

WHAT DO PARTS DO?

Performance Standard 12A/11A.B

Students will apply the processes of scientific inquiry to explore common and diverse structures and functions of living things accordingly:

- *Knowledge*: identify and describe the major functions of the component parts of a plant.
- *Application*: draw or find a picture of a plant and label all of its components and functions.
- *Communication*: explain the major functions of the component parts and how a change in one component could affect the functions of other components.

Procedures

1. ***In order to know and apply concepts that explain how living things function, adapt, and change (12)A and know and apply the concepts, principles and processes of scientific inquiry (11 A)*** students should experience sufficient learning opportunities to develop the following:
 - Describe an served science event, object or concept.
 - Begin guided inquiry about the structures and functions of plant parts.
 - Identify and name the component parts of plants and their functions.
 - Compare common plants' growth cycles, structures and functions.
 - Explain how a change of one component part would change the major functions of an entire living system.

Note to teacher: This activity relates to knowledge associated with standard 12A, while addressing the performance descriptors for stage B within standard 11A.

Preparation note: Prepare or obtain images or pictures of different plants and use them to promote questions which can help students compare the common structures and their functions of plants.
2. Have students review and discuss the assessment task and how the rubric will be used to evaluate their work.
3. Begin guided inquiry by having students ask questions about how plants can be the same and different. Guide students toward answering their questions using applicable scientific vocabulary terms and resources.
4. Provide each student a copy of the "What Do the Parts Do" task sheet. Ask students to label the component parts of the tree and an explanation of what that part does. Students may color each component an appropriate color.
5. Provide each student a blank sheet of paper and ask them to draw another plant, label its component parts, and provide a brief description for each part. Have each student present his/her drawing to the class, pointing out the parts and their functions. Also ask them to explain what would happen to the whole organism if that part stopped working or doing its job. Alternatively, provide students pictures of plants (perhaps from seed catalogs, etc.) to create a collection of pictures that accentuate the one kind of structure, such as the stems, leaves, roots or fruits of different plants.
6. Evaluate each student's work using the Science Rubric as follows and add the scores to determine the performance level:
 - *Knowledge*: the identification and description of the major parts and their functions was complete and correct.
 - *Application*: the drawing and labeling of parts of a living organism was well-executed and well-organized.
 - *Communication*: the explanation of the functions and what would happen to the whole organism if one component changed was complete and thorough.

Examples of Student Work

- [Meets](#)
- [Exceeds](#)

Time Requirements

- 20 – 30 minutes for labeling task sheet and drawing and labeling a second organism
- 2 – 3 minutes for each presentation

Resources

- Copies of the “What Do the Parts Do” task sheet
- Crayons or colored pencils/markers
- Pictures of different plants for alternative activity
- Science Rubric

Name _____ Date _____

WHAT DO PARTS DO?

Label the component parts of a tree and write a brief description of the function of each component part. Draw the roots of the tree and any other parts that cannot be seen in this drawing.

