Timeline of Plant Lessons and Observations:

The beginning of school includes laying the foundation for future learning. Children learn how to make observations of things in the world around them through hands on experiences. An observation table in the classroom offers opportunities to observe items from nature daily with magnifying glasses and microscopes. Children learn to describe and document their observations using developmentally appropriate resources in science journals. Lessons are selected to reflect real-world experiences throughout the year such as pumpkins in October and leaves in November.

August: Stage the learning environment

Place interesting items from nature in the science station. Items such as shells and fossils give children opportunities to ask "What is this?" and to make connections as children have been to the beach in the summer. The children instantly engage in asking questions and wondering why, how, or where. Children continue to observe various objects and learn to document observations using their senses.

September: Seeds and seed pods

Last year I provided a variety of seeds and seed pods from the local environment. This year we were able to observe seeds from our garden that began growing the previous spring. Children examine last year's crop that dried and went to seed demonstrating the plant life cycle. These lessons precede our fall planting experiences in the garden and offer rich discussion during the planting lessons. We discuss questions like, "Why did the sunflower die?" Many children respond that the sunflower did not get enough water (it looks brown and dry). So I ask the children, "Why is the plant next to the dead sunflower still green and growing?" We continue asking questions and discussing these ideas. We conclude that the sunflower died after it made the sunflower seeds. To help this discussion we are sitting in the garden with the dead sunflower still in the ground. We also have photos of the sunflower when it was alive to compare how it has changed. We compare various seeds from different plants in the garden and create a Venn diagram of the similarities and differences. Children draw and label detailed drawings of seeds.

October: Parts of a pumpkin and parts of a pumpkin plant

Children participate in formal lessons and make observations in the science station of a variety of pumpkins. Children are able to make connections to the pumpkins they see at home, in the pumpkin patch, or around the community at this time of year. We visit the local Bread Company and take wheat berries home to plant. We plant wheat berries and pumpkin seeds to compare how they grow and change.

November: Leaves and Parts of a Leaf
Collect a variety of leaves to compare, contrast, measure, observe physical characteristics, and label the parts. Leaves begin to fall in November as the weather changes. Children actively participate in raking leaves, playing in leaves, or collecting leaves at home and school.

December: Evergreen trees, pinecones
Observe pine needles and pinecones from different types of evergreen trees. Compare size, color, shape, etc.

January: Observations and discussions of our school garden
What things are growing? What things are not growing? How are plants changing? Why do things grow during specific times of the year?

February: Examine cacao pods
Observe cacao pods and learn about where cacao trees grow and why they grow in specific areas. The cacao pods stimulate a discussion about chocolate and how it is made. Valentine's Day makes this an engaging and purposeful investigation to explore the origin of chocolate.

March: Begin a life science unit to investigates specific grade level standards that lasts 4-6 six weeks
Children identify the parts of a plant, the functions of the plant parts, and learn what a plant needs to grow. Children continue observing plants and begin experiments on how the different parts of the plant work. For example, observe celery in colored water to see how a stem works, observe seeds sprout in clear containers, observe roots grow in water and around the school

grounds, and observe leaves under a microscope. Children investigate what happens to a plant when it does not get what it needs.

Children explore roots around campus by going on a root hunt to observe roots of trees and plants. Children wonder what listening to the trunk of a tree would reveal, so we try it. Children ask in-depth questions that lead to further investigation of how parts of the plant work. The children make the connection that each part of the plant we can see also has parts that we cannot see. Children ask questions that lead to further investigation as to how the parts inside the plant work. These questions lead to the development of a model plant. The children decide that building plants with marble tracks and blocks will show how water and nutrients move through a plant so we create a model.

April and May: Observe earth worms, ladybugs, and other garden animals

Observe the garden as it changes through the last two months of school. How do the animals in the garden help or harm the plants we are growing? We eat vegetables that we grow in the garden. Children continue to ask questions and learn about life science through the garden and making connections to all of our learning experiences throughout the year.