classroom yelling "This is a stupid game anyway!"

4. Zoey is with a group of friends at lunch after the summer break. One friend is talking about what she did at the beach. As she explains all of the attractions she saw, Zoey interrupts and says that she hates the beach and crowds and would much rather be in the mountains with a good book.

5. Mark gets on the bus and two stops later, realizes that he forgot his lunchbox. He demands that the bus driver turns around to go get his lunchbox. When the driver continues with the bus route Mark is visibly agitated and repeatedly states "I need my lunchbox to eat".

Executive Function Challenges at School

- Initiating tasks
- Completing class work
- Completing long-term projects on time
- Following directions
- Getting organized
- Changing activities or classes
- Controlling emotions



Executive Function Challenges at Home

- Getting ready in the morning
- Completing chores
- Maintaining a schedule
- Doing homework; studying; doing long-term projects
- Controlling impulsive behavior
- Handling changes in plans (flexibility)
- Learning to manage anxiety



Teaching EF Skills: Flexibility

Challenges for Individuals who struggle with Flexibility:

- Changes in routine
- Making Transitions
- Understanding Abstract concepts
- Adapting to alternative options
- Coping with unseen events

Strategies to Teach Flexibility:

- Visual Scales
- Wait Card
- Timers
- Power Card
- SOARR method

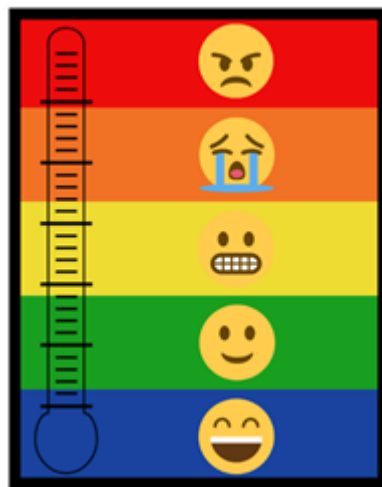


Visual Scales

Emotion Thermometer



Emotion Thermometer



Visuals cont.

What zone am I in?



Use tools to get in the green zone.



Wait Cards

wait

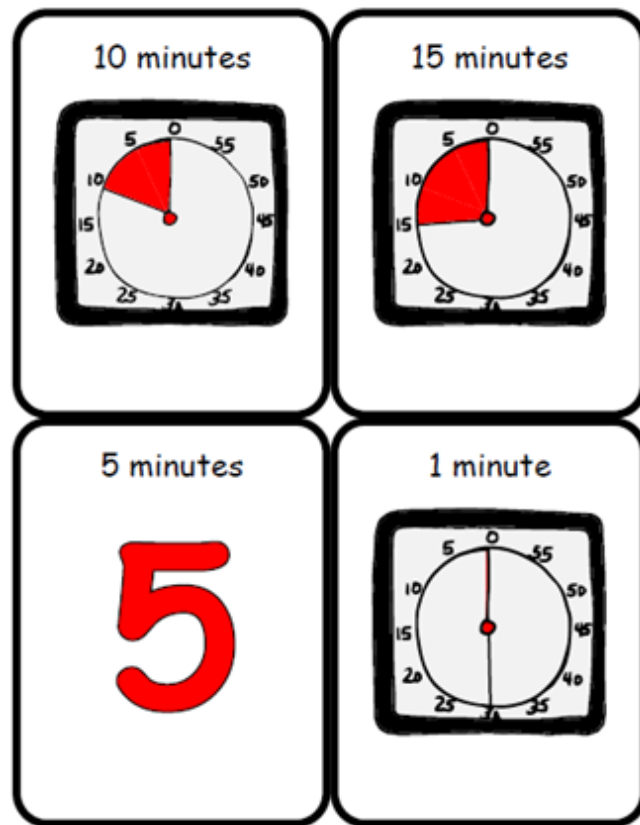


**While waiting for assistance
in math class, I can:**

1. Do the problems I am able to do on my own.
2. Start tonight's homework.
3. Review lessons from last week.



Timers



Flashcards

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Power Card

Thomas the Tank Engine loves being a helpful and nice engine but sometimes it is difficult for him to be nice to everyone. At the end of a long day of running the tracks, he is often tired and it is difficult for him to be nice to his friends. But Thomas has learned it is important to smile at his friends and say nice things to everyone even when he is tired. He has learned that if he can't say something nice, it is better to smile and say nothing at all. Thomas stops and thinks before he says anything. Just like Thomas, it is important for young people to think before they talk. Thomas is a proud engine when his young friends remember to:

1. Thomas says "think before you say anything. Say it in your head first before you say it out loud".
2. If you can't think of something nice to say then don't say anything.
3. You do not have to say every thought out loud that you think.



