

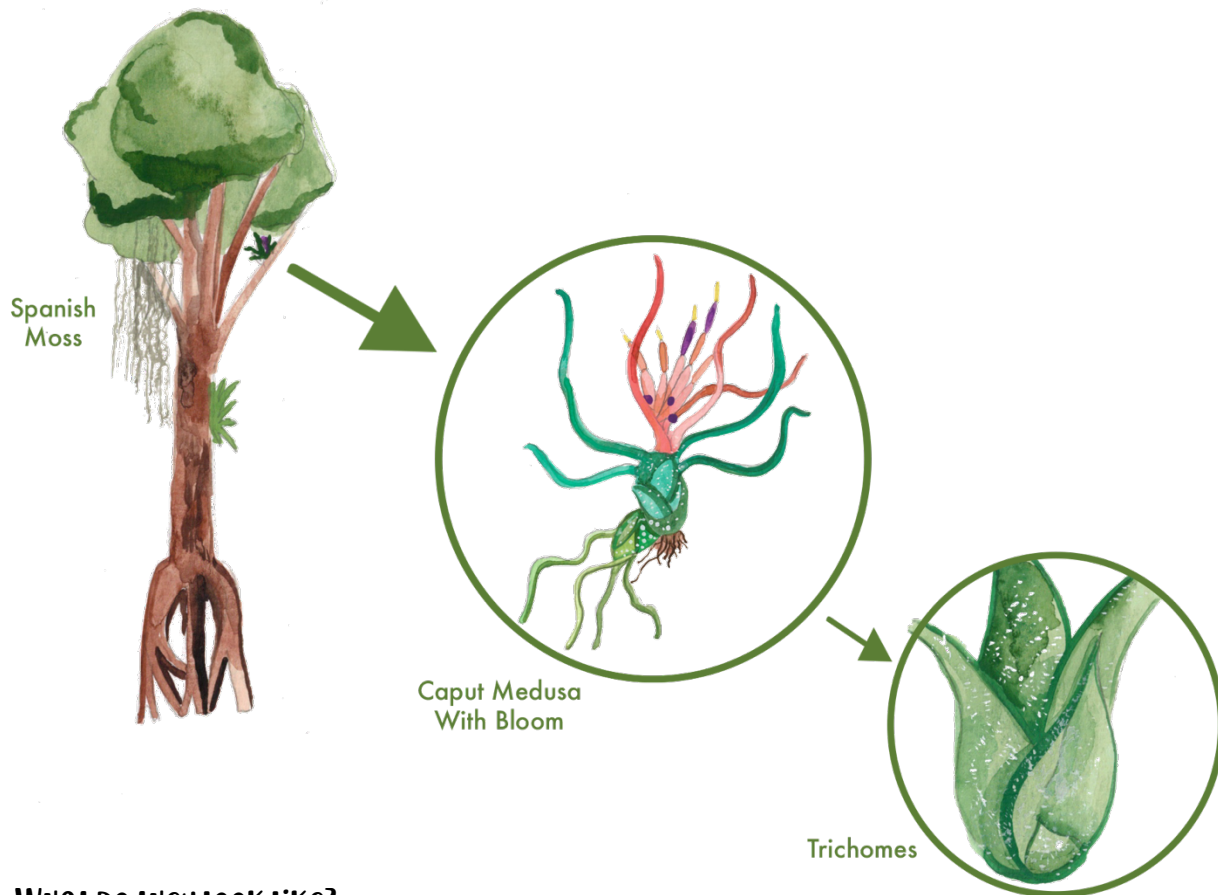
DIY Air Plant Terrarium-Lesson

WHAT ARE AIR PLANTS?

Did you know that there are plants that don't need soil to grow? One of these unique types of plants is called **air plants**. Air plants are epiphytes (ep-uh-fahyt) which are plants that grow on other objects called **hosts**. Hosts can be tree trunks, branches, rocks and other things. Air plants are not **parasites** because they do not hurt the host! Air plants rely on the hosts for safety and access to water and minerals needed to grow and reproduce.

WHERE DO THEY GROW?

Air plants are typically found in tropical forests in North, Central and South America. Your air plants were farmed in Guatemala! Some species of air plants have adapted to humid rainforests while others survive in dry deserts. If you live where it snows then air plants cannot survive there outdoors. However, air plants can survive in most indoor environments as long as they get indirect sunlight and are watered (misted or soaked) once a week.



