**FOSS Environments, Lesson #1-5th grade**

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Big Question: What is an environment? What is necessary for a successful plant environment?

The Engagement Process:

1. Hook: Have students brainstorm and come up with foods that they eat that come from plants. Talk about the foods that grow in our region and why we can only grow certain things. Discuss the things they ate for breakfast or lunch that day that came from plants.

2. Hypothesis: Every living thing requires a helpful environment

3. Discussions about prior knowledge/experience: terms to introduce: gardens, terrariums, organisms. The discussions can include brainstorming or using webs. This information should be written in the science notebooks. Have students draw a picture of a garden and label it. Discuss the different types of gardens.

Materials needed: **(included in kit**) 5 kinds of seeds, terrarium, terrarium map, plastic container, beaker

 **(not included in kit**)soil, water

Steps for investigation:

1. Introduce the 5 kinds of seed and discuss each size, shape and color.
2. Make a terrarium map (student sheet #3)
3. Each group of 2-4 students plans their terrarium
4. Each group has 1 liter of soil, a terrarium , 5 types of seeds
5. Put a label in the front of the terrarium and plant the seeds
6. Plant the seeds(corn, barley, peas, radish, clover)
7. Water and cover the terrarium with plastic wrap, the water amount is measured and recorded in milliliters
8. In notebook, list the sequence for planting the terrarium
9. Discuss terrarium environment and other environments(in notebook)
10. Discuss the term environmental factor
11. Make a word bank or science word wall using vocabulary(terrarium, organism, environment, environmental factor)
12. Check terrarium every 2-3 days and note growth and water as needed

Adaptations: We suggest you use your own containers for the terrarium so that you may keep them in your classroom for longer than 1 or 2 weeks. Students can get the soil from outside, instead of the teacher supplying it.

Lesson extensions: use different types of seeds, possibly seeds that students bring in from food that they have eaten (apples, oranges), possible stories to read: The Turnip, Stone Soup

Reflections: A great hands-on activity for students.

Timing: 45 minutes during the school year, could be 60-90 minutes in the summer school sessions