

Early Childhood and Lower Elementary:
Everyone Wants to Eat!

Connections to Standards:

Science K-LS1-1; K-ESS3-3; 2-LS4-1

Social Science K.10

English Language Arts K.RL.9; K.SL.2; 1.RL.3;
1.RL.9; 2.RL.2, 3

Lesson:

Show students how Brussels sprouts grow on a tight stem and can provide many protected homes for insects-- both pests and beneficials. Brainstorm with students about what plants and insects need to survive (water, energy, appropriate habitat, etc.). Then walk through the school yard or garden to look for plants being eaten or showing evidence of being eaten by animals or insects. Discuss ways that plants protect themselves from insect damage (thick leaves, harmful toxins, rapid growth, etc.) and ways that humans can also protect plants so we can eat the food (having healthy plants, covering plants, planting a diversity of crops, etc.). *The Tale of Peter Rabbit* by Beatrix Potter is a classic tale showing how other critters may also want to eat food we plant and can be used as either an introduction or conclusion to this lesson.

Resources:

The Tale of Peter Rabbit by Beatrix Potter

Oregon Insects and Bugs

<http://www.insectidentification.org/insects-by-state.asp?thisState=Oregon>

Upper Elementary: Sibling Similarities

Connections to Standards:

Science 3-LS3-1; 4-LS1-1

Lesson:

Brussels sprouts are part of the Brassicaceae family. The first domesticated member of this family was a leafy cabbage type vegetable in the Mediterranean region. Now the Brassicaceae family includes many domesticated vegetables such as Brussels sprouts, radishes, mustard, cabbage, kohlrabi, broccoli and kale. Bring examples of these vegetables into class to have students compare and contrast the different family members. Once initial observations have been completed, discuss plant parts with your students and determine which part of the vegetables we eat represent which plant parts: broccoli (young flower buds), Brussels sprouts (buds), radishes (roots), mustard (seeds), cabbage (leafy bud), kohlrabi (enlarged, fleshy stem) and kale (leaves).

Resources:

Brassica Vegetables: List Of 10 Healthy Cruciferous Veggies
www.dole.com/~media/Superkids/Lesson%20Plans/Music/Broccoli_plan.ashx



Middle School: Planning the Planting Calendar

Connections to Standards:

Science MS-ETS1-1, 3

English Language Arts 6.SL.4; 6.RST.7; 7.SL.4;

7.RST.7; 8.SL.4; 8.RST.7

Lesson:

Members of the Brassicaceae plant family grow well in the climate of Western Oregon. After introducing students to the variety of vegetables in the Brassicaceae family, have students create a garden planting calendar for 3 - 5 different Brassica crops using the planting dates and days to maturity listed in the resource planting chart. Challenge students to plan to grow vegetables throughout the year since many members of this plant family can grow year-round in the mild climate of Western Oregon or with protective cover in Eastern Oregon. Have students write a narrative about the reasoning behind their choices.

Resources:

Territorial Seed Company Planting Chart

www.evolution.berkeley.edu/evolibrary/article//evo_30



High School: Pests and Produce

Connections to Standards:

Science HS-LS4-5, 6

Lesson:

Growing tight to the stem, Brussels sprouts provide good habitat for beneficial insects which eat the many pests that enjoy the vegetable. In order to harvest and sell the vegetable though, farmers need to ensure their product is free of insects. Conventional growers may use synthetic pesticides to protect their crops from molds, insects, and diseases. When farmers spray pesticides, this can leave residue on produce. Organic farmers may use insect traps, careful crop selection (disease-resistant varieties), predator insects or beneficial microorganisms to control crop-damaging pests. Some people buy organic food to limit their exposure to these residues. Organic produce typically carries significantly fewer pesticide residues than does conventional produce. However, residues on most products — both organic and nonorganic — don't exceed government safety thresholds. Introduce the class to different ways farmers can control insects in their fields and brainstorm what these methods might mean for the farmer, the surrounding environment, and consumers. Students can then research a pest control method and report on the pros and cons of that control method.

Resources:

Natural Pest Control Overview by OSU Extension Service

www.ecoliteracy.org/downloads/food-inc-discussion-guide