

CONSERVATORY READER: AMAZING ADAPTATIONS



Figure 1: An early view of the Conservatory.

The Garfield Park Conservatory opened in 1908 and is one of the largest conservatories in the United States. The Conservatory is made up of two acres of indoor greenhouses and ten acres of outdoor gardens. The indoor greenhouses consist of eight rooms that grow mostly tropical and desert plants. Figure 1 shows the glass roof covering the largest greenhouse at the Conservatory, the Palm House.

Home to venus fly traps, tall palms, and chocolate trees, the Conservatory is a place to learn and explore!



HOW DO PLANTS MEET THEIR NEEDS?

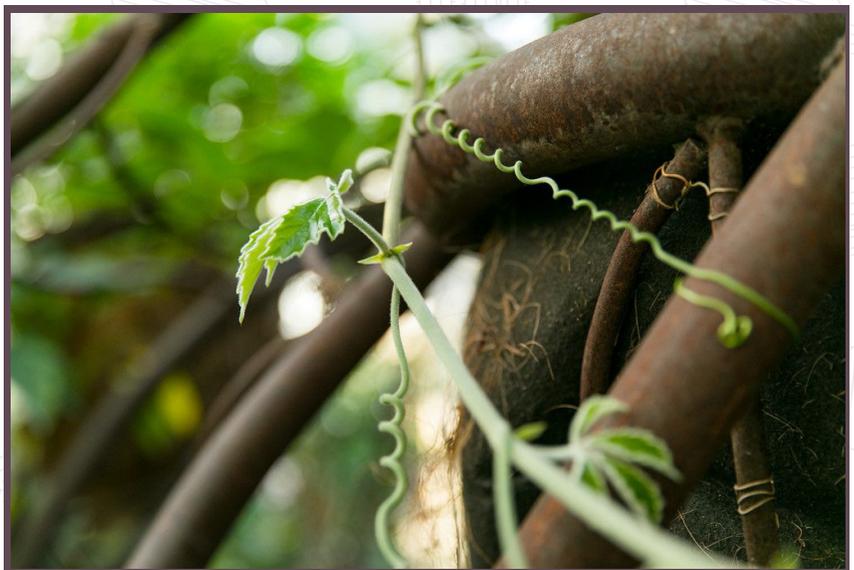
Just like you need certain things to grow and survive, plants have needs, too! All plants require **water**, **nutrients**, **air**, and **sunlight** in order to live and grow. Although all plants have the same needs, they live in very different environments which contain vastly different amounts of water, nutrients, and sunlight. For example, plants live both in deserts where less than one inch of water falls each year and in rainforests where over 100 inches of rain falls each year. Many plants grow in sunny places, but others can thrive on the rainforest floor where only a tiny amount of sunlight is able to reach them.

In order to meet their needs in so many different environments, plants have changed, or adapted, over long periods of time. These changes, called adaptations, are special skills or parts that help plants survive in their unique environment. The Conservatory houses different species of plants from across the world and from many different environments giving you a chance to see some of these incredible adaptations up close.



The ficus tree has aerial roots that grow from the branches! This gives the plant more stability while also giving it more opportunities to collect nutrients from the soil and the air.

Many of our plants have roots underground that help them take in water and nutrients from the soil. The roots of the plants in our desert house do not go very deep into the ground. Instead, the roots are close to the surface and spread out to cover a large area so that the roots can take in as much water as possible in dry desert conditions. Other plants, like our ficus, have roots that grow above the ground. The ficus' roots grow from its branches so that they can take in the water that is in the air!



The chestnut vine has spring-like tendrils that grow outward, looking for something to hold.

Plants also have many different ways to get sunlight. Some of those ways are hard to find, so you have to look closely! Plants need sunlight to reach their leaves, and they have many different adaptations to help make this happen. The Chestnut Vine is a small plant that can not grow tall on its own to get sunlight. So, in order to reach the sunlight it needs, the Chestnut vine wraps its tendrils around taller plants and climbs up them towards sunlight.

As you can see, not all plants meet their needs in the same ways. Come explore the Conservatory to find the hidden ways plants get what they need to live. We hope to see you soon!

AMAZING ADAPTATIONS DISCUSSION QUESTIONS



Can you think of another way that the ficus' roots can help it?



What other adaptations can plants have to get sunlight other than growing on taller plants?



If a plant grows in a very windy area, what adaptations could it have to protect itself from falling down?



What questions do you have about plant adaptations? Remember them or write them down, and ask the staff at the Conservatory!

School groups are welcome at the Conservatory Tuesday through Friday from 9 am-1 pm. For more information visit garfieldconservatory.org/group-visits or email groups@garfieldpark.org.

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