

Structure of a Leaf Plant (Lesson 1/5/16)

- We cannot fully study photosynthesis without knowing more about the structure of a leaf. The leaf is adapted to play a vital role in the process of photosynthesis.
- Let's start with the parts of a leaf that we can see:

It is flat – to provide a large surface area to receive sunlight. It's called upper epidermis.

It is green – because it has a large amount of chloroplasts organelles. Inside the chloroplasts we find the chlorophyll responsible for absorbing energy from the Sun.

Structure of a Leaf Plant (cont.)

- It is waxy on the top – to seal the leaf and protect from bacteria and to prevent water loss.
- It has veins – to carry water from the stem to the leaves. Glucose produced is also sent to the other parts of the plant from the leaves through the veins. Additionally, the veins support and holds the leaf flat to capture sunlight.



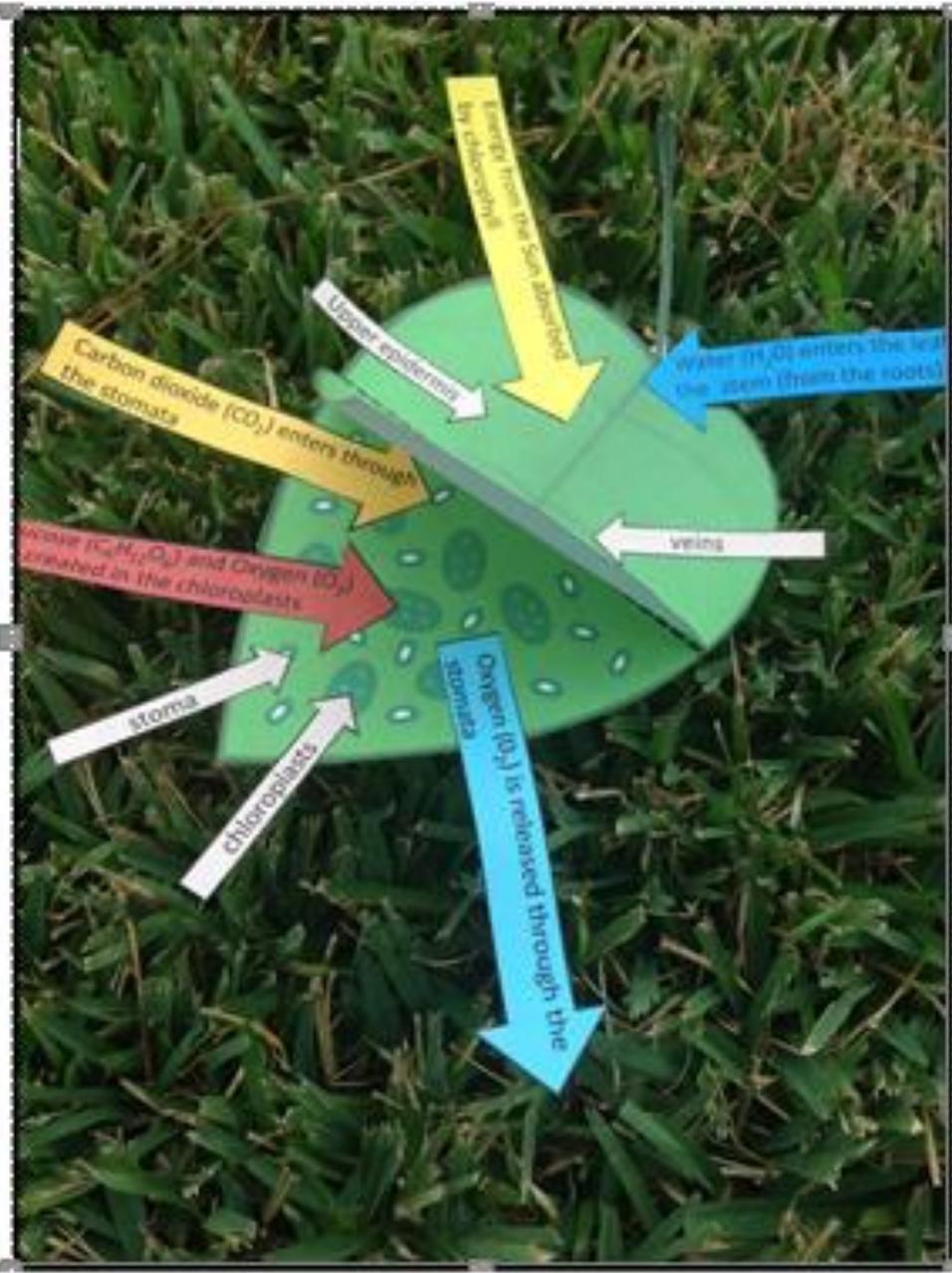
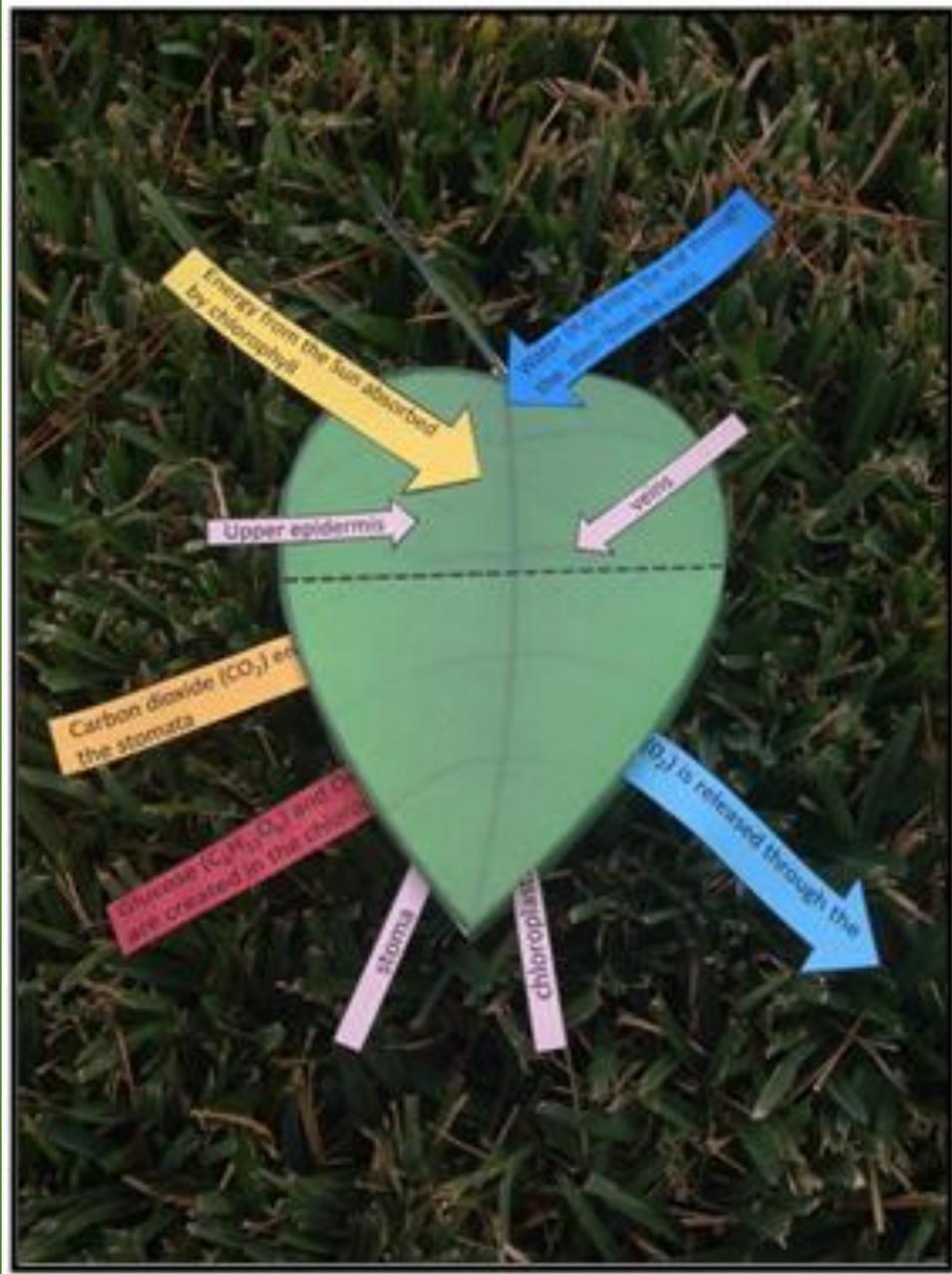
How do plants make photosynthesis?

- A plant makes photosynthesis through the leaves.
- Plants make their own food (sugar – or glucose) inside the chloroplast.
- The ingredients all plants need are:

WATER, CARBON DIOXIDE, AND SUNLIGHT

Plants use those ingredients and make:

OXYGEN, GLUCOSE, CELL ENERGY STORED ON GLUCOSE (CHO) MOLECULES.



