

# LET'S SPROUT!

## Pre Field Investigation Information:

**What to expect:** The Let's Sprout program at Blandy Experimental Farm and the State Arboretum of Virginia is designed to introduce or review the **parts of a plant**, their functions, and the concept of plant **life cycles**.

During the field investigation, students observe and identify plants and their parts. As young scientists, they will dissect bean seeds, and explore flowers using life size models to understand plant life stages. During an outdoor exploration, we will look at patterns in plants as students sketch and compare different stages of plant life cycles – just emerging, in bud, blooming, plants with dying blooms, and developing seeds.



### Vocabulary List

**Seed-** embryonic plant enclosed in a protective outer covering; a mature fertilized plant ovule

**Seed Coat-** outside protective part of a seed

**Roots-** part of plant, usually underground, that absorbs water and minerals from the soil

**Stem-** main stalk of plant, transports food and water

**Leaf (leaves)-** usually green part of plant that performs photosynthesis

**Flower-** reproductive structure of a plant, often colorful to attract pollinators

**Cotyledon-** part of the seed that stores food for the growing embryo

**Before your arrival:** We recommend taking a brief walk on school grounds to observe plants. This creates a great introduction for learning outside and honing the students' observation skills!

Discuss or have the students document what they found.

- How many different plants do they see?
- Draw two different plants: How are they different and how are they the same?

Have fun, and we will see you soon!



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## Post- program activity: Plant Parts are Yummy!

Now that your students have been introduced to the parts of Fred the Flower, they might enjoy identifying the parts of plants their food comes from.

The majority of our diet is plant-based foods. We generally call these foods fruits, vegetables, and grains. People have cultivated plants to harvest a variety of edible parts.

We eat the roots (carrots), stems (asparagus or celery), leaves (lettuce), flower buds (broccoli), fruit (apple, tomato, cucumber), or seeds (peanuts and grains) of many plants.

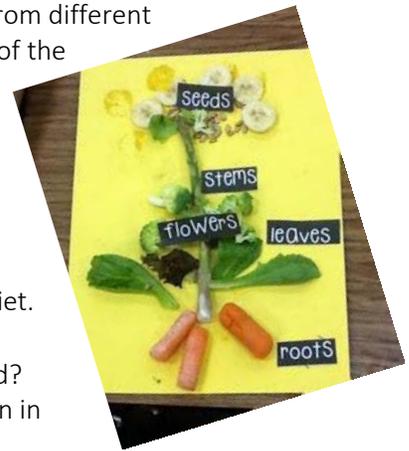


### Activity

1. Use your scientific tool (hand lenses) to examine and journal about the progress of the germination of your seed. Be sure to draw, write a story or measure your plant to document its growth.

2. Using pictures, models, or real foods, ask your students: From which part of the plant does each food come. You can use all different kinds of plant products, including canned, dried, or otherwise processed food.

- Break the students into small groups and assign them 4-6 foods from different parts of the plant, and ask them to match the food to which part of the plant it came from.
- Hands on Activity- Have a variety of foods available for students to construct a plant complete with roots, stem, leaves and fruit. (See photo at right for an example.)



**Extension:** This activity could lead into a discussion of food webs and/or diet.

- Where do milk and eggs come from? What do the animals that produce these items eat? What about the animals we eat for food? One way or another, it all goes back to plants (even phytoplankton in the ocean).
- Have the students trace the items in their lunch back to the part of the plant it came from, or as close as you can get. They may need some hints, like gelatin comes from pigs or cows, agar comes from algae, and pectin comes from plants.

Hopefully, your students will come away with a greater understanding of where their food comes from and what they are eating!

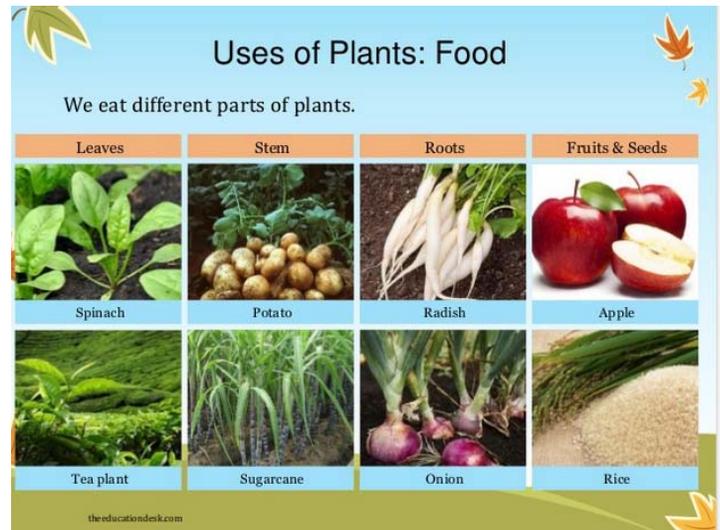
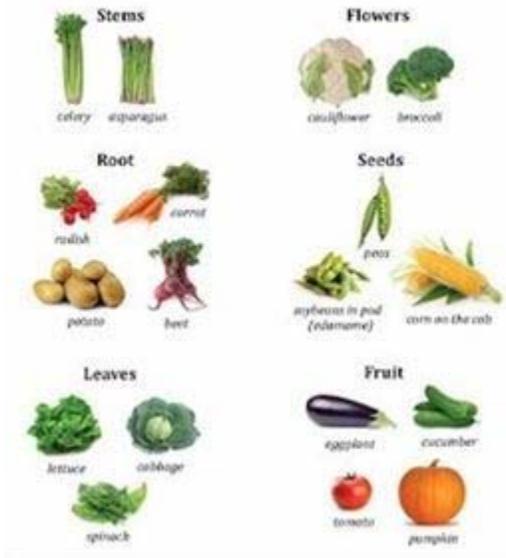


Literature Resources

- **Who Grew My Soup** by Tom Darbyshire
- **A Seed Is Sleepy** by [Dianna Aston](#) (Author), [Sylvia Long](#) (Illustrator)
- **From Seed to Plant** by Gail Gibbons

Extra Resources

**The Plant Parts We Eat**



Flowers



Stems



Leaves



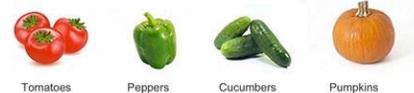
Roots



Seeds



Flowers



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## Taking Care of your Seeds

The students have planted their seeds in slightly moistened potting soil. The seeds should be kept constantly moist in order to germinate. The consistency of a moistened sponge is great.

Check the containers daily and water as needed to keep the surface evenly moist. Use a spray bottle or watering can with a fine spray so the drops fall lightly on the growing mix.

The seeds should germinate at room temperature. Consistently warm temperatures, both day and night, signal the seeds to sprout.

Once sprouted, what will the seedlings need? Plenty of light!

Once the seedlings have about four leaves on them, start to put them outside on warm sunny days, but bring them back in for the chillier nights. Once they have “hardened” to the outside temperatures, they can be transplanted to the garden, where (hopefully) Mother Nature will take over. They will still need to be watched, watered and nurtured as needed.  
Have fun!!

