



Roots Rock! Activity Guide

This Roots Rock! Activity Guide lists all of the materials you will need to create a Roots Rock! Education Kit, and suggestions for how you can use the kit in the school cafeteria and classroom to teach students about root vegetables. Feel free to adapt these activities based on the age of students you are talking to and the location in which you are using the kit.

Materials You Will Need

- ◆ A variety of roots, tubers and bulbs (examples: beets, carrots, parsnips, garlic, onion, potatoes, sunchokes)
- ◆ To make: Name cards for each root
- ◆ To make: Name card labels that say “Root”, “Tuber”, “Bulb”
- ◆ To make: “Roots Rock!” Table tent/sign for creating a display.

Root, Bulb, or Tuber? What you Need to Know

- ❖ A **taproot** (true root) is a fleshy, enlarged root of a plant that absorbs moisture and nutrients from the soil.
 - Example: beets, carrots, parsnips, radishes, rutabagas, turnips
- ❖ **Bulbs** are modified leaves that store food for the plant. They are wide at the bottom and narrow to a point at the top from which the leaves and flowers grow. Bulbs often have a papery skin (called a “tunic”) to protect themselves. They have a flat part at the bottom (called a “basal plate”) where the roots grow, and which forms new “daughter bulbs.”
 - Examples: garlic, onion, tulip
- ❖ A **tuber** is an underground stem, which differs from other roots because it can store energy for the plant and produce new plants. Other roots can take nutrients from the soil but can’t store the energy or use it for reproduction. Tubers often grow in clusters. Each tuber has several growing points or buds called “eyes.”
 - Examples: potatoes, Jerusalem artichokes (aka sunchokes)
- ❖ For those who want to dig deeper, there also are Tuberous Roots (e.g., sweet potatoes, dahlias), Corms (e.g., water chestnuts, crocus), and Rhizomes (e.g., ginger, iris), each of which has a somewhat different structure.

In the Cafeteria

- ❖ **Set Up a Display** - Use the “Roots Rock!” table tent, root samples, and name cards for each root. You can add to the display with copies of Harvest of the Month posters for root vegetables, carrots, potatoes, and radishes (on www.whatcomfarmtoschool.org website); tablecloth; or relevant books from the school library.
- ❖ **“Name that Root” Game** – Challenge students to put each name card next to the correct root.
- ❖ **“Root, Bulb, or Tuber?” Game** – Generally, “root vegetable” refers to any underground part of a plant that we eat, but we are going to get more specific with this game. Challenge students to group roots by type.

Fun Facts about Root Vegetables

- ❖ Washington is the second largest producer of potatoes.
- ❖ In October 1995, potatoes became the first vegetables to be grown in outer space.
- ❖ Before pumpkins took over Halloween, turnips were carved out and used as lanterns.
- ❖ American colonists relied heavily on root vegetables because they could be stored and eaten through the harsh New England winters.

In the Classroom

- ❖ Show the Harvest of the Month Root Vegetables Powerpoint slides for a brief overview.
(http://www.whatcomfarmtoschool.org/posts/harvest_of_the_month/root-vegetables/)
- ❖ **Mystery Root Game:** Place each item from the root kit in a brown paper bag and pass them out to students. Have the students put their hands in the bag without looking and describe how the mystery root feels (i.e. the texture and size). On the board, write a list of all the vegetables in the root kit. Have students guess what the vegetable in each bag is and encourage them to refer to the words on the board.
- ❖ **Root, Bulb, or Tuber?:** Begin by explaining the difference between a root, bulb, and tuber (see descriptions above). Place the “Root”, “Bulb”, and “Tuber” labels on the board. Divide students into small groups and give each group a root sample with matching name card. Give the groups a few minutes to decide whether the vegetable they were assigned is a root, bulb, or tuber. Invite each group of students to place their card under one of the three categories. Take a moment to explain why each vegetable is categorized as it is, focusing on specific plant function and growth.
- ❖ **Discussion Questions:** As you introduce these vegetables to the class, help students understand the farm-to-school-to-kitchen connection through the following questions...
 - Q: Does this vegetable grow locally or regionally?
A: Yes, all of these roots can be grown in Washington.
 - Q: Is it edible?
A: Yes, all of these roots are edible.
 - Q: Can it be eaten raw? Cooked?
A: Both! Most root vegetables need to be cooked. Some can be eaten raw.
 - Q: How can we prepare it at home?
A: An easy and delicious way to serve a mix of all different types of roots is to cut them into pieces, toss with olive oil and salt, and roast in the oven. Any root also can be steamed or boiled and mashed, or made into a creamy soup with added herbs and liquid (water, milk or broth). What are some ways you have eaten roots?

Try a Little Trivia in the Cafeteria or Classroom

For more trivia visit: http://www.whatcomfarmtoschool.org/posts/harvest_of_the_month/root-vegetables/

- ❖ **True or False:**
Root vegetables grow in the ground so they absorb nutrients from the soil.
True.
- ❖ **Root Vegetables are good for:**
a) boosting immunity b) boosting energy c) fighting disease d) **all of the above**
- ❖ **Which of these is NOT a root vegetable?**
a) Parsnip b) Carrot **c) Cabbage** d) Beet

Special thanks to the AmeriCorps team at Common Threads Farm & School Garden Collective for their work on this Activity Guide.