WHAT DO THEY LOOK LIKE?

Air plants, like most plants, have leaves, stems, flowers and even roots. Most air plants are small, ranging from one to ten inches tall. Some species can grow much larger. The bloom and leaves of the air plant all come out of the same point and unfurl as they grow. You may notice that air plants look like the top of a pineapple. Air plants are closely related to the pineapple—but don't eat them! Air plants and pineapples are part of a family of plants called **bromeliads**.

If they don't grow in soil, then how do they get water and nutrients?

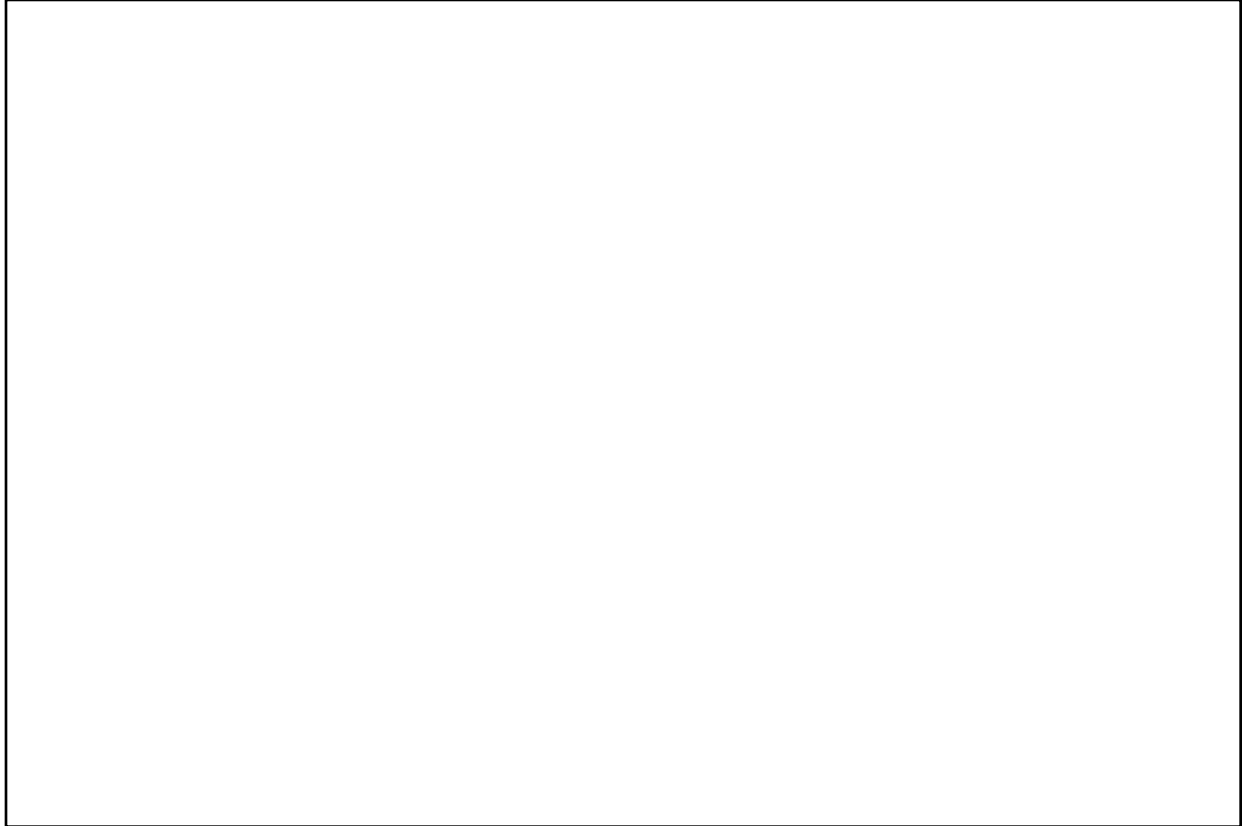
You may have noticed that your air plants are covered in white fuzz. This layer of fuzz consists of **trichomes**, special cells which the plant uses to absorb water and nutrients from its environment. The roots of air plants are only for attaching themselves to their host. This is different from other plants that use their roots to take in water and nutrients from soil. Air plants rely on rain to be watered and they absorb minerals from small particles floating in the wind. Like all plants, they use the sunlight to create energy to grow with photosynthesis.