Directions

This activity is used as a supplement to our photosynthesis lesson. We can understand compounds, elements, equations, photosynthesis all within this one model.

1. Color the arrows and the leaf.

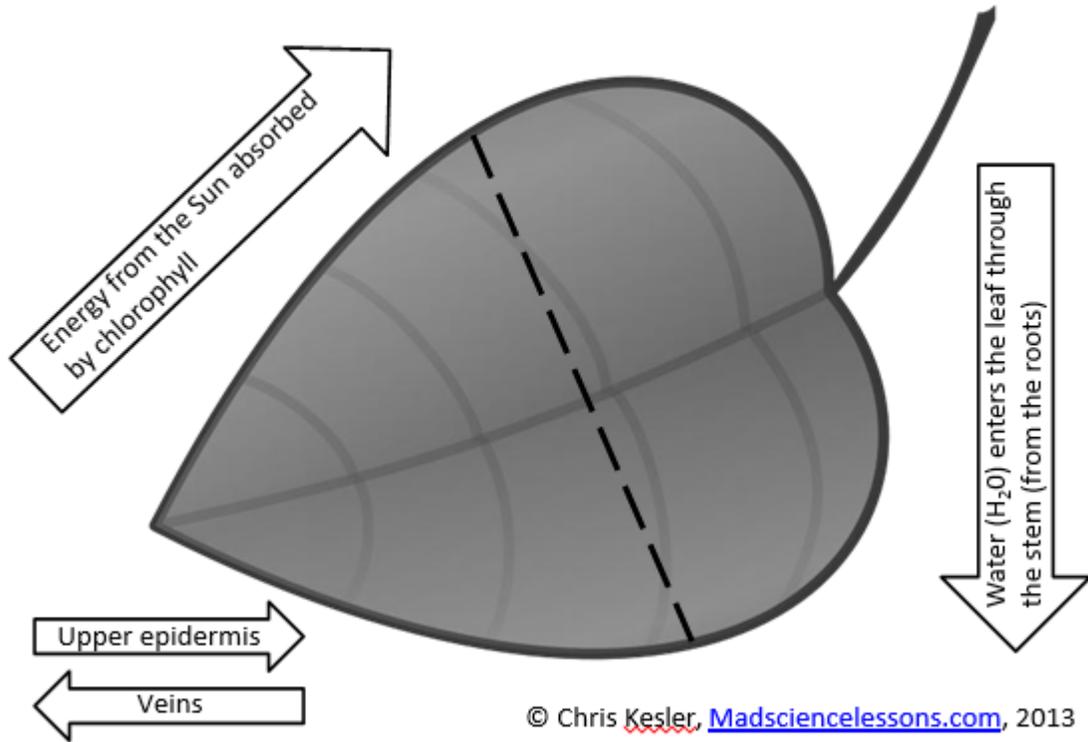
Cut out all pieces.

Fold the top leaf along the dotted line so that the leaf can open up from the point (opposite the stem).

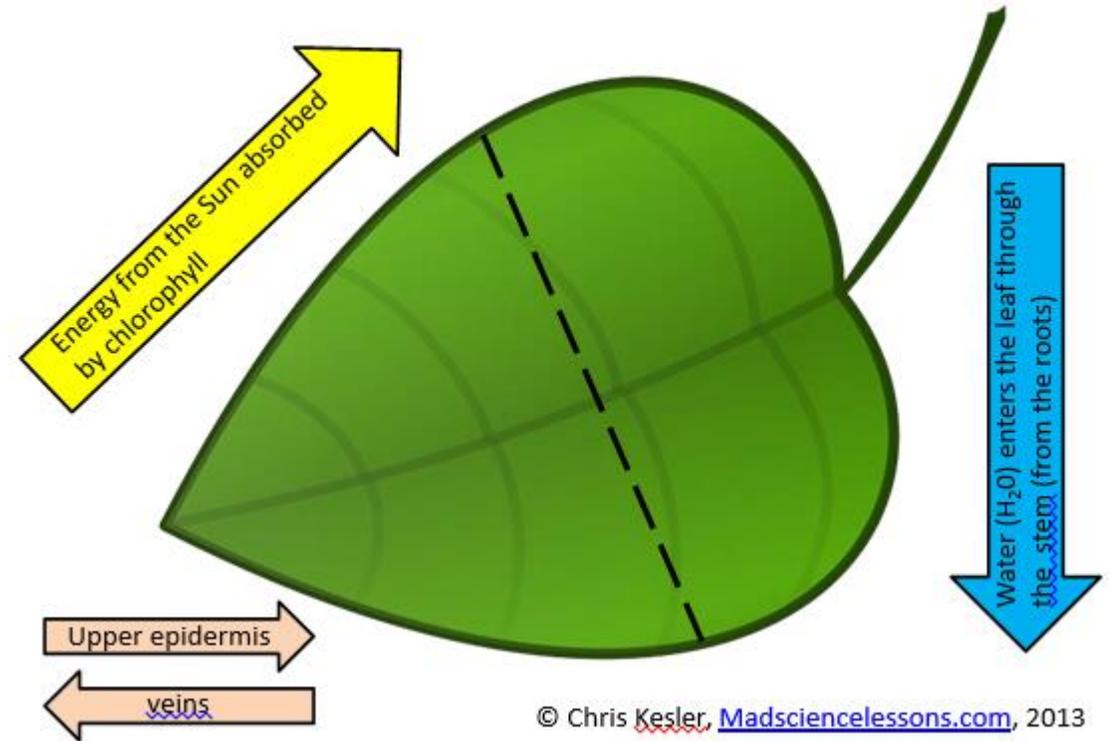
Glue the top leaf to the bottom leaf, but **ONLY GLUE** the half of the leaf that is nearest the stem. The other half of the leaf will open up to see the inside of the model.