Power Card cont.

1. Follow a bedtime routine.
Fireman Steve takes a bath,
brushes his teeth, and reads
for 15 minutes before turning
off the light.

2. Close your eyes
and try to lie still.

3. Stay in bed after
the lights are out.



SOARR Method

Specify	What do we already know about [name the event location context]
Observe	What do people usually doing [name the event, location, context]?
Analyze	What do I need to do to fit in
Respond	What should I do? How will I know if I am doing the right? What can I look for?
Reflect	What went well? What did I learn? What can I do differently next time?

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R
R**

Teaching EF Skills: Leveled Emotionality

Challenges for Individuals who struggle with Leveled Emotionality:

- Over-reactions
- Low tolerance for frustration
- Difficulty tolerating mistakes
- Behavioral Outbursts
- Poor coping Strategies

Strategies to Teach Leveled Emotionality:

- Choice Cards
- Calming Routines
- Help/Break Cue Cards
- Chunking Tasks
- Social Narratives

Choice Cards

Name: _____

 september center choice board

Reading	Word Work	Writing	Extra
 Library	 Cube-a-Word	 "I Like" Story	 Build-a-Sentence
 Read/AR	 Word Sort	 Poem Writing	 Buddy Reading
 Order-a-Story	 Make-a-Word	 Draw-a-Story	 Code Words

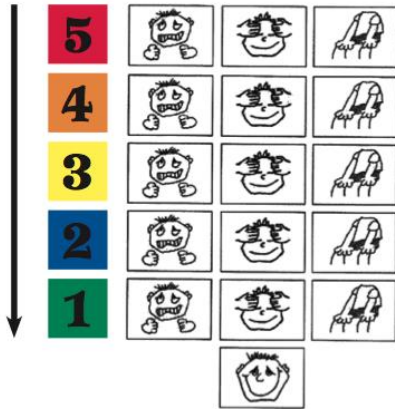
OR

Calming Routines

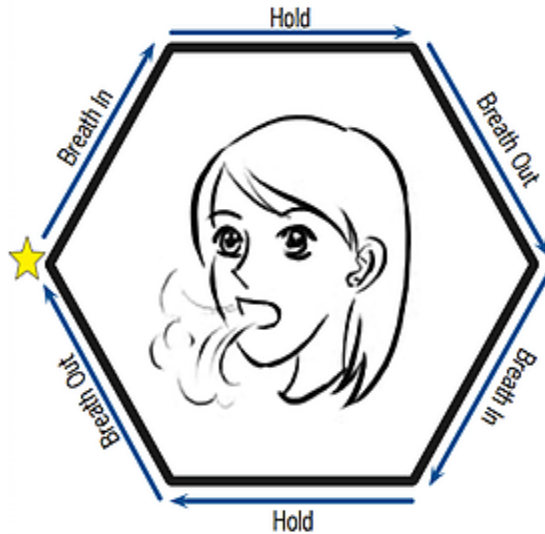
My **Calming** Sequence Visual

Activity: Try this calming sequence. Does it feel good and calming? How can you change it so that it works for you?

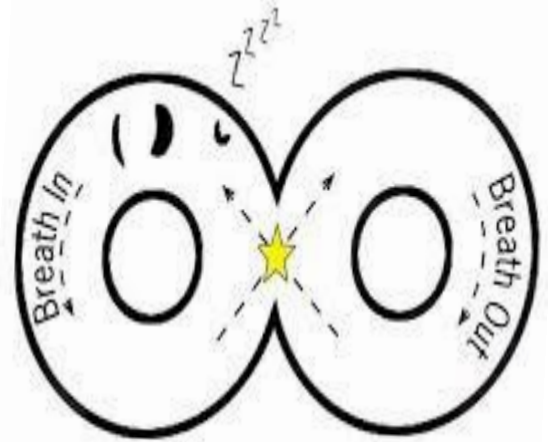
This calming sequence goes like this: Squeeze your hands together; close your eyes and rub your head; then rub your legs. Repeat the sequence five times, bringing your stress down.



