

Leaf Science Activities

10 Science
Activities
for
Little
Learners



By Angela Thayer

Thank you for purchasing my Leaf Science Activities Packet!

I hope these activities will be a lot of fun for your little one and that it will increase their love of learning! Science activities are SO much fun and a lot of learning happens with these hands-on activities!

This packet covers the following science concepts:

- Life processes
- Living things
- Botany
- Photosynthesis
- Transpiration

If you have any questions or comments, please feel free to email me at angela@teachingmama.org

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Clip Art By:
Boo-tique
Key & Bell
Amanda Ilkov

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Leaf Life Cycle



Materials:

- Red Leaf, Yellow Leaf book by Lois Ehlert
- Life Cycle Printable
- scissors
- glue

Science Concepts:

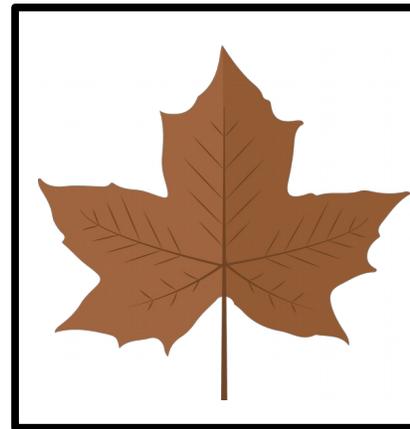
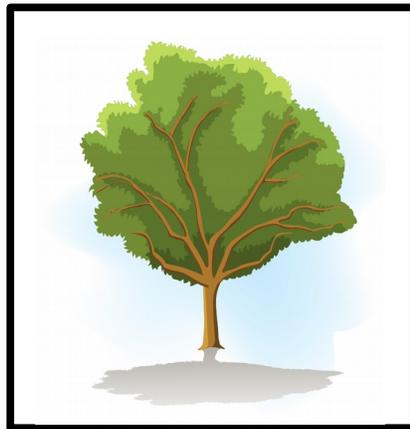
Life Processes, Living Things

