



Classroom Teacher Preparation

Life Science 25: Plants - Structures & Functions

Please use the following to prepare for the next SfS lesson.

Description:

In this lesson, students will learn about the main structures of a flowering plant (root, stem, leaf, and flower/fruit) and will discuss the function of each component. Observation of common edible plants will allow students to locate relevant plant parts and make everyday connections with plant anatomy.

Lesson Objectives – SWBAT (“Students Will Be Able To...”):

3rd-5th

- Identify and explain the structures and functions of various roots, stems, leaves, and flowers
- Observe, sketch, and present the structures and functions of one specimen

Disciplinary Core Idea (DCI)

LS1 From Molecules to Organisms: Structures and Processes - LS1.A Structure and Function

- (3rd-5th) Organisms have both internal and external macroscopic structures that allow for growth, survival, behavior, and reproduction.

Science & Engineering Practice (SEP)

Constructing Explanations

- (3rd-5th) Identify the evidence that supports particular points in an explanation.

Crosscutting Concept (CCC)

Structure and Function

- (3rd-5th) Substructures have shapes and parts that serve functions.

Preparation:

No special preparation is needed for this lesson.

Room Set Up for Activities:

Students will work in partners or in small groups at their desks. There are no special room needs.

Safety:

Please inform your instructor if you know of a student food allergy so that the instructor can avoid bringing in that particular sample. If you know of a pollen allergy then your instructor can remove the pollen from the flower prior to giving it to the student or can select alternative plants to dissect.



Related Modules:

This lesson may be taught as part of a sequence or group of related modules on **Plant and Animal Structures**. Modules include:

Life Science 22: Photosynthesis -The Game – Students work in pairs to model photosynthesis through an interactive game. From their game evidence, students then develop an argument that plants need sunlight, carbon dioxide, and water to make food.

Life Science 23: Tree Identification - Students will use a dichotomous key to identify trees by their leaves. Students will also compare conifers and broadleaf trees, discuss the function of the leaf, and talk about the advantages of each type of leaf.

Life Science: Owl Pellets – Students will learn about the adaptations that allow owls to swallow prey whole and will dissect an owl pellet to gather data about the owl's diet.

For other module sequences and groups, look here: www.sciencefromscientists.org/sequences

Standards Covered:

Please click the following link to our website to review the standards covered by this lesson, listed by state: www.sciencefromscientists.org/standards/

Lessons are matched to both national NGSS and local state standards.

After Our Visit:

Extend this lesson with *The Great Plant Escape game* and unlock the mysteries of plant life! Find the interactive game and many activities here: <http://extension.illinois.edu/gpe/case1/index.html>

Access this Extension activity by visiting the Classroom Post found on our website at sciencefromscientists.org/cohorts. Use the name of your school/cohort and password to log in.

To help Evaluate, check out our Open Response questions online at sciencefromscientists.org/open-response-questions. They are freely available for all of our lessons for current teachers. Use the password supplied by your instructor to log in.

Additional Resources:

- Students learn about plant structures and their functions in this short and easy to understand video <https://mass.pbslearningmedia.org/resource/5dea21b4-6c92-46ff-982c-8650f9429c01/think-garden-plant-structure/#.W3ljkthKgWo>