The Six Sides of **Breathing**



Lazy 8 **Breathing**



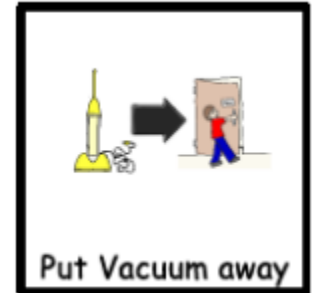
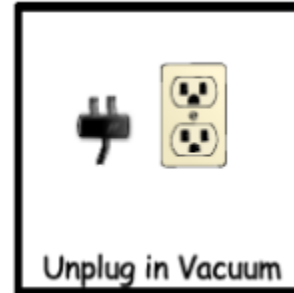
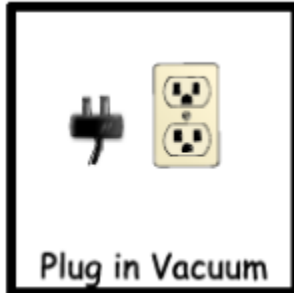
Help/Break Cue Cards

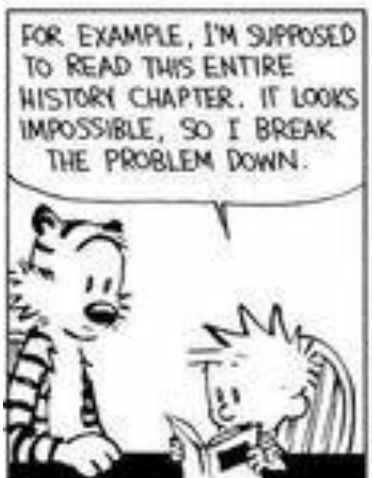
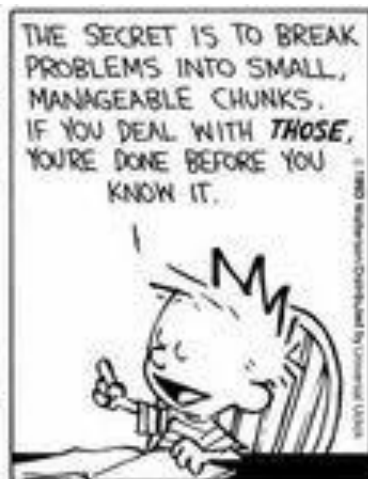


Chunking Tasks

Estimate how long it will take to:

Steps	Estimation	Time
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____





Social Narratives

Going to the



Grocery Store



Today, we are going to the grocery store. First, we will get into our car and drive to the store.



When we get there we will get a grocery cart or basket to fill with food.

Lining Up in Class



At school, when it is time to leave the classroom, my class lines up at the door.



When the teacher tells us to line up, she wants us to get up quietly from our seat.



Everyone in the class should get in line behind the last person in line.



This keeps the line orderly and everyone is happy.



We can all get where the class needs to go if we can line up quietly.



My teacher will be so proud of us if we line up calmly.

Teaching Impulse Skills: Impulse Control

Challenges for individuals who struggle with Impulse Control:

- Lacks self-monitoring
- Blurts out answers
- Interrupts others
- Does not consider consequences before acting
- Lacks perspective taking
- Easily distracted

Strategies for Teaching Impulse Control:

- Reminder Cards/Scripts
- Reinforcement Systems
- Social Autopsy

Reminder Cards/Scripts


Expected Behaviors for Reading Time

- Open book to the beginning page (page listed on the board)
- Follow along as classmates read.
- Be ready to read when my name is called.
- Listen for questions to check my understanding.

Reinforcement Systems

I am working for

computer



★

★

_____ 's Point Sheet



Points Earned	How I earned my points
3	I went above and beyond.
2	I met my goal.
1	I needed a few reminders.
0	I had a hard time and did not meet my goal.