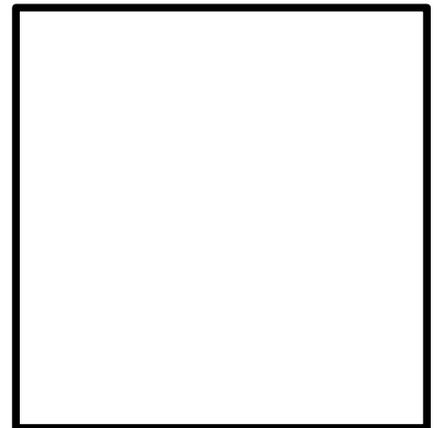
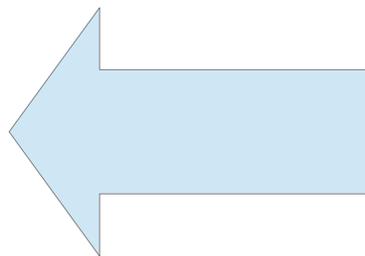
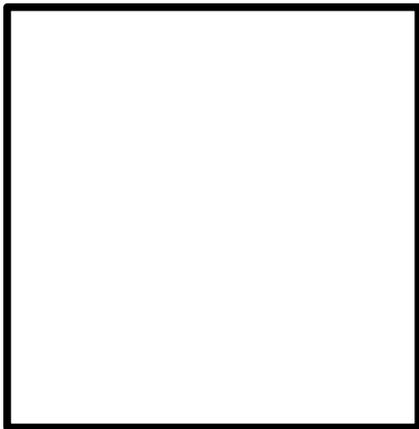
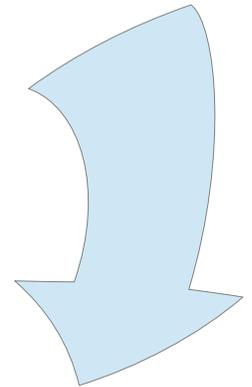
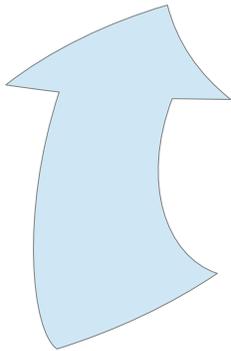
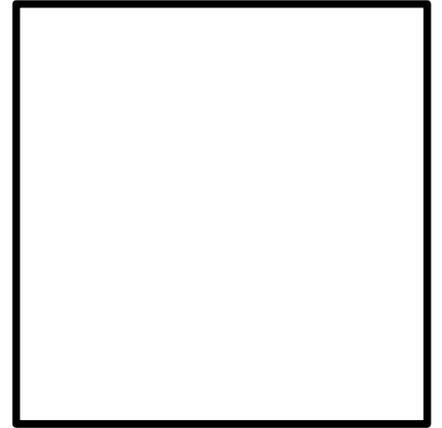
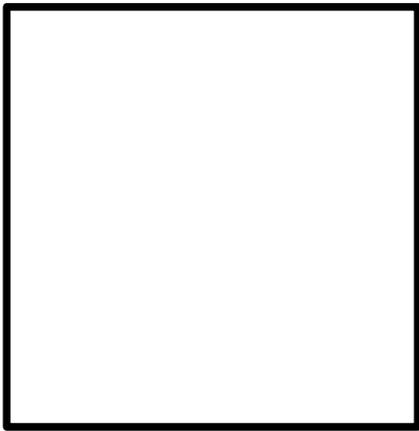
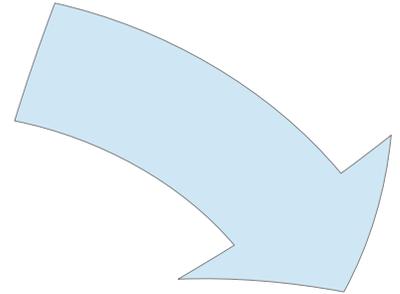
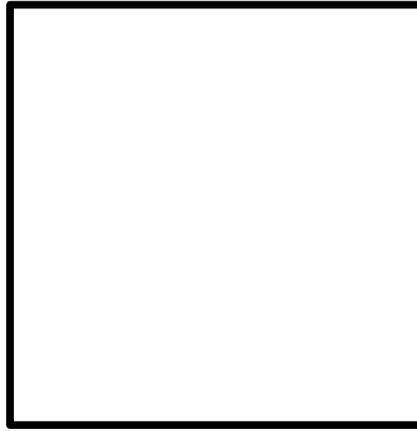
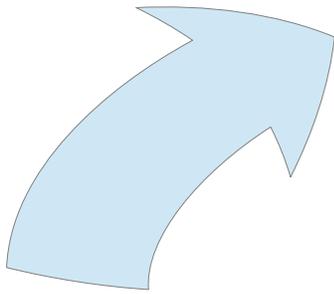
Directions:

1. Ask your child what they know about the life cycle of a leaf.
2. Read the book, Red Leaf, Yellow Leaf by Lois Ehlert.
3. Talk about the life cycle of the leaf. First, a tree starts from a seed and then the seed grows into a tree, which produces leaves. The leaf starts out green, but as the days get shorter and colder, the tree begins to rest. It stops making chlorophyll, and other pigments color the leaves, such as red, yellow and orange. After the leaf drops, the leaf changes to brown.
4. Have your child cut out the 5 life cycle pictures. Paste them in order on the life cycle circle.

Leaf Life Cycle

Directions: Cut out the 5 life cycle pictures. Have your child arrange them in order and glue them on the life cycle circle.





Parts of a Leaf



Materials:

- leaf
- leaf parts printable
- scissors
- glue

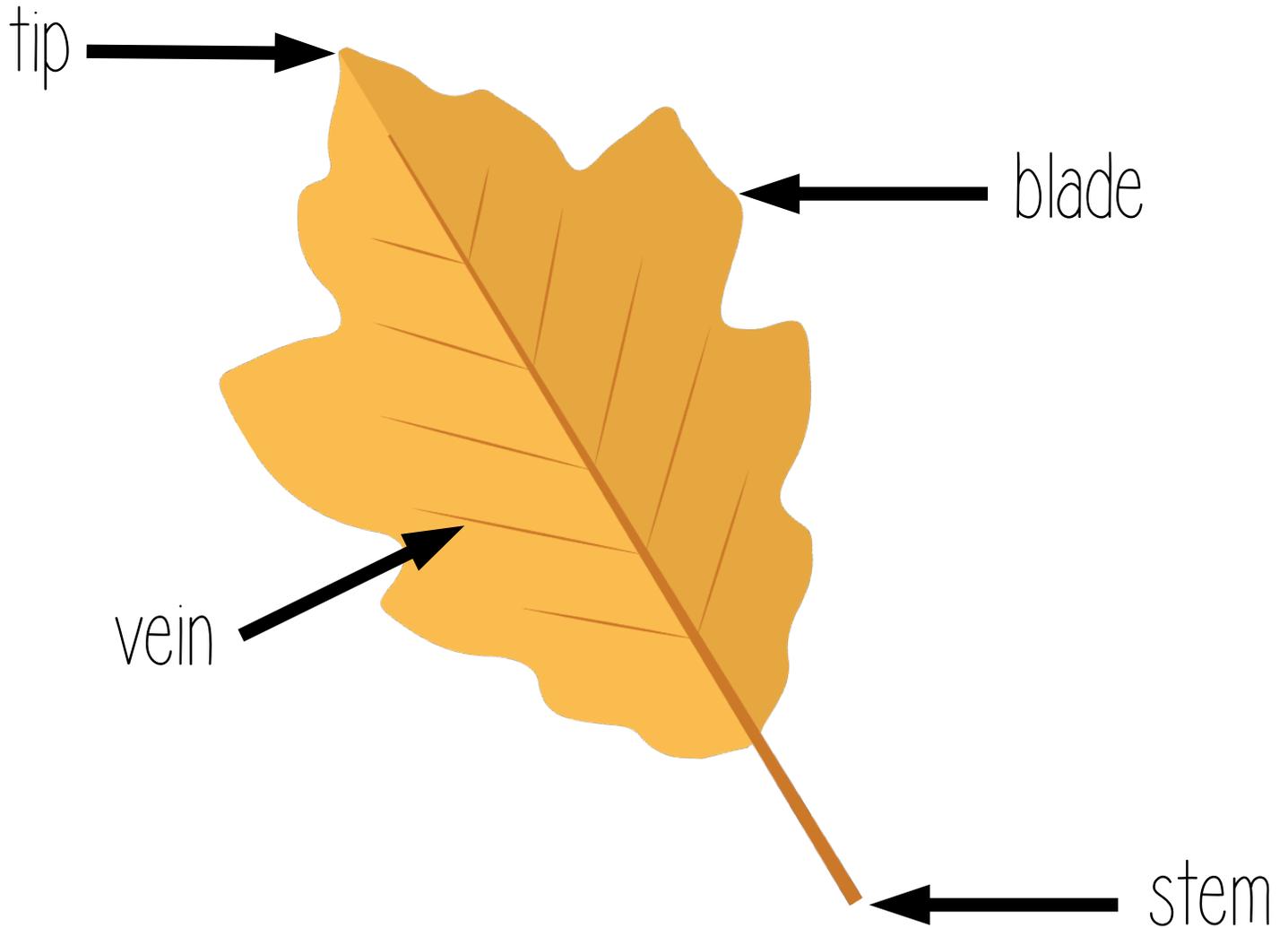
Science Concept:

Investigating Living Things

Directions:

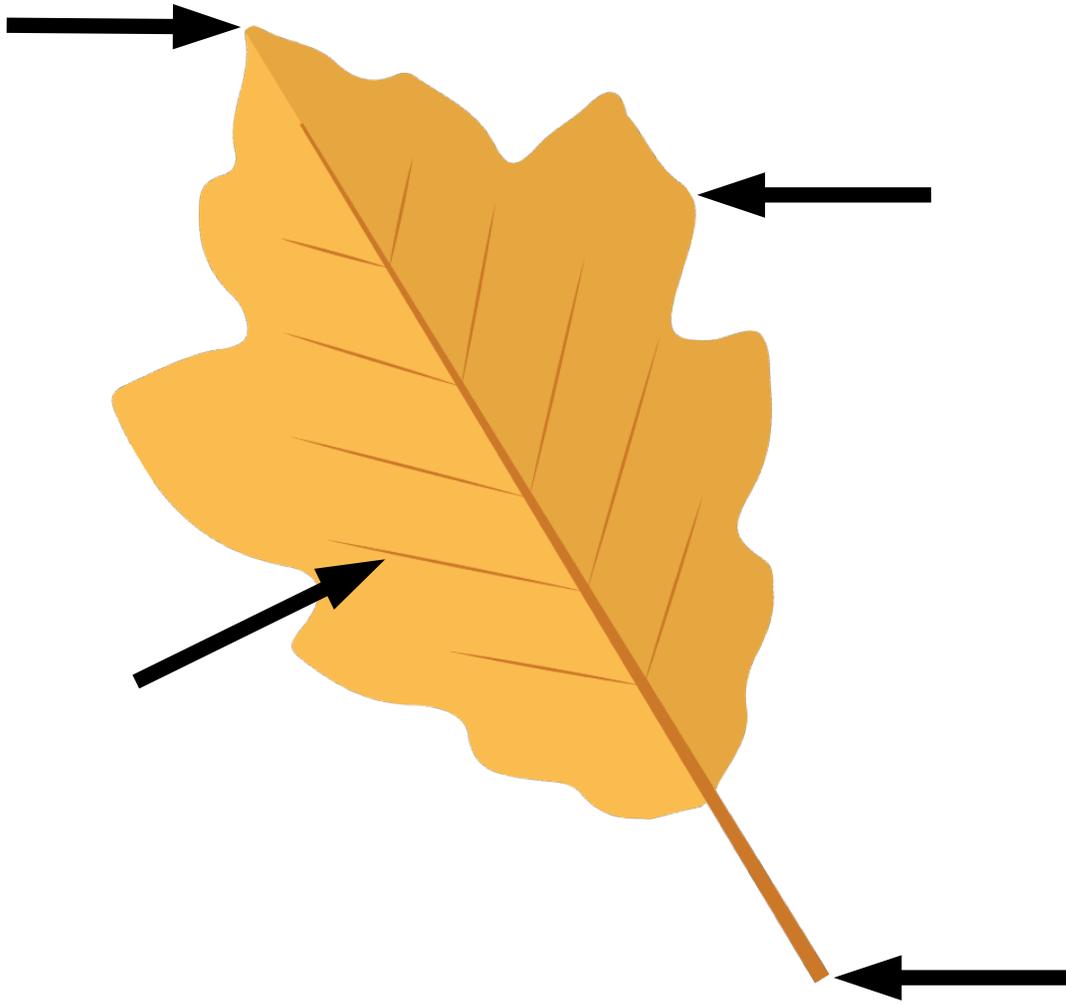
1. Observe the outside of an leaf. Talk about the parts that your child knows.
2. Explain there are 4 basic parts to a leaf: stem, veins, blade, and tip. Show your child the printable with the labels.
3. Cut out the parts of an leaf labels on the printable.
4. Glue the labels next to the part on the leaf.

Parts of a Leaf



Parts of a Leaf

Cut out the labels and place them on next to the arrows.



Parts of a Leaf:

stem

blade

vein

tip

Comparing Leaves



Materials:

- 3-4 leaves
- paper
- crayons

Science Concept:

Investigating Living Things

Directions:

1. Gather several different kinds of green leaves.
2. Have your child look at the leaf and talk about the differences and similarities.
3. Place the leaves underneath a piece of white paper. Rub a crayon on the top until the whole leaf is colored.
4. Examine the drawings and talk about the differences and similarities between the leaves.

Crunchy Leaves



Materials:

- leaves
- Ziploc bag
- journal

Science Concepts:

Biology, Investigating Living Things

Directions:

1. Find several freshly-fallen leaves on the ground.
2. Take them inside to observe. Place 1 on the counter to observe and another one inside of a sealed Ziploc bag.
3. Observe the leaves and watch how long it takes for the leaves to dry up and become crunchy.
4. Fill out the observation sheet to track how long it takes.
5. After the leaves are dry and crunchy, talk about the differences in how long it took. Discuss that the Ziploc bag preserved the leaves a little longer, but both ways show that the decaying leaf because it no longer has a source of nutrients.

Crunchy Leaves Journal

Directions: Collect leaves. Put some on a tray and observe. Place the others inside of a sealed Ziploc bag. Draw your observations below and write an X on the day when the leaves became dry and crunchy.

