



Dear Third Grade Families,

Today we began our unit on Plant Growth and Development. In this unit, students make first hand observations of a plant's life cycle.

We will begin by examining a seed. Then we will plant a seed and watch it grow. We will take notes about and measurements of our plant's growth along the way. This information will be used to analyze and draw conclusions about why some of our plants grew very tall while others withered away. Finally, we will look closely at the interdependence of flowers and bees. The students will even get to cross-pollinate their own flowers using "bee sticks."

The following NYS science standards will be covered;

#### **Standard 4: The Living Environment**

- **Key Idea 1: Living things are both similar to and different from each other and from nonliving things.**
  - Plants require air, water, nutrients, and light in order to live and thrive.
  - Living things grow, take in nutrients, breathe, reproduce, eliminate waste, and die. Nonliving things do not live and thrive.
- **Key Idea 2: Organisms inherit genetic information in a variety of ways that result in continuity of structure and function between parents and offspring.**
  - Some traits of living things have been inherited (ex: color of flowers)
  - Plants closely resemble their parents and other individuals in their species.
  - Plants can transfer specific traits to their offspring when they reproduce.
- **Key Idea 3: Individual organisms and species change over time.**
  - Each plant has different structures that serve different functions in growth, survival, and reproduction.
  - In order to survive in their environment, plants must be adapted to that environment.
- **Key Idea 4: The continuity of life is sustained through reproduction and development.**
  - Plants have life cycles.
  - Each kind of plant goes through its own stages of growth and development that may include seed, young plant, and mature plant.
  - The length of time from beginning of development to death of the plant is called its life span.
  - Life cycles of some plants include changes from seed to mature plant.
  - Growth is the process by which plants and animals increase in size.





- Food supplies the energy and materials necessary for growth and repair.
- **Key Idea 5: Organisms maintain a dynamic equilibrium that sustains life.**
  - All living things grow, take in nutrients, breathe, reproduce, and eliminate waste.
  - Plants respond to changes in their environment. For example, the leaves of some green plants change position as the direction of light changes; the parts of some plants undergo seasonal changes that enable the plant to grow; seeds germinate, and leaves form and grow.
- **Key Idea 6: Plants and animals depend on each other and their physical environment.**
  - Green plants are producers because they provide the basic food supply for themselves and animals.
  - When the environment changes, some plants and animals survive and reproduce and others die or move to new locations.
  - Plants manufacture food by utilizing air, water, and energy from the Sun.
- **Key Idea 7: Human decisions and activities have had a profound impact on the physical and living environments.**

Please encourage your child to study the review sheet attached to this parent letter each night as part of his/her homework routine. In addition, keep an eye on the weekly newsletter for our unit test date.

Sincerely,  
Mrs. Pelneau



**Plant** Life  
CYCLE





## Plant Unit- Study Guide

### Vocabulary:

embryo-	baby plant
cotyledon-	stored food in the seed that provides energy for underground growth until it's old enough to make its own
seed coat-	protects the embryo and the cotyledon
petals-	colorful leaves of the flower
anther-	where pollen is held; the male part of the flower
stigma-	collects pollen to help produce seeds; the female part of the flower
Pods-	where new seed are stored
pollination-	when pollen is moved from the male part to the female part of the plant
cross-pollination-	fertilized by pollen from another plant
interdependence-	a partnership in which each other is needed to survive
thinning-	removing smaller plants to give more space, light, food, water, and air
transplanting-	taking a plant out of the soil and replanting it where there is more space
fertilizer-	helps to feed plants to make sure they grow healthy
buds-	unopened flower

### Important Facts:

4 things that plants need to grow are; Light (sun), Food (fertilizer/soil), Water, Air.

Each part of the plant has a job.

- stem- holds up the leaves and flower, & carries water/food to the rest of the plant
- roots- hold the plant in place and take up water and minerals from the soil
- leaves- helps the plant make its own food
- flowers- make the seeds for new plants

Bees help to pollinate flowers out in nature. They are interdependent on flowers. Flowers attract bees by their colorful petals. Flowers provide food (pollen/nectar) for the bees and bees carry pollen from flower to flower to help pollinate and make more seeds.

Seeds travel in many ways. Some of these are through air, people, and animals. (BE ABLE TO TELL ME HOW)

Plants are important to us for many reasons. They provide oxygen, trees are used to build houses (shelter), medicines are made from them, etc.

