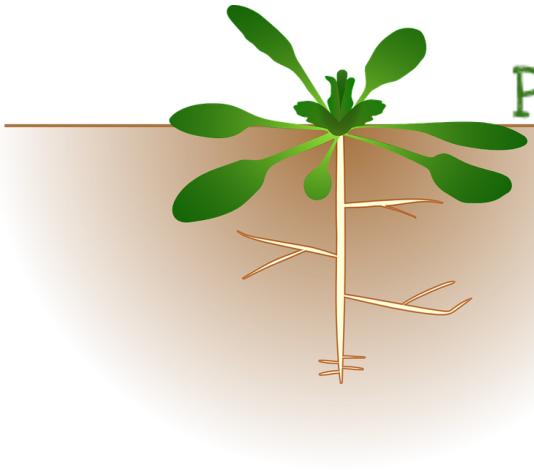
Name: _____

MATTHAEI BOTANICAL GARDENS AND NICHOLS ARBORETUM
UNIVERSITY OF MICHIGAN



Plant Parts & Functions

Plants have many parts. Each one of these parts has an important function, or job to do. Use this sheet to record the plant parts you see and find here at Matthaei Botanical Gardens!

Do you think roots are always in the soil? Look for a plant in the conservatory with roots that are **not** in soil. Write its name here.

_____

Draw your favorite flower in this box. Why do you think so many flowers are colorful?

Try to find a fruit in the conservatory. Write its name here:

_____

What do you think is inside?

_____

Choose two leaves with different shapes. Draw them here. What do the leaves do for the plant?

Find a plant with a woody stem. Draw it here. How tall do you think it is? How tall do you think it could grow?

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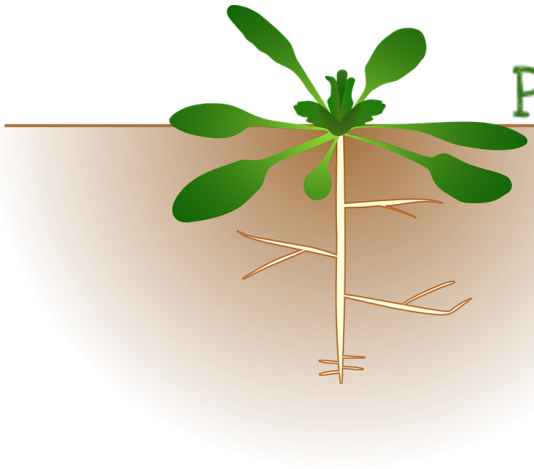

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The tropical house contains many epiphytes, or plants that grow on other plants, whose roots are not in contact with the soil. Look for epiphyte orchids, which have aerial roots that cling to their host plant, and bromeliads, which collect rainwater in a central reservoir.

Students may draw any two flowers found in the conservatory or on the trails. Encourage students to draw like a scientist, and try to capture the shapes and colors they see. Scientists also use labels to identify drawings. These could include the names of the plant or parts of the flower (e.g., petals, sepals, stamen, pistil). Ask students to think about how brightly colored petals might benefit a flower, especially in terms of attracting pollinators. Once a flower is pollinated, it can make seeds.

There are many fruits in the conservatory that students will easily recognize: pineapple, banana, papaya, guava, lychee, lime, mango, and grapefruit. There are several other fruits that students may not recognize as such. For example, cacao pods (chocolate), coffee beans, and olives are also fruits. All of these fruits come from flowers and contain seeds, which enable the plant to reproduce.

Students can draw any two leaves from the conservatory or the trails in this space. Have students look for leaves that are very different from each other in shape, size, or texture; students can use this space to compare the different features of the leaves. In most plants, green leaves make food for the plant through photosynthesis, a process in which energy from the sun is used to convert water and carbon dioxide from the air into sugars. The leaves take in sunlight and air; water is absorbed through the roots and delivered by the stem.

Woody stems are hard stems that survive above ground in the winter. One common example of a woody stem is a tree trunk. There are many trees in the conservatory and out on the trails. Have students explore a few trunks and describe their size, color, and texture. Most trees form new wood every year, so the trunk expands in size. Therefore, the size of a trunk tells us something about the age of the tree. When a tree is cut, we can even count the number of growth rings in the trunk to find out its age!