How do they reproduce?

There are two ways that air plants reproduce. One way is through germinated seedlings and the other way is through offsets (baby air plants aka pups). Both processes start once a plant has bloomed which only occurs once in the plant's lifetime. Seeds form from the bloom itself months after it dries up. Small seeds will appear in a cotton-like material (similarly to a dandelion). The seeds are carried away in the wind and then attach themselves to other hosts. **Pups** are produced directly from the base of the blooming plant. Over time the pups will make a clump or family of air plants. Once the pup is about a third of the size of the original air plant it can be gently removed to survive on its own.

DIY Air Plant Terrarium-Activities

Touch and observe the air plants—shape, color, texture, smell and more.
Draw your favorite one! List three of your observations.



Observations:

1.

2.

3.

Below is a drawing of the air plant Caput Medusa. It is named after the Greek mythological creature “Medusa” which has a woman’s body with wings and snakes in place of hair—see the resemblance? The Medusa is one of the most popular household air plants because of its unique shape. It is also very easy to care for.

Can you label all the parts of the Medusa? Your air plant won’t have a pup yet but don’t worry, it’s coming! Since our plants haven’t grown on trees they do not have full root systems but they can develop roots with time.

Word Bank

Roots

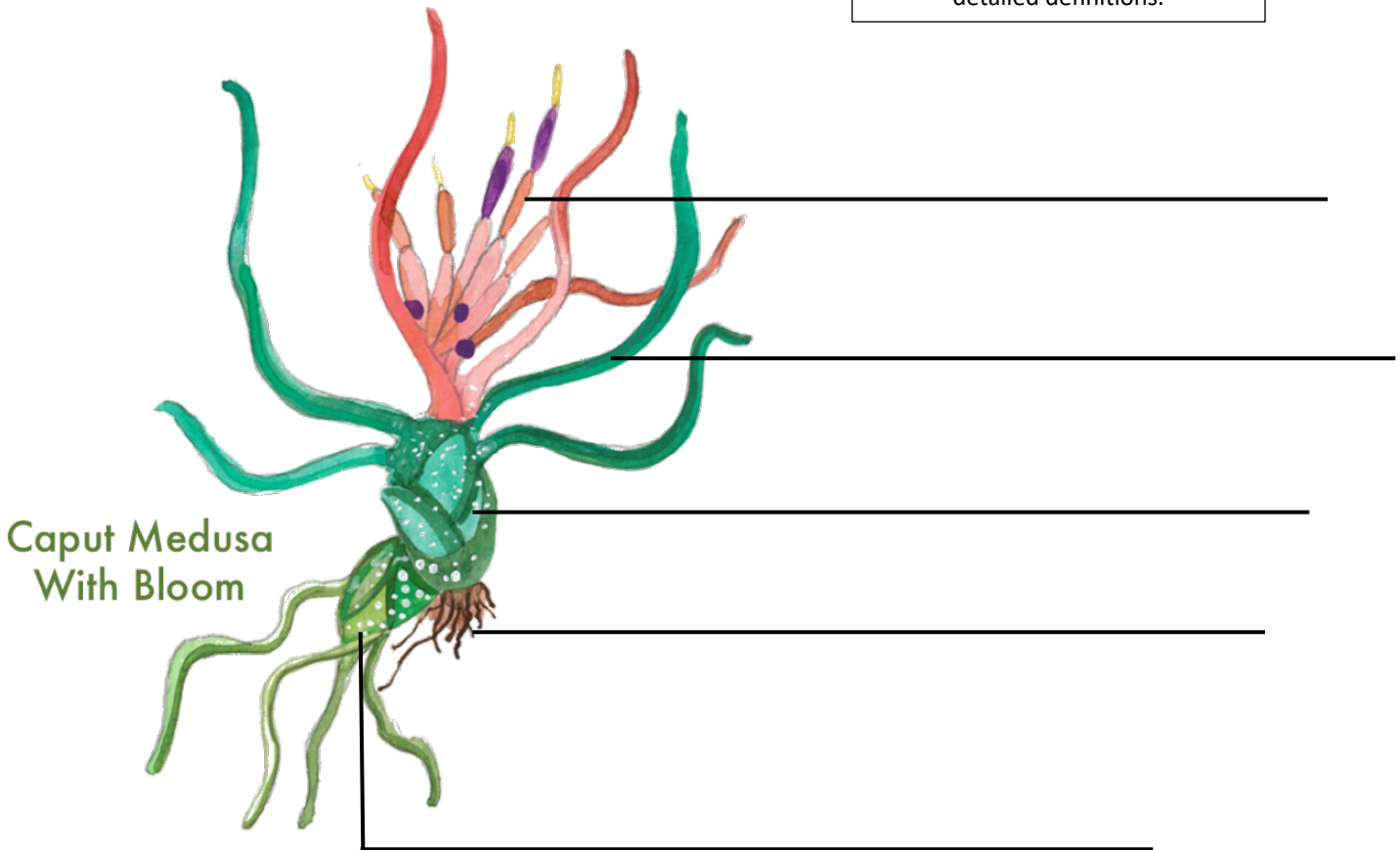
Flower

Pup

Leaves

Trichomes

*Check out the key vocabulary at the end of the worksheet for detailed definitions.



Before you get to build the terrarium you need to give the air plants some water. They might not need soil but they definitely need water to survive! You do not need to water the moss.

How to water an air plant:

1. Fill a bowl with lukewarm water from the sink.
 2. Place all air plants in the water so they can absorb the water for 20-30 minutes.
 3. Once they've had a good drink, take them out of the water. Lightly shake or drain them on a towel to remove any excess water from the base and leaves. You do not want the plant sitting in water or otherwise it will rot.
 4. Set them out to dry in an area with enough circulation to dry out for about four hours.
- *Make sure to water your plants at least once a week!

Now that you know more about air plants and how to take care of your air plants, let's build your terrarium! You can design the inside of your terrarium however you want! **Please use parental supervision while working with glass.**



We would love to see how your terrariums turn out! Send us a photo through the review process (or by clicking this link <http://www.airplantsupplyco.com/review>) or email us at info@airplantsupplyco.com!

