

FEBRUARY 2020 –Cabbage

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 Cabbage Facts

 **QUESTION:** “This vegetable has a head, and in the garden it is said to grow in patches. Its stem is short and its leaves are large, and it can be either purple or green. Its large, round shape resembles a bowling ball.

 **FACTS:**

- There are over 100 varieties of cabbage grown throughout the world, and many cultures ferment cabbage to preserve and add to its nutritional content, making sauerkraut, kim chi, curtido, etc.
- The Guinness Book of World Record holder for heaviest cabbage is Scott A. Robb from Alaska in 2012. His cabbage weighed a total of 138.25 pounds!
- One cup of cabbage contains 190% of the recommended daily amount of Vitamin C.

Garden Lessons and Activities

 **Cabbage’s Weird Anatomy – Science 4.4**

Background: The cabbage stem is in the center of the head, with the leaves growing around it and covering it entirely. When ready to reproduce, the leaves pull apart and the flower stalk grows out of the center of the head from the stem.

Lesson: Have students observe the leaf and stem structures in a cabbage that is cut in half or quarters. Have them observe that the stem is hidden on the inside of the cabbage head, with leaves growing out of its sides. In the garden, have students look at other plants (trees, weeds, herbs, grass) and identify their stem and leaf and how the appearance and growth of these parts differs from that of the cabbage.

Extension: Students can peel off and count the different layers of cabbage leaves, placing the pieces of leaf from each layer in a separate bag. Have them make observations about the difference in texture and color of each layer, and have them find and record the mass to observe the decrease as each layer brings them closer to the youngest leaves in the center.

 **Winter Sleeps – Science 1.7a, 2.7a**

Background: In winter, cold temperatures and fewer hours of daylight severely limit plant growth. When there are fewer than 10 daylight hours (known as Persephone Days) plants cease growing and those that can survive enter a state of suspended growth until day length increases again.

Lesson: Have students look around the garden to gather three examples of leaves that are still alive. Discuss what enables these plants to stay alive during the winter (storage of energy in roots-carrots, small leaves-grass, close to the ground-cabbage, etc.), and the differences in leaf size and plant height during the winter compared to the summer. A plant like cabbage is able to have large leaves because its leaves grow close together to decrease wind exposure, and the plant grows close to the ground to increase warmth and protection.

Extensions:

- ① Read the book Persephone by Sally Pomme Clayton about the Greek myth surrounding the changing of the seasons.