Date _____

Planner	
Homework	
Bus	

Class	Target Behavior 1	Target Behavior 2	Target Behavior 3
	0 1 2 3	0 1 2 3	0 1 2 3
	0 1 2 3	0 1 2 3	0 1 2 3
	0 1 2 3	0 1 2 3	0 1 2 3
	0 1 2 3	0 1 2 3	0 1 2 3
	0 1 2 3	0 1 2 3	0 1 2 3
	0 1 2 3	0 1 2 3	0 1 2 3
	0 1 2 3	0 1 2 3	0 1 2 3
	0 1 2 3	0 1 2 3	0 1 2 3
	0 1 2 3	0 1 2 3	0 1 2 3
	0 1 2 3	0 1 2 3	0 1 2 3
	0 1 2 3	0 1 2 3	0 1 2 3
	0 1 2 3	0 1 2 3	0 1 2 3

Target Behaviors	Definition
Target Behavior 1	
Target Behavior 2	
Target Behavior 3	

Parent Signature _____

Social Autopsy

THINK SHEET	DATE: _____
During _____ I made the following choice:	

My choice affected my learning by: _____	

My choice affected _____'s learning by:	

Two other choices I could make next time are:	
1. _____	
2. _____	
Families: Please review this think sheet with your child and sign below indicating you have discussed their choices. Students must return think sheets back the next day or there will be a loss of recess.	
Student Name: _____	
Parent Signature: _____	
Teacher Signature: _____	

Social Autopsy Worksheet

What happened?

What was the social error? Who was hurt by the social error?

What should be done to correct the error?

What should be done next time?

Teaching Ef Skills: Planning and Organizing

Challenges for individuals who struggle with Planning and Organizing

- Inability to break down and complete complex tasks
- Difficulty estimating time needed for task completion
- Difficulty organizing thoughts
- Difficulty with initiation
- Difficulty with seeing the big picture
- Inability to organize the environment

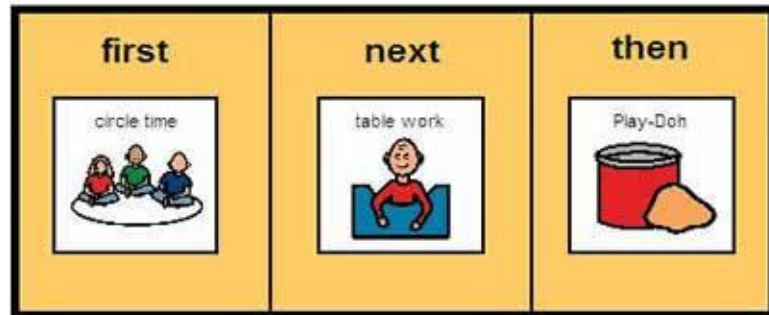
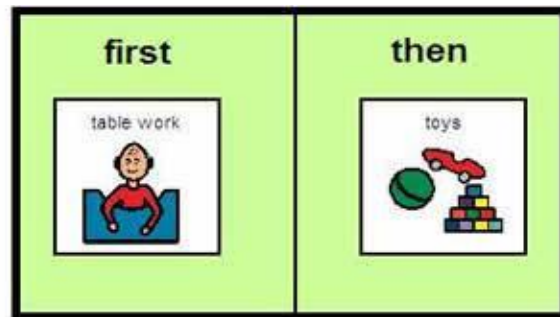
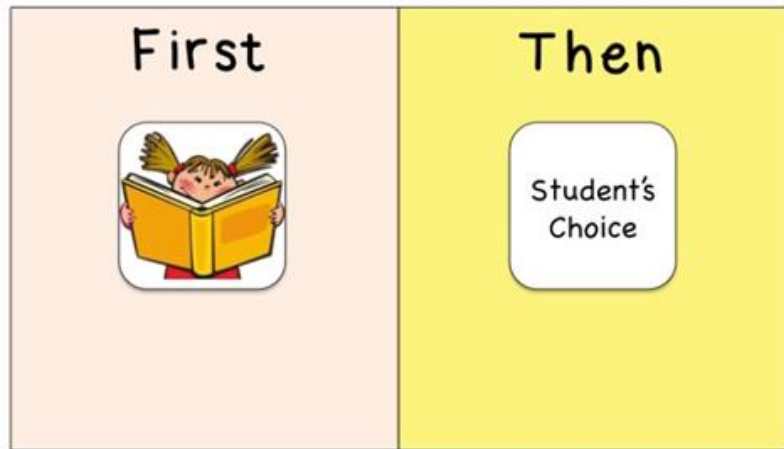
Strategies to Teach Planning and Organizing:

- First Then Board
- Video Modeling
- Master Binder System
- Contingency Mapping
- Project Mapping



"I can't believe the pilgrims did all this with just a campfire."