1. Begin to glue the arrows using the images on the last page of this document as a guide.

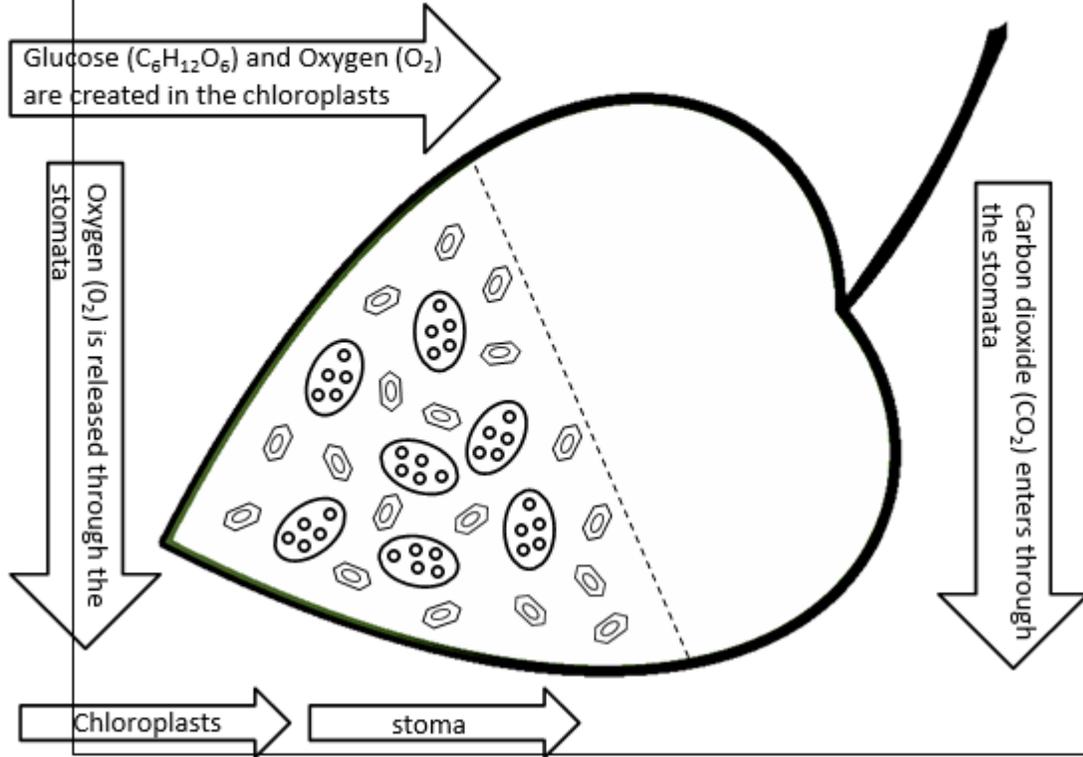
Photosynthesis in a Plant Leaf Model (Top)



Photosynthesis in a Plant Leaf Model (Top)



Photosynthesis in a Plant Leaf Model (Bottom)



Photosynthesis in a Plant Leaf Model (Bottom)