Check us out on Instagram @airplantsupplyco and use the hashtag #stayhometerrarium and tag us in your photos!

We value education at home and around the world. With your terrarium order we will continue to support our educational initiatives in Guatemala in partnership with Pencils of Promise, donating \$1 per order. The COVID-19 outbreak has slowed the progress of our second school build. Once things return to normal construction will begin in Quetzaltenango Department, Guatemala. Thank you for the continued support.

KEY VOCABULARY

Air plant: a type of bromeliad plant that naturally clings to wherever conditions permit such as tree branches, bark, bare rocks, telephone wires, etc. Some of the most popular air plants are the Caput Medusa, Xerographica, Ionantha and Capitata Peach which are drawn and labeled above.

Bromeliad (broh-mee-lee-d): All air plants are bromeliads. Bromeliads are a family of plants that encompass over 3,000 blooming tropical plants. The most common bromeliad is the pineapple.

Epiphyte (ep-uh-fahyt): an organism that grows on the surface of a plant and gets its moisture and nutrients from the air, rain, water or from debris around it. Epiphytes grow on other plants for physical support but do not necessarily affect the host negatively. Epiphyte species make good houseplants because of their minimal water and soil requirements! All air plants are considered both bromeliads and epiphytes.

Host: In regards to air plants, the host is the object that the air plant is attached to. It can be living, like a tree branch, or not, like a telephone wire or rock.

Parasite: An organism that lives on another organism, that takes nutrients at the expense of the host.

Pup: A baby air plant that forms from the bottom of the mother air plant after it blooms. If pups are left attached, the air plants will form into a clump.

Terrarium (tuh-rair-ee-uhm): a collection of small plants growing in a clear container with other material such as rocks, sand, sticks, etc. A terrarium is a controlled environment that can replicate a mini ecosystem.

Tillandsia (ti-land-zee-uh): a genus of over 650 species in the Bromeliad family which are native to the forests, mountains and deserts. Their leaves are silvery green in color and covered with special cells (trichomes) capable of rapidly absorbing water that gathers on them.

Trichome (trah-kohm): hair-like or bristle-like outgrowths on the epidermis of a plant. Trichomes serve a variety of functions but mainly help absorb water and airborne materials as well as helps them to regulate their temperature. They also provide defense against insects.