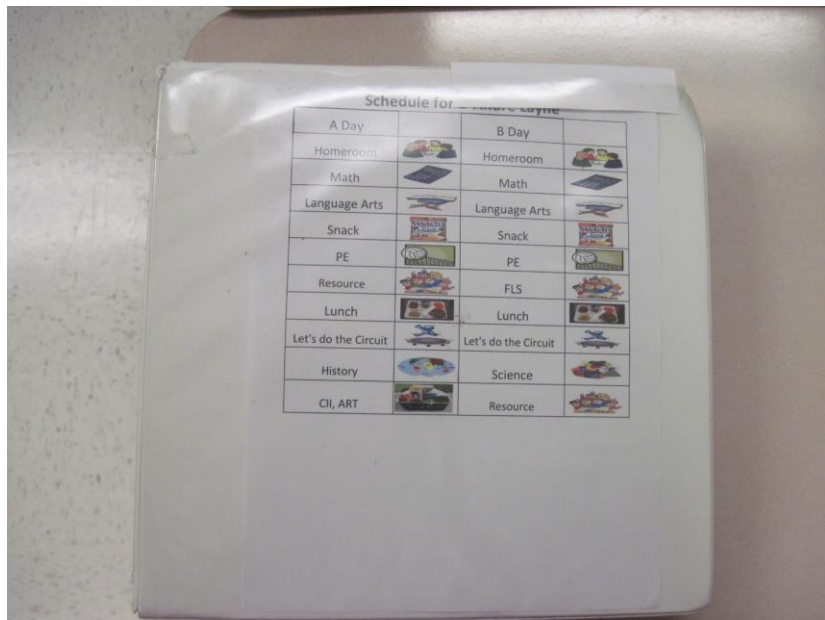
Visual Schedules



Video Modeling



Master Binder System



Project Mapping

Project Map Planner:

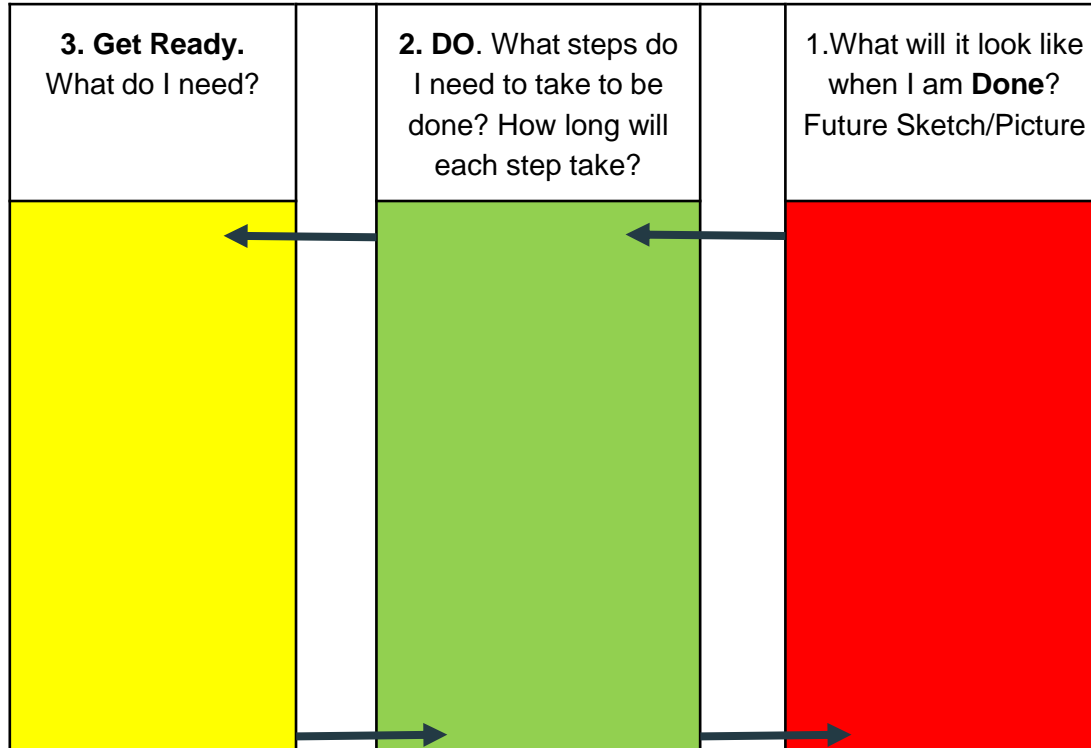
Project Name:		Date Due
Not Begun	In Progress	Completed

