

THE BIOLOGY OF PLANTS (answer key): Special thanks to the makers of the website for allowing teachers to use their materials!!!!

1. Go to the following interactive Website <http://www.mbgnet.net/bioplants/> and answer the following questions!
2. What are five characteristics of life that plants show?
 - They grow and die.
 - They need energy, nutrients, air, and water.
 - They produce young.
 - They are made up of cells.
 - They react to what's around them.
 - a. Click on Starting to grow: What three things must a plant have before it can begin to germinate? What does the word germinate mean?
 - b. water, correct temperature (warmth), and a good location (such as in soil)
 - c. germinate means to start to grow
3. Click on Plant Parts:
 - a. What is the difference between an herbaceous stem and a woody stem?
 - Herbaceous:** Plants with stems that are usually soft and bendable. Herbaceous stems die back to the ground every year.
 - Woody:** Plants with stems, such as tree trunks, that are hard and do not bend easily. Woody stems usually don't die back to the ground each year.
 - b. What do roots do? How do root hairs help?
 - Roots act like straws absorbing water and minerals from the soil. Tiny root hairs stick out of the root, helping in the absorption. Roots help to anchor the plant in the soil so it does not fall over. Roots also store extra food for future use.
 - c. What 2 things does the stem do for a plant?
 - They support the plant. They act like the plant's plumbing system, conducting water and nutrients from the roots and food in the form of glucose from the leaves to other plant parts.
 - d. What is the difference between a fruit and a vegetable? Name one fruit that you always thought was a vegetable!
 - A fruit is what a flower becomes after it is pollinated. The seeds for the plant are inside the fruit. Vegetables are other plant parts. Carrots are roots. Asparagus stalks are

stems. Lettuce is leaves. Foods we often call vegetables when cooking are really fruits because they contain seeds inside

- Cucumbers, pumpkins, squash, tomatoes are all fruits

TEST YOURSELF: CLICK ON THE PLANTS PART GAME! You will see that it immediately tells you if you are correct!

4. Click on Making Food:

- a. What are 5 things that a plant needs to make food?
Chlorophyll, sunlight, carbon dioxide, water, nutrients/minerals
- b. What is chlorophyll?
The green pigment plants use to absorb light for photosynthesis

5. Click on Pollination:

- a. What are the “female parts of the plants?” Flowers also have a female part called the pistil. The top of the pistil is called the stigma, and is often sticky. Seeds are made at the base of the pistil, in the ovule.
- b. What are the “male parts of the plants?” stamens that produce a sticky powder called pollen
- c. What is pollination? the transfer of pollen from a stamen to a pistil. Pollination starts the production of seeds.
- d. What are some ways that plants can be pollinated? People can transfer pollen from one flower to another, but most plants are pollinated without any help from people. Usually plants rely on animals or the wind to pollinate them.
- e. What about plants that don't have flowers? Some plants don't have flowers. Cone-bearing plants, for example, reproduce by means of spores that are produced by a male cone and travel by wind to a female cone of the same species. The seeds then develop in the female cone.

7. Click on Seed dispersal:

- a. name four methods of seed dispersal. Animals, wind, water, and other methods such as shooting!