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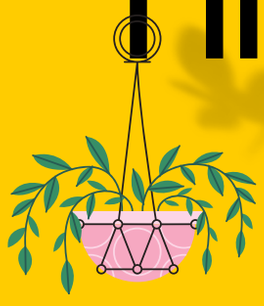
WHAT IS TRANSPIRATION?



Transpiration is a really important part of the water cycle. Transpiration is when water evaporates from the surface of leaves. This loss of water helps the plant to regulate its temperature and is similar to the way humans regulate their temperature when they sweat.

How does transpiration work?

Stomata are holes located in the surfaces of leaves. Guard cells are located around the edges of the stomata and open and close the holes on the surfaces of leaves. Transpiration occurs when these guard cells open the stomata of plants. When the stomata are open, oxygen and water vapor leave while carbon dioxide flows in. Transpiration pulls water through the plant, through the leaves, and into the atmosphere.

What are we testing here?

In this experiment, we are testing indoor and outdoor plants and comparing the amount of water collected from their leaves. This experiment can be performed in a number of ways. You can compare shaded and unshaded plants, smaller versus larger leaves, native versus non-native species, or simply compare different species of plants.

At Home Transpiration Experiment

Collect Materials

STEP 01

For this experiment, you'll need a plastic bag and an outdoor plant, and an indoor plant.

Set Up Experiment

STEP 02

Next, place the plastic bag over the leaves of both the indoor and the outdoor plant.

Wait A Few Hours

STEP 03

Leave the bag on the leaves of the plants for a few hours.

Remove The Bags

STEP 04

After a few hours remove the bags from the leaves and be careful not to spill the water inside!

Draw Conclusion

STEP 05

Determine which bag has the most water. Why do you think one bag has more water than the other?