WHAT IS A PLANT?
A SELF-GUIDED EXPERIENCE
OVERVIEW
All plants have the same basic structure; roots, stems, leaves, flowers, fruits, and seeds. Plants depend on these basic structures to get light, warmth, food, nutrients or vitamins, water, and air. Roots help plants stabilize themselves, while pulling water, oxide, and nutrients from the soil. Stems house the vascular system that distributes the resources obtained by the roots. Leaves use the sun, water, and carbon dioxide to create sugar or plant food. They also release excess water and oxygen. Flowers contain all of the organs necessary to make baby plants, and they produce fruit containing the seeds that house the baby plants. Once the seed hits the ground, the cycle of life begins again!

PRE-VISIT ACTIVITIES
Show students assorted pictures of plants and parts of plants. Have students identify the part of the plant they see. Students should understand that even though some plants look different from one another, they all have the same basic parts.

Extension:
Cut open 5 different fruits so that the seed(s) is exposed. Have students compare and contrast the seeds. Ask students to explain how the seeds got inside the fruit, what the seed is for, and why some fruits may have larger seeds than other, and more or less seeds than others.

AT THE CONSERVATORY
Palm House Ficus, Bamboo
Fern Room Maidenhair, Tree Fern
Sugar From the Sun Mangrove Trees, Taro, Calamondin Orange
Children’s Garden Bird of Paradise, Powder Puff Plant
Desert House Golden Barrel Cactus, Jade
Aroid House Peace Lily, Giant Sea Grape
Horticulture Hall Banana Plant, Ginger

POST-VISIT ACTIVITIES
Plant seeds and watch them grow over time. Choose two different types of seeds that grow well indoors. Students can identify the plant parts as they begin to develop.

Bring in several varieties of fruit, vegetables, and fresh herbs. Challenge students to identify what part of the plant they come from. Have students write myths that explain how people began to eat that part of the plant.

ADDITIONAL RESOURCES
Plant basics:
https://www.youtube.com/watch?v=q6OL7_qFgU
Plant based lesson plans K-5:
http://classroom.hiddenvilla.org/curriculum/for-english-language-learners/1stgrade/what-plants-need-to-grow
Function of plant parts:
Importance of plants:
http://www.bgci.org/plantconservationday/whyplantsimportant/
What are the basic parts of a plant?

What does a plant need to survive?

Draw each plant part and describe its function.
What is a Plant?

**OVERVIEW**

Root—the part of the plant that typically grows underground and absorb water and nutrients from the soil; also helps the plant stabilize itself and support its weight.

Stem—the part of the plant that extends from the roots and typically grows above ground. Transports water, nutrients, and sugars (created through photosynthesis), from one part of the plant to another.

Leaf—the part of the plant that grows from the stem, helps the plant release excess water and oxygen; creates sugar using photosynthesis.

Flower—the colorful part of a plant that holds the reproductive or seed-bearing organs of the plant.

Fruit—a part of the plant that can house a seed.

Seed—the part of the plant that contains a baby plant and all of the nutrients necessary to begin the growth cycle.

Photosynthesis—the process that leaves undergo to create sugars from carbon dioxide, sunlight, and water.

**TALKING POINTS**

- Plants are the oldest living organisms on the planet. Plants are the source of food and nutrients, medicines, beverages, essential oils, and many products that we use to enhance our personal comforts. The part of the plant that we use varies from plant to plant and depends on our purpose.

- Most plants, like most people, have the same basic structure. Typically plants are made up of roots, stems, leaves, flowers, fruit, and seeds.

- Leaves are essential to the survival of green plants, as they are responsible for photosynthesis, and for absorbing and releasing air and water above ground. Plants have either compound leaf structures, where multiple leaves extend from one stem, or simple leaf structures, where one leaf extends from a stem.

- Photosynthesis is the process green plants use to make glucose necessary to feed and nourish the plant. This process is also the way plants absorb carbon dioxide and release oxygen.

- When the flower is ready to reproduce, a seed is created inside the ovary of the flower. Ovaries then produce flesh around the seed to protect it. Some flowers also create a hard shell around the flesh. The flower does not do anything special to produce fruit. What we call the fruit is actually the fleshy part of the fertilized, ripened, swollen ovary of the flower. This flesh surrounds and protects the seed.

- Seeds are the result of plant reproduction. Seeds are baby plant embryos and contain everything the plant needs to begin its life cycle. Like plants, seeds vary in size, shape, hardiness, and basic preference for sunlight and depth. All seeds are NOT created equal!