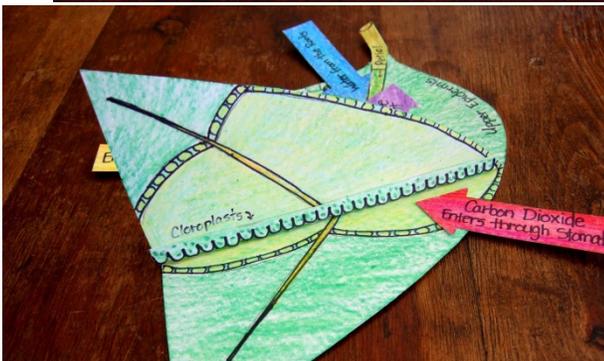
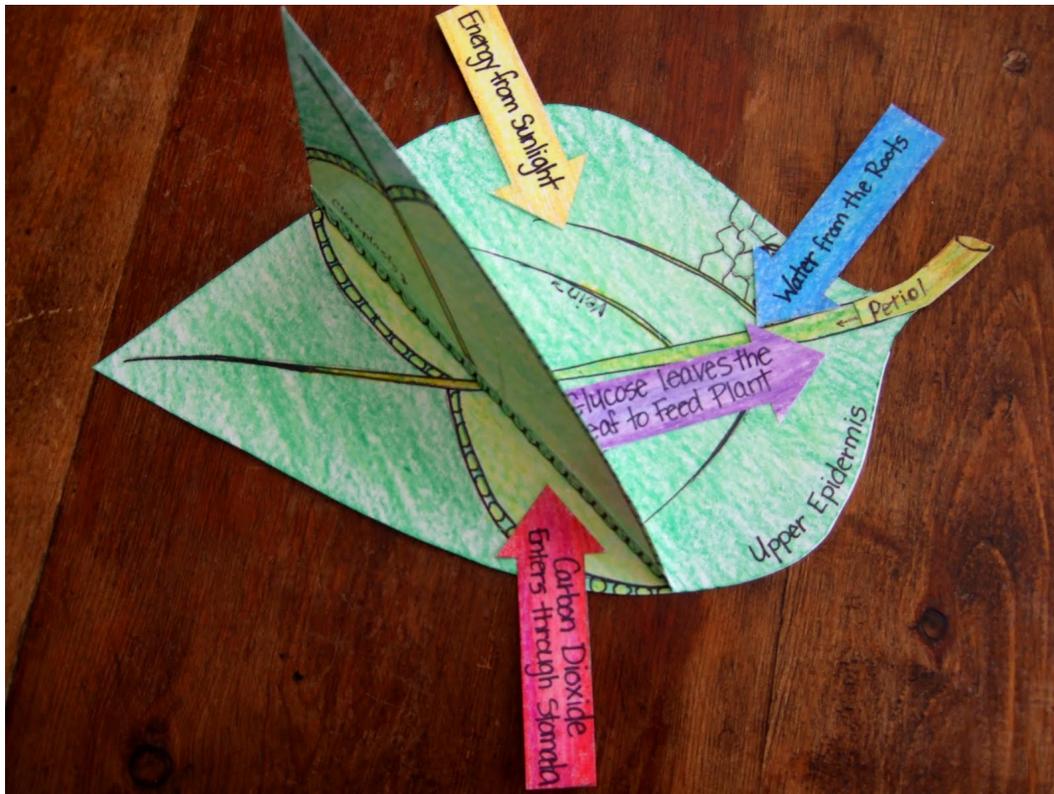


Photosynthesis Foldable

Directions:

1. Cut out both leaves and all arrows.
2. Label one arrow "Water (H_2O)", and color this arrow blue.
3. Label the second arrow "Energy from Sunlight," and color it yellow.
4. Label the third arrow "Carbon Dioxide (CO_2)" and color this arrow red.
5. Label the fourth arrow "Glucose ($C_6H_{12}O_6$)." You may color this arrow any color that you have not already used.
6. Label the fifth arrow "Oxygen (O_2)" and color it.
7. Glue the ***BOTTOM HALF*** of one leaf to the top of the top of the other leaf. Fold the TOP half up. (See first picture below.) Color the leaf green & Draw veins on your leaves.
8. On the ***TOP*** of the leaf, label the *epidermis* and the *cuticle* and the *petiole*.
9. ***Inside the folded part*** of the leaf, draw a layer of ovals around the edges of the leaf. Label this outline "*chloroplasts*."
10. On the ***inside of the fold*** draw a few (3-5) circles. Draw circles in the same spaces on the ***other side*** of the leaf (so it looks like the hole goes the whole way through). Label these holes "*stomata*."
11. Draw a bigger circle outside of the stomata. Label these circles "*guard cells*."
12. Arrange & glue your arrows to show energy, carbon dioxide and water entering the leaf and glucose traveling from the leaf to where the stem would be. Also show that oxygen leaves the plant from the stomata.
13. Refer to your textbook and add the photosynthesis equation to the back of your leaf.



EXTRA CREDIT OPPORTUNITY

Read about Respiration: Using the Energy in Food (Ch. 4-2) in your textbook. Create a poster using your leaf & an animal of your choice, to demonstrate respiration.

1. Draw an animal on the poster, showing it eating the leaf (you will glue the leaf to the poster).
2. The animal uses the glucose in the leaf, along with the oxygen in the air, to get the energy that was stored in the food.
3. Write the equation for respiration on your poster.
4. Using arrows, show that the animal gives off (releases) carbon dioxide & water, and creates ATP (an energy-storage molecule) in its body.
5. The ATP stores the energy from the food so the cell can use it later.

