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A program of the

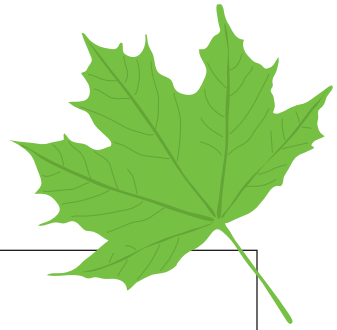
American Public Gardens Association

In partnership with the

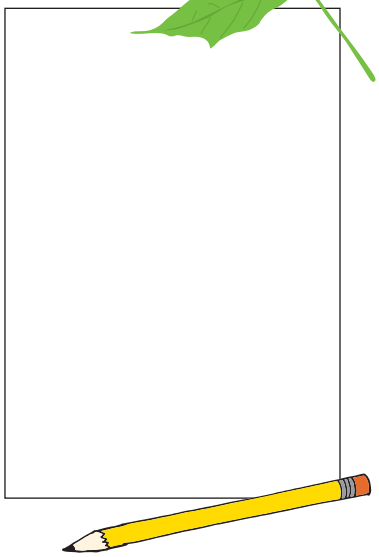
FOREST SERVICE U.S. DEPARTMENT OF AGRICULTURE

LOOKING AT LEAVES JOURNAL

LOOKING AT LEAVES

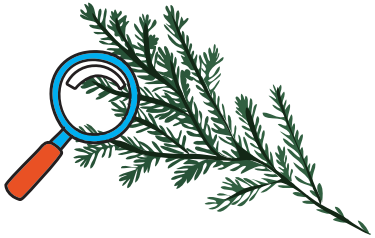


Find a leaf to observe on a plant. What size is it? How does it feel? What shape is it? Sketch your leaf and write about its unique features.



Describe the habitat the plant is growing in.

Now find a leaf to look at on a plant that lives in a different habitat. How are the leaves similar? How are they different? Share your observations below.



Sketch of My Leaf

Draw your leaf and label all its unique adaptations.

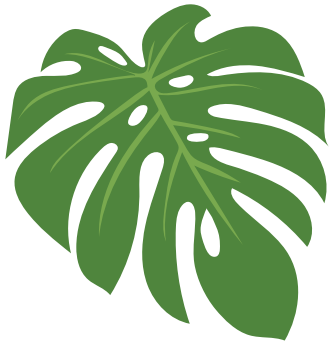
What adaptations does your leaf have?

How do these adaptations help it to survive?

Name your plant based on the unique features of its leaf!
My plant's name is

LEAF ADAPTATIONS SEARCH SHEET

How many leaf adaptations can you find?



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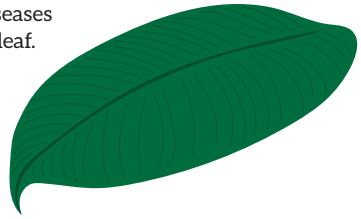
Large holes in leaves

These holes drain water quickly to prevent diseases from growing on the leaf.



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Drip tips

These pointed tips direct water off leaves, enabling them to dry quickly after a rain shower.

☐

Silvery-colored leaves

The silver color reflects sunlight, preventing the leaves from getting a sunburn!

☐

Hairy leaves

Hairs on leaves protect the plant from drying out in the wind.

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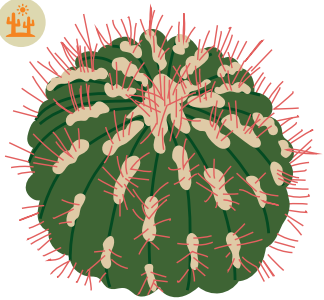
Spines

Ouch! Spines protect leaves from being eaten.



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Long, narrow leaves

The shape of these leaves prevents the loss of water.

Habitat Hints

Use the habitat icons to help you know where to look!

Alpine | Aquatic Habitats | Desert | Prairie | Temperate Forest | Rain Forest

☐

Swollen, fleshy leaves

These leaves are filled with water, helping the plant to survive in dry environments.

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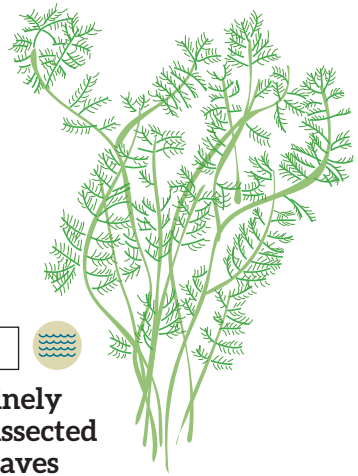
Needlelike leaves

These leaves enable the plant to photosynthesize all year long in cold, dry environments.



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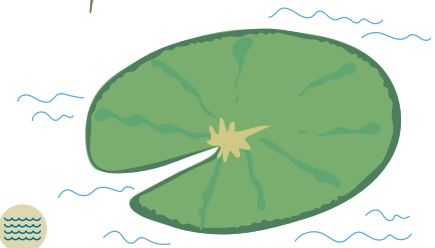
Finely dissected leaves

Water moves easier through dissected leaves, preventing them from tearing.



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Floating leaves

Horizontal leaves that float on water enable the plant to capture more sunlight for photosynthesis.

CREATE YOUR OWN LEAF

Now use your imagination to invent a super leaf adapted to survive in the habitat of your choosing.

Circle your choices below to describe the environment where your plant lives.

My plant lives in the:

Alpine | Aquatic Habitats | Desert | Prairie | Temperate Forest | Rain Forest

The temperature my plant thrives in is:

Cold | Warm | Hot

My plant needs this amount of water:

dry | average | wet

My plant grows in:

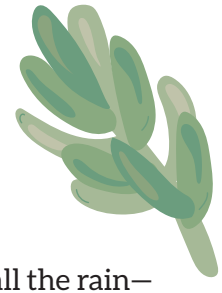
shade | part shade | sun

The leaves of my plant are protected by:

hair | spines | poison

Have you ever wondered why plant leaves come in so many different shapes, sizes, colors, and textures?

Plants live in many different environments. These environments can be hot or cold, dry or wet, windy or calm. All plants have **adaptations**, characteristics that help them meet their needs and survive in their environments. Variations in leaf shape, size, texture, and color are adaptations the plant uses to survive.



In desert habitats—which have extreme temperatures, lots of wind, poor soil, and little rain—leaves are fleshy to store water.

In a rain forest—where it is shady, hot, and humid from all the rain—leaves are large to collect more sunlight for photosynthesis. They too have a waxy texture to their leaves. However, this texture allows the rain to roll off the leaves quickly. The leaf's surface dries quicker so that disease does not grow and harm the plant.

Use the search sheet on the following pages to discover more amazing leaf adaptations.

Did you know? Some leaves contain poisons or glass-like crystals called "silica." These chemicals protect the leaves from being eaten by predators.