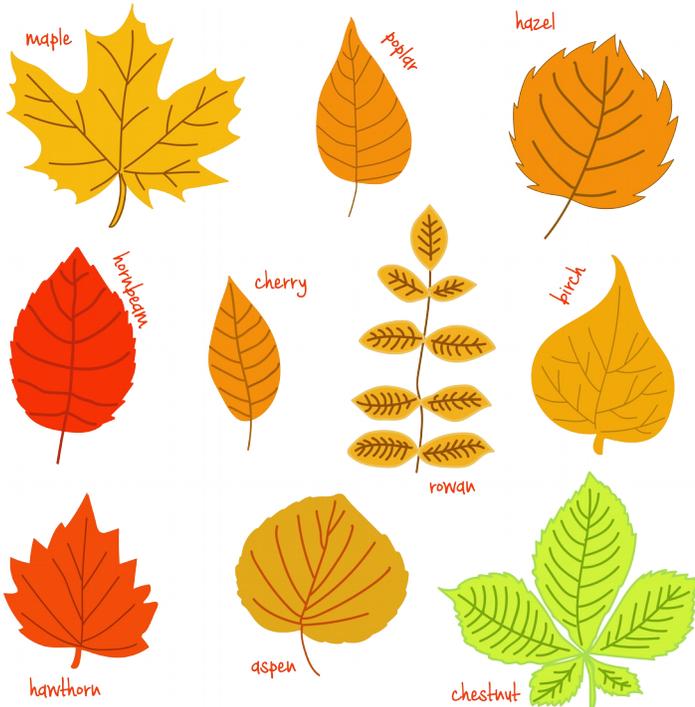
Leaves on a Tray:

Day 1	Day 2	Day 3	Day 4	Day 5

Leaves in a Bag:

Day 1	Day 2	Day 3	Day 4	Day 5

Leaf Hunt



Materials:

- leaves
- leaf hunt printable

Science Concepts:

Investigating Living Things, Botany

Directions:

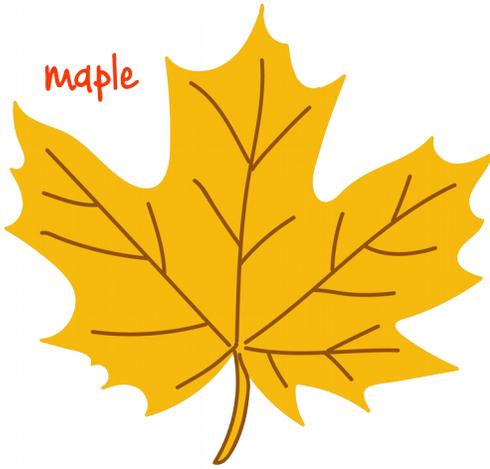
1. Take a walk around the neighborhood or park and search for leaves.
2. Collect a variety of leaves and look at the printable to see which leaves you found.
3. There are many types of leaves, so if you find one you don't see on the printable, try using the [Leaf Snap app](#) to identify the leaves. This app allows you to take a picture of a leaf and then it will identify it for you!
4. Talk about the differences and similarities between the leaves.

Extension Idea:

Sort the leaves your found by size, color, and shape!

Leaf Hunt

Directions: Search for these leaves from trees and then put an X on the picture, once it is found.



