

Okra Plants and Their Parts

9th-11th Grade Basic Agriculture



Overview

This lesson will challenge students to diagram okra plants and explain the functions of their parts and how they reproduce.

Time needed: 2-3 class periods with option to do additional work outside of class.

Standards:

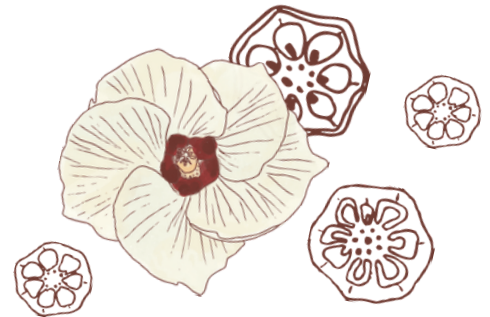
- AFNR-BAS-13 Explain and demonstrate basic plant science principles including plant health, growth and reproduction.
 - 13.1 Describe basic factors in plant growth.
 - 13.3 Label the major parts of the plant and explain functions of each plant part.
 - 13.6 Explain the roles of essential plant nutrients for plant growth and reproduction.
 - 13.8 Illustrate and demonstrate sexual and asexual methods of various plant propagation techniques.
 - 13.9 Sequence the steps of pollination and fertilization.

Objectives:

- Students will understand the parts of the okra plant and how those parts contribute to plant reproduction.
- Students will evaluate a growing okra plant and use it as their model for a plant diagram.
- Students will dissect an okra pod and use it to draw the diagram of the fruit.
- Students will present their completed posters to the class.

Materials:

- [Pollination Handbook](#)
- [Flower Anatomy](#)
- Okra Pods, and other types fruiting vegetables
- Garden beds or field



Outline:

- Engage: Students will name the samples of fruiting vegetables from a variety at the front of the room.
- Explore: Students will explore the okra pod and plant to create a poster that displays the plant parts and a diagram of the inside of the okra fruit.
- Explain: Teacher will explain the key concepts of plant parts, reproduction, and the confusion people have about what is and is not a fruit or vegetable.
- Extend: Students can share their posters with other ag students and share their knowledge of plant parts and reproduction.

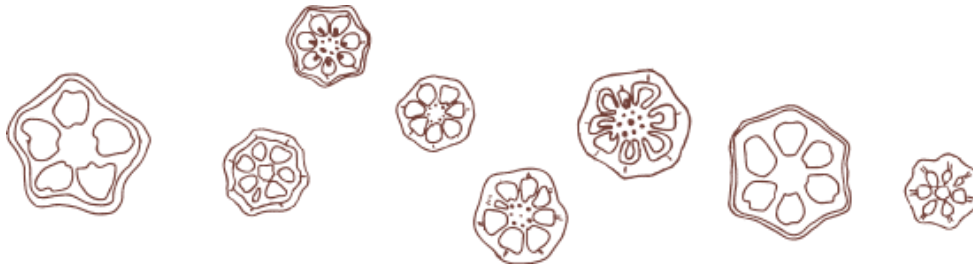
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Lesson Plan:

- Engage: Students will be given a variety of fruiting vegetables such as okra, tomatoes, eggplants, and peppers. Teacher will explain that botanists and culinarians have an ongoing debate about what is a fruit and what qualifies as a vegetable. Have the students explore the different fruits and identify what may be confusing about the classifications. They are being tasked with creating a poster that explores the botanical differences between fruits and vegetables, specifically okra.
- Explore: Let the students explore the [websites](#) and do their own research into okra plants, its reproduction, and type of pollination.
- Explain: Teacher will explain that students will create their own plant parts poster that explains all parts of the okra plant and how it reproduces.
- Extend: Students will design and create an educational poster to be displayed in the classroom.
- Evaluate: Students will evaluate the success of their project based on how they communicated the parts of the plants and how well they can explain plant reproduction.



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