Baby Peanut Plants

Objective
Students will read a short text about the peanut plant and answer comprehension questions, including a sequencing activity. Students will conduct a scientific experiment with peanuts.

Background
Peanuts are not really nuts. Nuts grow on trees. Peanuts are legumes, related to beans and peas. Peanuts grow underground. The peanut is the fruit of the plant. It is unusual for the fruit of a plant to grow underground, especially when the flowers grow above ground.

The peanut seed grows into a small green bush about 18 inches tall. It has delicate yellow flowers. After the flower loses its petals, the flower stalk, or peg, is pulled by gravity toward the ground. The peg grows into the ground and forms peanuts about one inch below the soil surface. It takes about four to five months for the peanut plant to grow from planting to harvest.

Oklahoma produces about 120 million pounds of peanuts on about 97,000 acres. Most of Oklahoma’s peanuts grow in the southwest part of the state, in Caddo, Beckham, Harmon, Greer and Washita Counties.

People eat large numbers of peanuts in the form of nuts, peanut butter, candy bars and baked goods. Other peanuts are crushed to extract peanut oil. Peanut oil is usually more expensive to use in cooking than other oils. However, since it has no flavor, not cholesterol and can be heated to a higher temperature without smoking, it is used by many restaurants for frying foods. It is also used in margarine, shortening and salad oil.

Peanuts are 25 to 30 percent protein and about 50 percent oil. The meal that remains after the oil is extracted from peanuts makes an excellent feed for cattle, hogs and poultry because of the high protein content. In early days, peanuts were grown as feed. Hogs, in particular, like peanuts and will root out the nuts themselves if turned into the peanut fields. Whole peanuts are seldom used for animal feed today, because peanut growers can make more money selling them for people to eat. Some other names for the peanut are “groundnut,” “pinder” and “goober.”

Reading
1. Read and discuss background and vocabulary.
2. Hand out the “Comprehension Page” and questions included with this lesson.
   —Students will read and discuss.
   —Hand out the comprehension questions or place them on a smart board for students to answer individually or in class discussion.

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Materials
raw peanuts
paper towels
plastic wrap
aluminum pan

Vocabulary
fruit—a usually useful product of plant growth
peg—the flower stalk of a peanut plant.
petal—one of the often brightly colored modified leaves that make up the corolla of a flower
stalk—a plant stem especially of a plant that is not woody
seedling—a young plant grown from seed

Peanut Butter
Place about one cup roasted peanuts in a blender and set the blender to “chop.” If needed, add a small amount of oil. Let students watch as the peanuts become peanut butter. Provide crackers so students can taste. Check ahead of time for peanut allergies.

—Discuss the answers together as a class.

Science
1. Bring raw (not roasted) peanuts to class.
   —Students will take the peanuts out of the shells and split them in half.
   —Show students the bump at one end of the opened peanut. This is the baby plant, or the embryo.
2. Shell several of the raw peanuts, and spread them on paper towels in a pan.
   —Wet the paper towels and cover the pan with plastic wrap.
   —Students will observe changes in the peanuts and write their observations in a journal.
   —In a few days roots and stems will sprout from the peanuts. Explain that the plant can get along without soil for a while because of the food stored in the seed. As the water soaks into the seed the food dissolves. It is broken into tiny bits that become part of the sap. The sap flows into the new roots and stems, bringing them everything they need until the seed runs out of food.
3. Place three of the peanut seedlings in paper cups filled with soil.
   —Snip both leaves off the first seedling. Snip just one off the second seedling. Leave both leaves on the third seedling.
   —Water the plants, and label them. Keep these plants in a warm place for a week.
   —Students will develop charts to keep track of the progress of each seedling. Can a plant grow without its seed leaves?

Extra Reading
Godwin, Sam, A Seed in Need, Picture Window, 2004.
Peterson, Cris, and David R. Lundquist, Seed, Soil Sun: Earth’s Recipe for Food, Boyds Mills, 2010.
Baby Peanut Plants

This is a picture of a peanut plant. It shows the five important parts of the plant—the leaf, the flower, the peg, the fruit and the root.

The peg is long and thin. It looks like a rope growing into the ground or reaching for the ground. As the end of the peg grows into the ground and gets bigger, it grows into a peanut.

The peanut is the plant's fruit.

Write these words on the lines where they belong.

flower  root  fruit  peg  leaf

1. 
2. 
3. ground
4. 
5. 
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Peanuts are mostly protein and oil. The meal that remains after the oil is extracted from peanuts makes an excellent feed for cattle, hogs and poultry because of the high protein content. In early days, peanuts were grown as feed. Hogs, in particular, like peanuts and will root out the nuts themselves if turned into the peanut fields. Some other names for the peanut are “groundnut,” “pinder” and “goober.”
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1. Number these events to place them in the correct order.
   ___ The flower loses its petals.
   ___ The peanut seed grows into a small green bush.
   ___ The peg grows into the ground and forms peanuts.
   ___ The flower stalk, or peg, is pulled by gravity toward the ground.

2. Put these words from the article into correct alphabetical order:
   peanut, protein, people, petals, planting.
   1_________________ 2______________ 3 ________________
   4______________ 5 ________________

3. How tall does the small green peanut bush get? (paragraph 2)
   _______________________________________________________

4. How many pounds of peanuts are produced in Oklahoma: (paragraph 3)
   _______________________________________________________

5. Why is peanut meal an excellent feed for cattle, hogs, and poultry?

6. How many foods can you name that have peanuts in them? Make a list.

7. List two Oklahoma counties where peanuts are grown. (paragraph 3)
   _______________________________________________________

8. What is the “peg” mentioned in paragraph 2?
   petals    flower stalk    soil    gravity

9. On the back of this paper, write a sentence for each of these words and illustrate them.

10. Explain why a peanut is not a nut.

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