

## Pre- and Post-Visit Activities: Watch Me Grow: Plants

### Overview:

These activities, which support the Staten Island Museum's lesson "Watch Me Grow: Plants", introduce students to the importance of plants and what they need to live and grow.

### Background Information for Educators:

Plants are very important to humans and their environment. They add **beauty** to the places where we live. They provide habitats for many animals, even fish. Plants have been very important in the field of **medicine**. Although most of our medicines come from wild plants, we have only used 2% of the world's plant species for our cures. We may discover many medicines that are more important by researching other plants. The world usually relies on only 20 species of plants for **food**. Rice, wheat and corn, which are types of grass, are the most important of all. Plants are used in our factories to create many different products like **furniture, paper, clothing** and even **fuel**. The **oxygen** in the air we breathe comes from the photosynthesis of plants. They can stop the movement of dust and pollutants. By using carbon dioxide, plants can also lessen the greenhouse effect. Plants help keep **water** quality high by filtering out sediments, and by preventing erosion.

### Seed Facts

- Seeds come in all shapes, sizes, colors, and textures.
- Seeds contain all the material a plant needs for making more of itself.
- "Monocot" seeds start life with one seed leaf, like grass.
- "Dicot" seeds start life with two seed leaves, like beans.
- Seeds have a protective coat that can be thin, or thick and hard.
- The baby plant inside the seed is called the embryo.
- Wind, water, and animals can spread seeds.
- Most seeds remain dormant (asleep) until they are given water.
- Insects or other animals that transfer pollen from plant to plant are called "pollinators."
- Pollen is the fine, powder-like material plants need to make seeds.

### Content Specific Vocabulary:

- Flower-the seed-bearing part of a plant, consisting of reproductive organs (stamens and carpels) that are typically surrounded by brightly colored petals and a green sepal.
- Germinate-begin to grow and put out shoots
- Leaf-the flat, usually green, part of a plant that is attached to a stem directly or via a stalk. Leaves produce food for the plant
- Petal-brightly colored parts of a flower surrounding the reproductive organs
- Plant-living organisms such as trees, flowers, herbs, bushes, grasses, vines, ferns, mosses, and green algae that use sunlight to make their own food. They provide us with food materials, wood and convert carbon monoxide into life giving oxygen.
- Pistil- the female part of a flower where seeds grow.
- Pollen- the fine, yellow powder made by a flowering plant; pollen is carried by the wind or by an insect to another plant of the same kind to fertilizes that plant's seeds.

**Watch Me Grow**

- Pollination- when pollen is moved or carried to a plant in order to fertilize the seeds
- Root- the part of a plant that usually grows underground. Roots take up water and nutrients, and anchor/hold the plant in the soil.
- Seed- the small part of a flowering plant that grows into a new plant.
- Sepal- outer most part of a flower, often green or brown, which protects the bud before it opens. The part of a plant, shaped like a leaf that lies at the base of a flower. Sepals hold and protect developing flower buds.
- Soil-the top layer of the earth's surface in which plants can grow, consisting of rock and mineral particles mixed with decayed organic matter and having the capability of retaining water.
- Stamen- the pollen producing part of a flower, usually with a slender filament. At the tip of the filament is the anther, where the pollen is produced.
- Stem-the main stalk of a tree, plant or shrub that supports a leaf, flower, or fruit.
- Sun-Sunlight is needed for photosynthesis, the process of the plant making its own food.
- Water-water helps living things like plants to grow and survive; water keeps the stems and leaves strong and sturdy so the plant does not wilt.

**Before Your Visit:**

Conduct a read aloud.

Suggested books:

*A Seed Is Sleepy*, by Dianna Hutts Aston

*How a Seed Grows*, by Helene Jordon

*Flip, Float, Fly: Seeds on the Move*, by JoAnn Early Macken

*A Fruit Is a Suitcase for Seeds*, by Jean Richards

*From Seed to Maple Tree: Following the Life Cycle*, by Laura Purdie Salas

**Lima Bean Plant:** Find the stem, leaf, soil



**WORD SEARCH:** Find these words: seed, root, stem, leaf, flower, water, sun, oxygen, soil, food

L	R	O	O	T	F	M	V	W	Q
D	I	H	S	H	F	S	O	I	L
T	F	O	S	E	E	D	F	T	U
A	O	F	L	O	W	E	R	E	J
S	O	E	M	S	T	E	M	R	I
L	D	X	M	Q	M	E	L	D	C
O	R	A	Y	L	E	A	F	B	T
W	A	T	E	R	S	Z	Z	X	D
O	X	Y	G	E	N	U	M	K	C
R	L	H	E	O	Z	N	S	U	N

You find a magic seed. Draw a picture of it.

Draw what grew from this seed. Tell a story about this wonderful plant.