maple



poplar



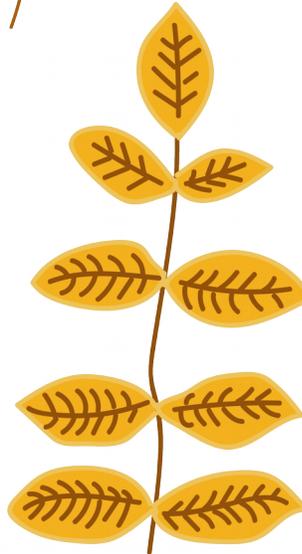
hazel



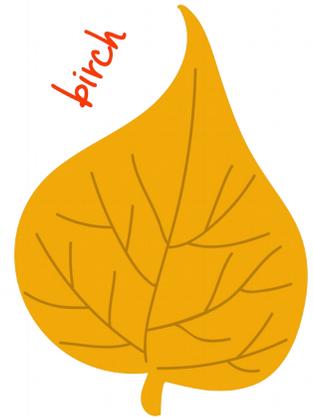
hornbeam



cherry



rowan



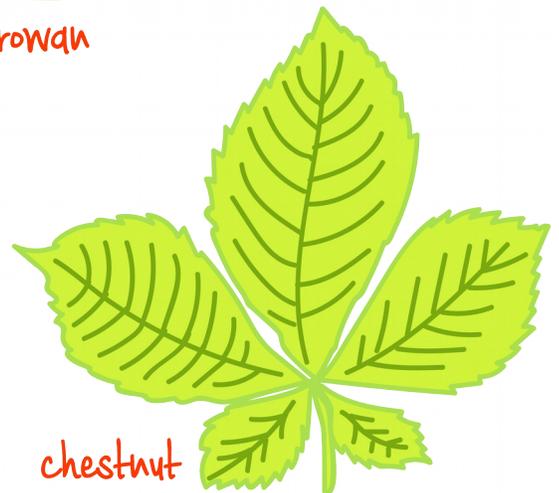
birch



hawthorn



aspen



chestnut

How Leaves Change Colors



Materials:

- 3 leaves from the same tree
- rubbing alcohol
- strip of paper towel
- jar
- wooden spoon
- tin foil or a lid
- bowl with warm water

Science Concepts:

Biology, Investigating Living Things

Directions:

- 1.** Tear the leaves into small pieces and place in a jar. Pour enough rubbing alcohol in the jar to cover the leaves. Cover the jar loosely with a lid or tin foil.
- 2.** Place the jar in a bowl with about 2 inches of hot tap water in it.
- 3.** After 5 minutes, twirl the jar gently. Then let it sit for 5 more minutes. Do this 5 times. If the water in the bowl is cold, replace it with hot water. The liquid will turn green.
- 4.** After 25 minutes, remove the jar from the hot water bowl and place a strip of paper towel inside the jar touching the liquid. Tape it to the outside of the jar. Wait for 30-90 minutes as you watch colors travel up the paper towel. It will be green at first and then change to another color, such as yellow, red, or orange.
- 5.** Explain that chlorophyll make leaves green and it is so dominant that it covers up all other colors in the leaves. In the fall, the chlorophyll in the leaves breaks down, allowing the other colors to finally shine through. This experiment shows what color the leaf would be without the dominant chlorophyll color.

How Leaves “Breathe”



Materials:

- 1 green leaf
- lukewarm water
- 1 glass bowl
- observation sheet

Science Concepts:

Living Things, Photosynthesis

Directions:

- 1.** Ask your child if a leaf is a living thing. Explain that this experiment will create an environment to show how a leaf is a living thing.
- 2.** Take a green leaf and place it in a bowl of lukewarm water. Place a rock on top to keep it submerged under the water. Let it sit for 2-3 hours in a sunny spot.
- 3.** After several hours, you will start to see bubbles form around the leaf and the bowl.
- 4.** Ask your child what would happen if we held our breath under the water and then let out the breath. We would see bubbles coming up to the water! A similar thing is happening here. The leaf is still using sunlight as part of the photosynthesis process. Since the leaf is producing energy, it needs to get rid of what it's not using so it will get rid of both water and oxygen through something called transpiration. And that is why there are bubbles! When the leaf gives off oxygen when it is under the water, the oxygen can be seen in the water. In simple terms, this is how a plant turns sunshine into food and releases oxygen for us to breathe. This shows the importance of plants for the environment!

How Leaves “Drink” Water



Materials:

- 1 green leaf
- water with dark red food coloring
- magnifying glass
- observation sheet

Science Concepts:

Investigating Living Things, Transpiration

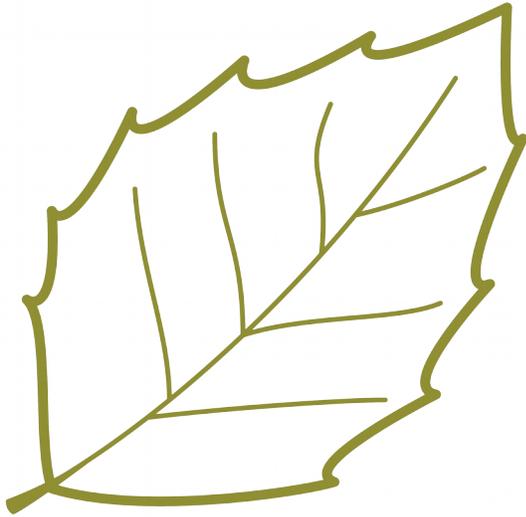
Directions:

1. Pick a green leaf with a stem.
2. Snip off a small piece of the stem and place it in a bowl of red water and let it sit there for 2 days.
3. As the leaf sits there, you will see the leaf's veins and stem change to red. Observe the leaf and use a magnifying glass to see it up close. Draw your observations on the printable.
4. Discuss how this shows how a leaf gets water. The stem and veins are important for carrying water and minerals to the whole leaf in order to keep it alive.

