

Classroom Activity

Guide: Winter



Science

K-2

Have students dissect the crop, research the anatomy and life cycle of the featured crop, and create informational posters / diagrams to be hung around the classroom or cafeteria.

3-5

Go over Plant Nutrients vocabulary and check students' understanding using the What? No Soil? worksheet

3-5, 6-8

Have students make their own soda bottle hydroponics systems in groups and monitor plants' growth over the next couple weeks.

6-8

Have students research hydroponics and watch this [Hydroponic Spinach](#) video. How has this technology affected our ability to grow and consume leafy greens?

ELA

K-2

Winter farming related readings: Winter on the Farm; Maple Syrup from the Sugarhouse; Sylvia's Spinach

3-5

Have students submit articles to their school newspaper or the local newspaper about what they've learned from the virtual field trip.

If kids are able to go to a Farmers Market in RI, ask them to write about their experience in a weekly journal or writing prompt. If students aren't able to go, ask them to write about what they imagine the perfect Farmers' Market should look like.

6-8

Have students write up a proposal for how to increase leafy greens in the cafeteria and how to incorporate more greens into the meals already offered.

Health



K-2

Have students identify where leafy greens are located on My Plate and create their own Rhode Island My Plates using local food products.

3 and up

Have students research the nutritional benefits of the leafy greens, and create informational posters to hang around the classroom and/or cafeteria.

Have students create a recipe highlighting RI grown leafy greens that can be placed in your cafeteria.

Discuss with students how hydroponically grown vegetables compare nutritionally to soil grown vegetables.

6-8

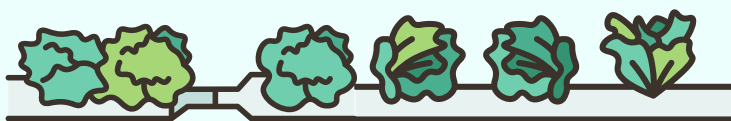
Read [this](#) article about food safety and leafy greens. Discuss the safety issues that come with transporting leafy greens long distances and how this compares to the transportation of locally grown produce.

Art

Have students create a textbook page featuring a leafy green of their choice, incorporating the information they have learned in their other classes.

Have students create miniature greenhouse sculptures using recycled materials they find in school or at home.

Have students illustrate the cycle of water through a hydroponic garden.



Social Studies

K and up

Discuss with students the societal benefits of eating local, seasonal food.

3 and up

Have students research the history of the use of hydroponics across cultures and discuss how the practice has evolved over time. Make posters to hang in the classroom or cafeteria and have groups present what they have learned to their classmates.

6-8

Watch this video on high-tech vertical farming. Discuss the possible social impact of the increased use of robotics in farming.

Math

3-5

Have students calculate how much water they would need to grow a head of lettuce hydroponically versus in soil.

Calculate how many pounds of leafy greens could be grown in a 12 sq foot area of school garden or cafeteria vertical garden.

6-8

Calculate how much of our daily requirements for vitamin c, calcium, and iron are met by eating 1 cup of spinach/1 cup of avocado/1 cup squash. Use USDA dietary requirements.

Have students map out a hydroponic setup blueprint by learning about the growing conditions/space needed for planting the crops in the videos.

