

Soil Nutrient Outcomes

PART 2 OF 2

FIFTH GRADE

In Part 1 of this activity, students planted one or two cover crops to “fix” the soil. In Part 2, we return to the garden a few months later when the cover crops are grown. Students will harvest a little, do a taste test, till the remaining plants into the soil, and examine the nodules formed on the plant roots from the rhizobia bacteria.

SUBJECT

SCIENCE

TIME

30 - 45 MIN

MATERIALS

Fruiting snap peas or other legumes

Buckets or bins for harvesting, several

Sharp pruners, 1 pair per adult

Access to a sink or several colanders to rinse beans

Paper towels, 1 roll

Magnifying lenses, about 10-12

Blank paper, about 10-12 sheets

Gardening tools like shovels, rakes, and hoes, about 4-5

Taste Test Evaluation, 1 copy per student

Pencils, about 10-12

DIRECTIONS

- When a class works in the garden together, it is good to split up into smaller groups and rotate through tasks to avoid overcrowding. Students will accomplish several tasks in this activity:
 - Harvest pods (whole class)
 - Pull up plants and remove the roots for observation (whole class)
 - Wash and taste beans/peas (Station 1)
 - Observe and dissect roots (Station 2)
 - Till plants into the soil (Station 3)
- Gather in the outdoor classroom and lead a brief discussion to revisit the test results from Part 1. Do they remember why they planted cover crops? What are the benefits of this method? (provides natural organic matter to the soil, which improves soil health and is a natural practice that protects watersheds)
- As students walk into the garden, they can harvest pods and pull up the plants. An adult should cut the roots off the bottom of the plant and place them at the observation station. Place some blank sheets of paper at the station to dissect the roots over.
- Divide the class into three groups and rotate every 5-10 min.
 - Group one will start at the tasting station. First, they will rinse their bean pods in the sink or run a hose through a colander. Next, they will taste the beans and fill out the Taste Test Evaluation.
 - Group 2 will start at the dissection station. Have them break open some nodules and note their observations. What are the nodules for? What's inside them?
 - Group 3 will start at the garden bed. Work with an adult to break up the bean plants into smaller pieces and then till them into the soil. If you planted the cover crop mix, till those plants into the soil as well.

SOURCE

- BCK Programs



Taste Test Evaluation

Food Tasted: _____

	Rate one to five stars (draw) ★★★★★	Description
Look		
Smell		
Texture		
Taste		
Overall Rating		

