

HARVEST of the MONTH

Seasonal snacks from garden to classroom

MAY 2016 – Multicolored Carrots

CSG uses our **Educational Roots (RootEd)** frame to design lessons for our gardens.

The four core areas of RootEd are intended to enhance academic learning and include: cultivating gardening skills, providing experiential learning opportunities, promoting health and fitness, and nurturing social & cultural development.

Trivia Question and Carrots Facts



QUESTION: “This vegetable is said to improve your eyesight and is a popular snack for both humans and rabbits. Its long, narrow root can be purple or yellow, but is most often orange when sold at the grocery store.



FACTS:

- The wild ancestor of our orange carrot is a plant with a purple taproot that is native to Afghanistan, where they began growing purple and yellow carrots several thousand years ago. The more common orange variety is only 400 years old.
- The skin of the carrot is where many of the phytonutrients are found. Peeling a carrot before eating it removes up to one third of the phytonutrients.
- “Baby” carrots are actually mature carrots that have been cut down to a smaller, uniform size.

Garden Lessons and Activities



Let me Flower! – Science 2.4b, 2.7a

Background: Carrots are a biennial, a plant that takes two years to complete its lifecycle, growing leaves and storing energy in the first year, and flowering and reproducing in the second year. During the winter between a carrot’s first and second year of growth, the plant goes dormant (a process called vernalization), which is necessary for the plant to experience in order to flower in the spring.

Lesson: *This lesson takes advance planning on the part of the teachers and CSG Garden Coordinators –* Have students go to the garden to look at the different parts of a carrot and to observe plants in the different stages of growth. Students should first look at carrots that are already growing in the garden to observe the leaves (absorbing sunlight) and the root (storing energy) in the first year of growth. Explain that some of these carrots will be left in the ground and will survive the cold of winter by going dormant. The following spring, they will come out of their dormancy and send up a flower stalk in order for them to reproduce and make seeds. *If there is an example of a flowering carrot in the garden, have the students study the flowering carrot and its seeds (if they’ve begun to form) – This part is fascinating and can be done with enough advance planning.* Finally, have the students plant carrot seeds in the garden, from the flowering carrot they observed if the seeds are ready.



Root Forms

Lesson: Have students dig holes in the garden to observe the structure of the soil and to begin to imagine how roots grow and move underground. Have students try digging with different types of tools (drinking straw, plastic spoon, metal trowel, toothpicks, sticks, etc.) and observe what works in different places (hard garden paths, soft garden beds, potting soil, compost). Discuss how plant roots move through the soil to gather nutrients and water (just as they did with their tools). Since plants have different nutrient, water, and growing requirements their roots shape and size adapts to meet their needs. For example, a carrot has a large taproot to store energy for surviving winter and flowering in the spring. Its root is longer and bigger if it grows in loose soil that is easy to move through, and it is shorter and smaller if the soil is more difficult to move through. On the other hand, lettuce stores energy in its leaves and has a relatively short lifespan, therefore, its roots are fine and fibrous.