Project Name: **Research Paper** Date Due: **May 30**

Not Begun	In Progress	Completed
Make outline May 20	Research On-line May 15	Write proposal + turn in May 9
Write rough draft May 23	Organize notes May 17	
Have Mom proofread May 26		
Make corrections and print May 29		

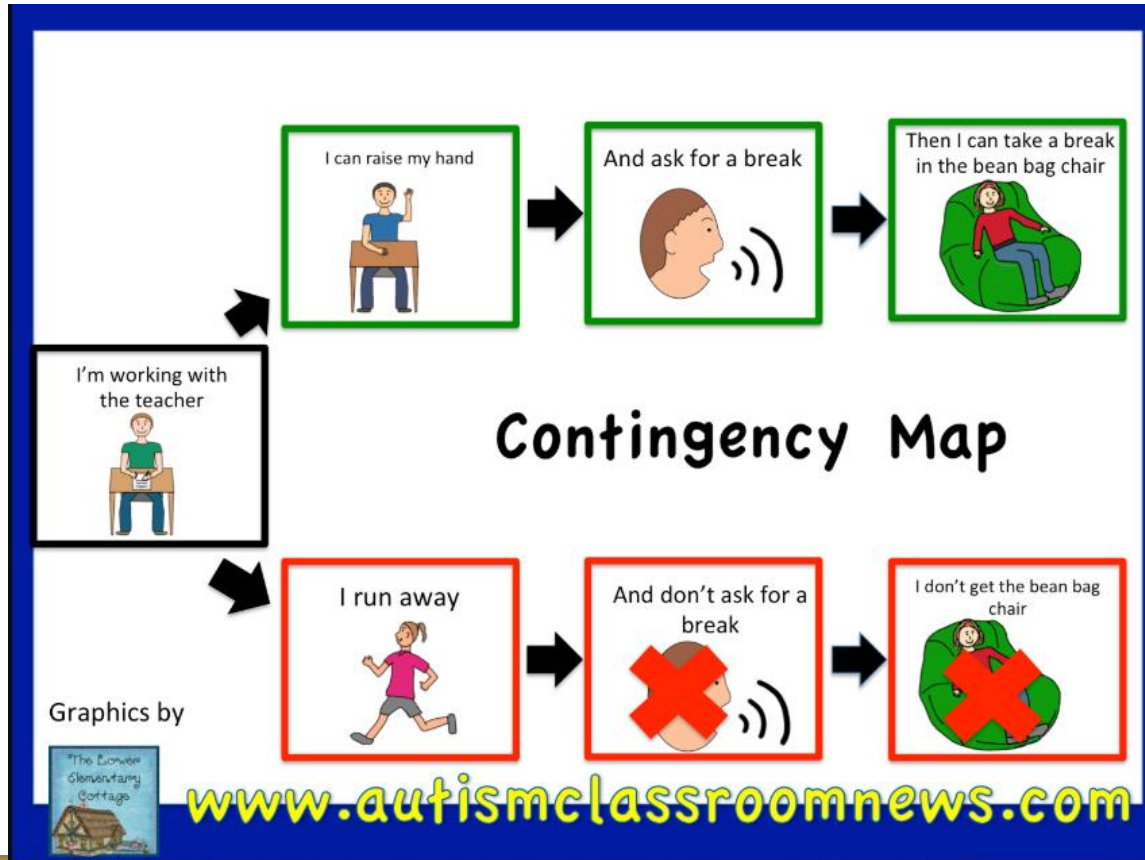
Research Paper
Topic: Off-shore Drilling
Due Date: May 30

Get Ready, Do, Done Strategy (Sarah Ward)



1. Done – what will it/I look like?
2. Do – what do I need to do?
3. Get Ready – what materials will I need?
4. Get Ready – gather materials
5. Do – create time markers/checkpoints
6. Done – stop and review

Contingency Mapping



Teaching EF Skills: Problem Solving

Challenges for students who struggle with Problem Solving:

