

Summary Description

This is the fifth in a series of 11 lessons that introduces the student to Biology.

Learning Objectives

To have the student learn a few key facts about plants.

Approximate Time for Lesson

40 minutes

Suggested Maturity Level for Instruction

Student should be able to read simple words and perform simple addition and subtraction. Also, student should be able to sit still and engage in one-on-one conversation.

References:

Biology of Plants - <http://www.mbgnet.net/bioplants/parts.html>

Materials Needed

1. Internet Access – Pull up the following:
 - a. Picture of parts of a plant (go to http://classes.lt.unt.edu/2007_Fall/CECS4100006/amg0185/graham/plant.gif)
2. Worksheet describing parts of a seed and a plant
3. OPTIONAL – seeds of your favorite indoor plant from your local nursery

Preparation

Make sure you have materials open, printed and/or available prior to beginning the lesson.

Script

Introduction (5 minutes)

1. Teacher: Alright. So last lesson we learned about seeds. Can you tell me the three main parts of a seed? [Engage the Student in conversation, but come to the point that the 3 main parts of a seed are the seed coat, food store, and embryo]
2. Teacher: Good job. Since you know something about seeds, we're going to focus today on what seeds grow into when they get older – I'm talking about plants. So, are you ready to learn about plants? [Get positive response from Student and begin lesson]

Lesson (30 minutes)

1. Teacher: Great. Now, if you remember from last time, plants start out from a seed. Do you remember which part of the seed actually becomes the plant? [Engage the Student in conversation but come to the point that the embryo is the part of the seed that becomes the plant]
2. Teacher: That's right, the embryo is the part that becomes a plant. Here is a picture of a plant. [Show the Student the picture of parts of a plant]

3. Teacher: As you can see, there are 4 main parts of a plant: [Point to each part of the plant using the picture of the parts of a plant] 1) the roots, 2) the stem, 3) the leaves, and 4) the flower.
4. Teacher: Now, what do you think that the roots are for? [Engage the Student in conversation but come to the point that the roots get water and nutrients from the soil. Roots also prevent the plant from falling over. Finally, roots help store food for the plant in the future.]
5. Teacher: So, there are 3 main things that roots do for the plant: 1) get food, 2) store food, and 3) helps the plant stay put in the soil. What do you think the stem is for? [Engage the Student in conversation but come to the point that the stem helps move food and water from the roots to other parts of the plant]
6. Teacher: That's right, think of the stem as a giant road used to carry food and water from one end of the plant to another.
7. Teacher: Now, what do you think the leaves are for? [Engage the Student in conversation but come to the point that the leaves help make most of the food for the plant]
8. Teacher: That's right, the leaves help make most of the food for the plant. This process of making food for the plant is called photosynthesis. Can you say "photosynthesis"? [Have the Student repeat the word several times]
9. Teacher: Good. Now, here's how the leaves make food for the plant. First, the leaves catch all that great sunlight from the sun. Remember in our food chain lesson, that plants are called producers? Well, that's because plants are living things that can actually make food from sunlight. Wouldn't that be cool if all you had to do was go outside and stretch your arms out to absorb the sunlight to be full? [Engage the Student in conversation]
10. Teacher: Anyway, if you were ever wondering why leaves were flat and wide, it's because this flat and wide shape helps them absorb as much as the sunlight as they can. Well, as the sunlight is absorbed into the leaves, the leaves then turn the sunlight into food, which is then transported through the stem to all parts of the plant.
11. Teacher: In fact, there is something special in the leaves called chlorophyll that really turn the sunlight into food. Can you say "chlorophyll"? [Have the Student repeat the word several times]
12. Teacher: And it just so happens that the chlorophyll is green in color, which also makes the leaves green. And this is why most leaves that you see on plants are green - it's because they are full of chlorophyll.

13. Teacher: Alright, now that we talked about leaves, what do you think the flower is for? [\[Engage the Student in conversation but come to the point that the flower is the part that helps make other plants\]](#)
14. Teacher: Yes, so the flower is for making other flowers. This is how it all happens. The flower part of the plant has two things in it, pollen and ovules. When the pollen and ovule mix together, a fruit is made. For some plants, like trees, these fruits are big. Anyway, and I'm sure you know this part because you've eaten many of them - the fruit has seeds in it. All it takes is a gust of wind or an animal eating the fruit to make the seed fall from the plant so that, hopefully wherever it lands, it can grow into a new plant.
15. Teacher: By the way, do you know how the pollen and ovules mix to make a fruit? This is really neat, because again, just like plants depend on animals to help them breathe, plants depend on bugs to help mix pollen and ovules together. For example, you know all those bees that fly around and land on the flower part of the plants in the spring and summer? Well, the bees don't know it, but there is pollen and ovules everywhere on the flowers and when the bees come to the flower for nectar, which is food for the bees, the bees bodies and legs get pollen all over them.
16. Teacher: Well, when the bees then fly to other flowers for nectar, the pollen from their bodies brush off onto those new flowers. Hopefully, if some of that pollen is lucky, it will land right on some ovules of the new flower, which will then turn into a fruit.
17. Teacher: Now that you know each part of a seed and plant, I'm going to give you a worksheet to help you remember the parts of a seed and plant. [\[Give the Student the worksheet of the seed and plant\]](#)
18. Teacher: As you can see, there is a picture of a seed and a picture of a plant. And there are also some words that are the parts of the seed and plant. Your job is to use the right words to fill in the parts of the seed and plant. If you want you can color the worksheet after you're done naming each part of the seed and plant. Go ahead and begin. And let me know if you need help. [\[Have the Student complete the worksheet\]](#)
19. Teacher: Great job! You now understand how a seed becomes a plant and how a plant makes a seed.
20. OPTIONAL: [\[Start to plant your seeds with your Student\]](#)
21. Teacher: Ok - time for review. Stand up and get in front of the class (consider inviting other members of the family also to set the stage). [\[Ask Student the following:](#)
 - a. [What are the 3 part of a plant? Roots, stem, leaves, and flower](#)
 - b. [What does the stem do for the plant? It helps transport food and water to the plant](#)

- c. Why are leaves flat and wide? This shape helps the plant absorb as much sunlight as it for food
- d. Why are leaves green? Because leaves contain chlorophyll, which transform sunlight into food. This chlorophyll happens to be green in color and since they are in leaves, the leaves are also green.
- e. Why are bees so important for plants? Because plants depend on bees to make new plants

Teacher reviews any questions that the Student missed].

Wrap Up (5 minutes)

Teacher: [Clapping] You did GREAT! Wonderful job! Are there any questions that you have regarding plants? [Engage in conversation with the Student and follow up with questions you cannot answer by researching the Internet]