

Cotton Life Cycle

Standards of Learning

Science 2.4, 2.8, 3.8, 4.4, 4.9

Objective

Students will:

- Sequence the steps in the life cycle of a cotton plant
- Identify the parts of a cotton plant

Materials

- White paper plates (1.5 per student)
- Brown construction paper
- Cotton balls
- Template, attached
- Scissors
- Tape
- Staplers
- Glue
- Crayons/markers

Background Knowledge

In Virginia, cotton is typically planted in late April through late May. Green sprouts will be visible on the ground in June as the cotton plants experience much growth during this month. After sprouting, the cotton first develops little leaves called cotyledons. Next, buds, or squares, will appear that will eventually open to reveal blossoms. The blossoms start out as white and then darken to yellow, then pink and eventually to red. When the blossoms fall off they leave cotton bolls. The boll is a small green football-shaped pod with the cotton and seeds inside. The boll will ripen and turn brown when it is ready to pop open to reveal the cotton fiber. When the bolls open in the fall, the cotton is ready to be harvested.

Cotton is harvested using special machinery to cut it from the field and is then stacked and stored in large rectangular mounds called modules. Next, it is sent to the gin to pull the fiber from the seed. After being ginned, the fiber is called lint and is pressed into large bales about the size of a refrigerator that weigh around 480 pounds. The seeds can be sold and used for animal feed, paper, plastics, or oils.

Procedure

1. Tell students they will be making a model of the cotton plant life cycle.
2. Hand out the templates, scissors and crayons.
3. Tell the students to label, color, and cut out the five patterns. Seed- brown; Leaf- green; Bud- green; Flower- pink; Boll- green.
4. Hand out one and a half paper plates to each student.
5. Tell the students to put the plates together, with the half plate forming a pocket on the back of the whole plate.
6. Hand out string to each student.



For more resources to connect children to agriculture visit AgInTheClass.org.

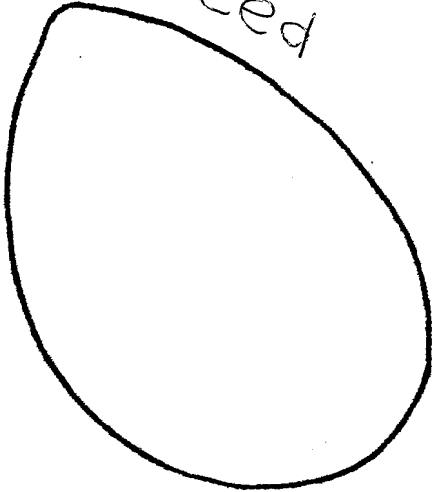
7. Ask the students to sequence their cotton parts on the string in the following order: seed, leaf, bud, flower, boll. Label them 1st, 2nd, 3rd, 4th, and 5th and tape to the yarn.
8. Attach this yarn to the back of the paper plates. The seed should be furthest from the plates so that it is the first piece taken out of the pocket.
9. Ask the students to cut out several triangles from brown construction paper.
10. Tell the students to glue or staple the bottom of the triangles along the bottom edge of the paper plate.
11. Tell the students to fold back the top half of the triangles so they stick out from the plate.
12. Give each student a handful of cotton balls.
13. Ask the students to glue the cotton balls to the plate, directly above the folded back triangles.
14. Tell the students that this depicts what a cotton boll looks like after it has opened.
15. After all the cotton cycle models are completed, tell the students to place all the cotton parts in the pocket
16. Demonstrate to the students how this model shows the life cycle of a cotton plant:
 - a. Pull out the seed part and tell the students that a cotton plant begins as a seed.
 - b. Pull out the attached part, the leaf, and tell the students that the cotton plant then develops leaves.
 - c. Pull out the attached part, the bud, and tell the students that the cotton plant then develops buds.
 - d. Pull out the attached part, the flower, and tell the students that the buds develop into flowers.
 - e. Pull out the last part, the boll, and tell the students that the flowers die and bolls are formed.
 - f. Point to the cotton boll on the front of the plate and tell the students that the bolls open up and the cotton can now be seen.
17. Ask the students to demonstrate the cotton life cycle to a partner using their newly made models.
18. Ask the students the following review questions:

What are the parts of the cotton life cycle from the beginning to end?
Why is cotton important?

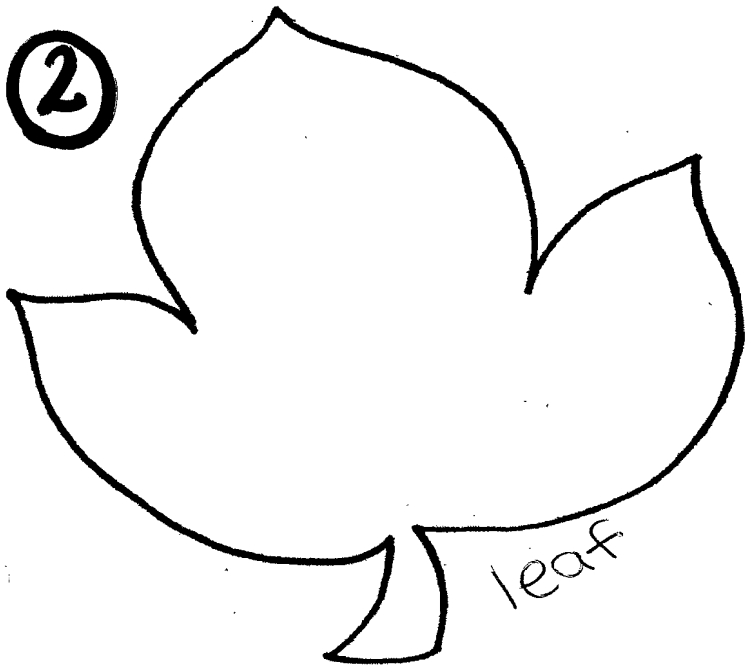


①

seed



②

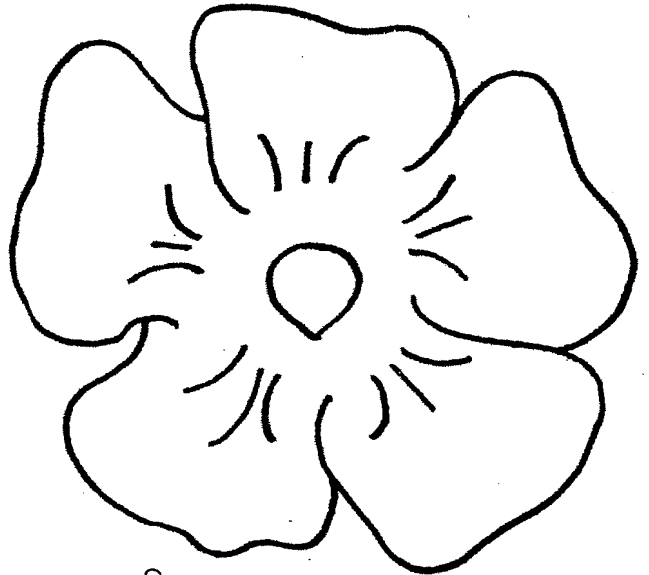


leaf

bud



③



flower

④

⑤

boll