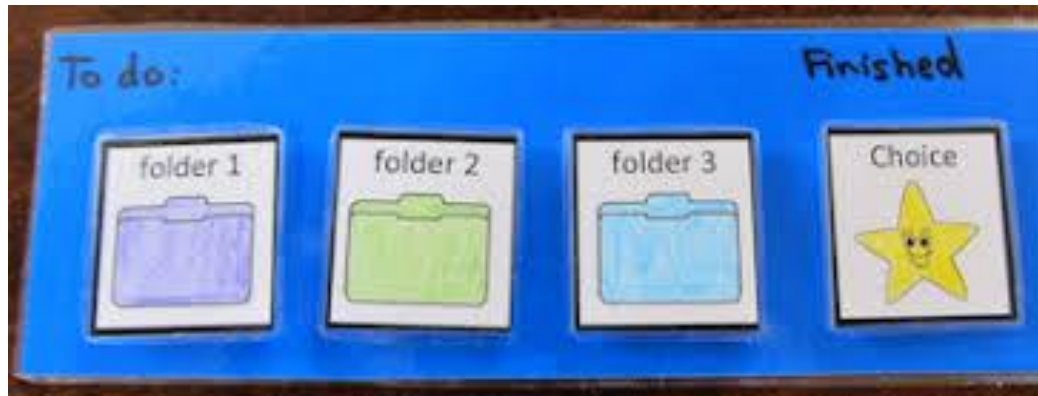
- Focus only on certain parts of the problem
- Difficulty with extracting the important information
- Resistance to seeking help
- Resistance to trying new strategies
- Difficulty with generalizing skills

Strategies for Teaching Problem Solving:

- **Work Systems**
- **Checklists**
- **Task Analysis**
- **Priming**

Work Systems

How much work?









Checklists

After School Checklist


- ☐  Eat a healthy snack
- ☐  Do homework
- ☐  Read for 20 minutes
- ☐  Put backpack away
- ☐  Daily chore







math

$$\begin{array}{r} 23 \\ +3 \\ \hline 26 \\ 3 \\ -12 \\ \hline 14 \end{array}$$


- ☐  pencil
- ☐  textbook
- ☐  paper
- ☐  calculator
- ☐  ruler
- ☐  markers







geography



- ☐  pencil
- ☐  textbook
- ☐  atlas
- ☐  binder
- ☐  ruler
- ☐  markers

science



- ☐  pen
- ☐  textbook
- ☐  paper
- ☐  folders
- ☐  laptop
- ☐  headphones

Task Analysis

Getting Dressed

1. Put shirt on

2. Put pants on

3. Put socks on


4. Put shoes on



Vacuuming


☐

Clear floor.




☐

Get vacuum cleaner.




☐

Unwind cord.




☐

Plug in.




☐

Turn cleaner on.




☐

Vacuum carpet.




☐

Turn cleaner off.




☐

Unplug.




☐

Wind cord.



☐

Put vacuum cleaner away.



Priming

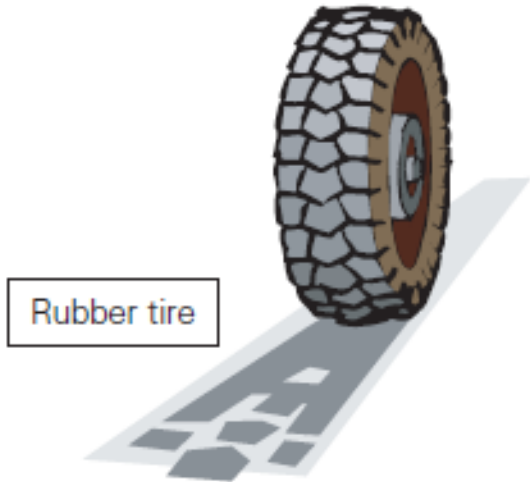


Shift your thinking from “Unwillingness” to “Different Brain” (Unstuck and on Target)

What Looks Like “WON’T”	May actually be “CAN’T”
Opposition, Stubbornness	Cognitive inflexibility-prevent becoming overwhelmed
Lack of will	Difficulty in shifting
Self-centeredness	Impaired social cognition/perspective taking
Lack of effort	Poor initiation, planning, generativity
Inability/refusal to put good idea on paper	Poor fine motor skill, disorganization
Sloppy, erratic work	Poor self-monitoring, overload
Refusal to control outbursts	Overload, disinhibitions
Preference for being alone	Impaired social problem-solving
Lack of sensitivity to others	Impaired understanding of non-verbal social cues

Why is EF important? Let's look at a real life example:

James Wright was a thinker who lived during the 1940s. There wasn't enough rubber in the 1940s because of World War II, so he tried to create a substitute for rubber.



Rubber tire



Rubber boots

Real life example cont.

Because of this, James Wright invented Silly Putty. Unfortunately, Silly Putty did not do what rubber could do; it wouldn't work for tires or boots or other such objects.



