ECO-SCHOOLS USA
NATIONAL WILDLIFE FEDERATION
FOUNDATION FOR ENVIRONMENTAL EDUCATION

A Seedy Experiment

Growing microgreen seeds at home

Have you ever heard of *microgreens*? They are yummy young vegetable greens that not only taste good but also have a high nutrient value – meaning they are good for you! You can buy microgreen seeds like broccoli, arugula, kale, or even beets. And what is cool is that you can grow microgreens inside, and you don't even need soil! If you can't order seeds, you can experiment with seeds you find in your kitchen; there are lots of seed choices! What kind of seeds do you think you could find in your kitchen? How about dried beans such as lentils or pintos, or in the spice rack – check out coriander or fennel? Each of these is a different kind of seed that you can experiment with and grow at home!

Activity Time

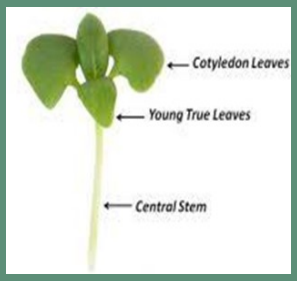
Approx. 15 minutes to set up and 10+ days to grow

Materials

- recycled container(s) with lids (any container that has a translucent top)
- paper towels
- seeds (either microgreen seeds) or seeds/spices from home (beans, coriander, fennel, etc.)
- spray water bottle
- an indoor, sunny location

Science Connection

The 3 edible components of a microgreen are the central stem, the cotyledon leaves, and the young true leaves.



Source: InstaGreen

A **cotyledon**, or seed leaf, is a leaf that is stored in a seed. When the seed sprouts, the cotyledons are the first leaves that the plant has. **Monocot** plants have only one cotyledon, and **dicotyledon** plants have two. In most instances, the cotyledon leaves look very different from the first true leaves.

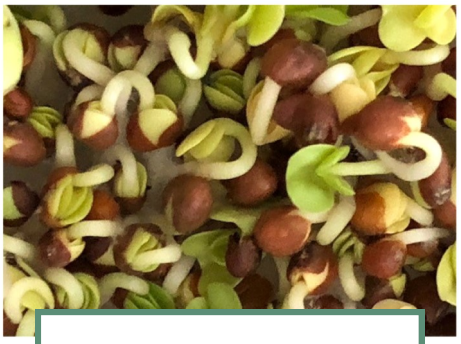
Sources:
InstaGreen: *Everything you want to know about microgreens*. Juliette Henry. Academy, InstaGreen Institute, InstaGreen News. September 4th, 2018.

Microgreens: a new specialty crop. Danielle D. Treadwell, Robert Hochmuth, Linda Landrum, and Wanda Laughlin. University of Florida, IFAS extension. Publication #HS1164. 2018.

WHAT TO DO

1. Gather all your materials.
2. Take paper towels (double thickness) and place in the container – make sure the paper towels fit well at the bottom of the container.
3. Using your spray water bottle, lightly dampen the paper towels.
4. Sprinkle microgreen seeds in a thin layer on top of the paper towels in your container – even though the layer is thin, use a good amount of seeds so they can support each other as they grow. You can experiment with multiple seed types, ensure each seed type has its own container.
5. Then using your water bottle, spray seeds, and paper towel again till they are saturated.
6. Put covers on the containers and place in a sunny spot. *Why do you think the seeds should be in a sunny spot?* (The sun provides heat for germination and then for photosynthesis once they have sprouted.)
7. Make sure to open up your containers every day and spray with water – until the seeds sprout, they should be kept covered and saturated.
8. Make observations and track the growth of your seeds – how long did it take for them to sprout? Did all the seeds sprout? Was there a difference between the microgreen seeds and seeds you found in your kitchen? Did you see any fine white hairs on your sprouts? What do you think they are? (Don't worry, it isn't mold. They are actually root hairs! Did you know roots had hair? Root hairs are fine, thin roots that grow from the thick main root of the sprout. The white fluff or root hairs look like mold when the sprouts are young and are a natural part of some sprout's life cycle.) What else did you observe?
9. When the microgreens have grown to be about 2 inches tall, and have formed their second leaves – it's now time to harvest! To harvest, either gently pull the greens away from the paper towel or use scissors to cut seedlings at the base.
10. Once you have harvested your greens, rinse in water to remove any left-over seed casings and then decide how you want to eat your microgreens! On a sandwich? Salad? Or just on their own!

Day 5 broccoli sprouts



Day 5 broccoli up close

Fully grown microgreens!

Photos by: Malena Garcia, NWF