James Wright was *not* flexible and gave up on his invention. A few years later, Peter Hodgson, who was flexible, thought that although Silly Putty might not be rubber, it still could do lots of neat things.

Real life example cont.

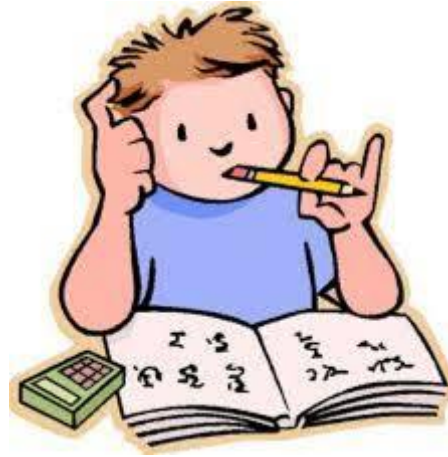


Peter Hodgson

Silly Putty has now been a popular toy for almost 50 years! Peter is a good example of how being flexible can be fantastic.

Tips for How to Help Younger Children be Successful

- Early intervention is key
- Keep routines short
- Reduce the number of steps
- Use pictures cues rather than written lists
- Be prepared to provide prompts and supervision. You may have to work side by side with your child



Tips for How to Help Older Children be Successful

- Make them full partners in the design of the routine, self-monitoring and troubleshooting that may need to improve routine
- Be willing to negotiate rather than dictate
- Whenever possible use visual cues (could be written)

rather than verbal cues-these seem a lot like nagging to older children



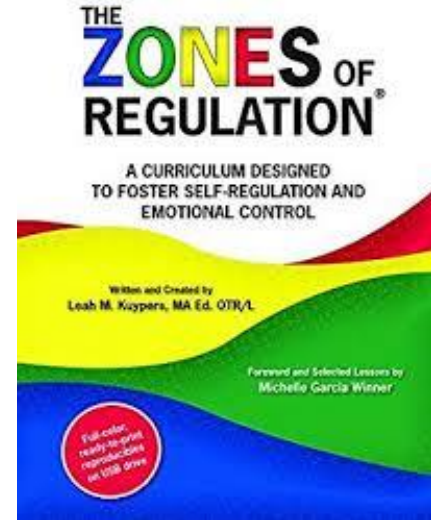
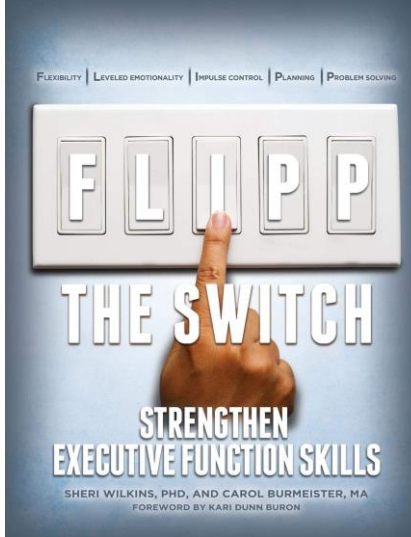
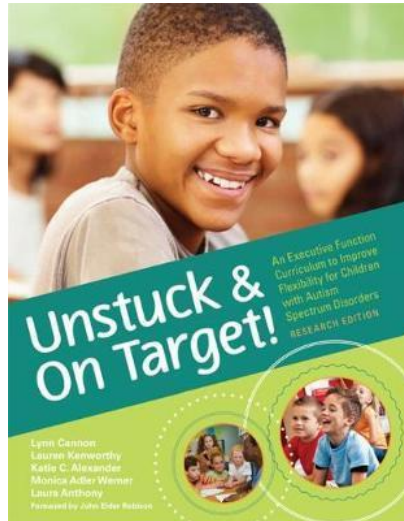
10 Principles for Improving EF Skills

1. Teach deficient skills rather than expecting the child to acquire through observation
2. Consider your child's developmental level
3. Teach externally before the skill is learned internally
4. The external includes changes you can make in the environment, the task, or the way you interact with your child.
5. Use (rather than fight) the child's innate drive for mastery and control

Cont. 10 Principles for Improving EF Skills

6. Modify tasks to match your child's capacity to exert effort
7. Use incentives to augment instruction
8. Provide just enough support for child to be successful
9. Keep supports and supervision in place until the child achieves mastery or success
10. When you do stop the supports, supervision, and incentives, fade them gradually

Books/Resources for EF



Questions????



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