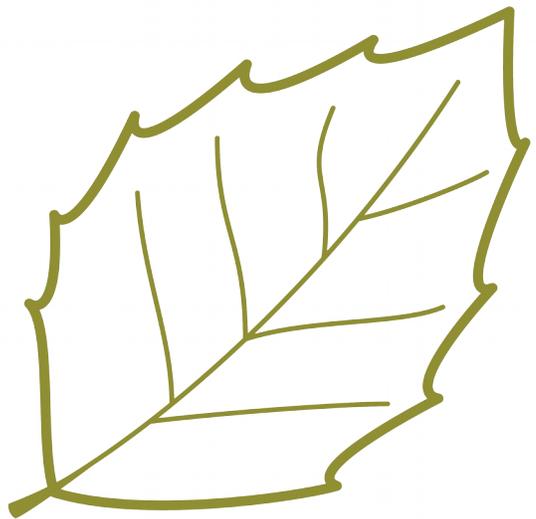
How Leaves Drink Water

Directions: Observe the leaf in the red water. Color your observations on the leaf below.

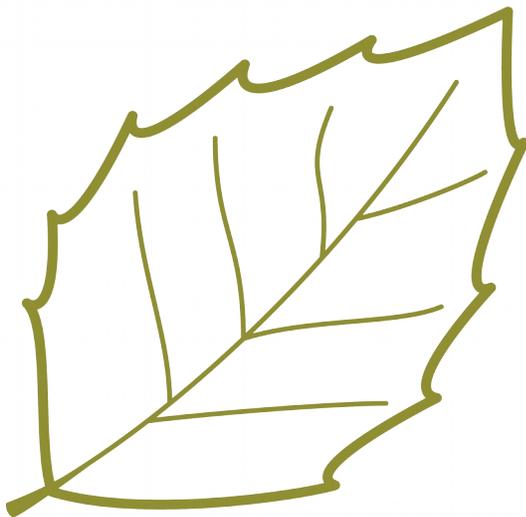
1 Hour



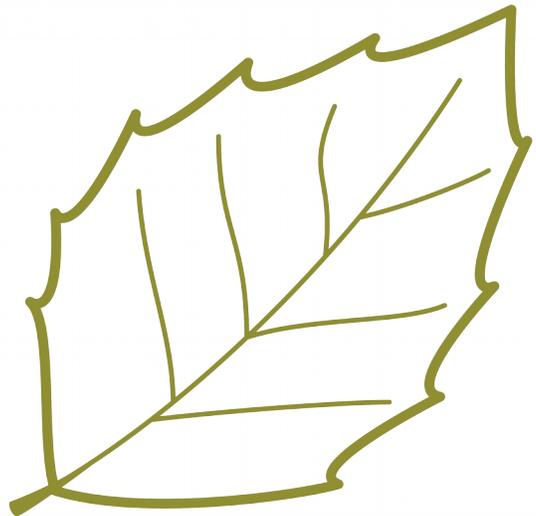
12 Hours



1 Day



2 Days



How Leaves Get Water



Materials:

- 1 plastic bag
- tree

Science Concepts:

Investigating Living Things, Transpiration

Directions:

- 1.** Tie a plastic bag around a tree branch and leave it there for several days. Make sure this is in a sunny spot.
- 2.** Look at the bag every day. You will see moisture and water inside of the bag. After 3-4 days, there will be a pool of water inside of the bag.
- 3.** Explain that plants absorb nutrients and water through their roots. The water flows through the tree and reaches every leaf on the branch. In this experiment, the sun caused the bag to heat up, which drew water out from the leaves. The water evaporated and then condensed on the inside walls, making water.
- 4.** This is an effective way to collect water and even a way to survive in the wilderness when water is needed.

What Happens to Leftover Leaves



Materials:

- brown leaves
- acorns
- seeds
- food coloring
- observation sheet

Science Concepts:

Life Processes

Directions:

- 1.** Ask your child what they think happens to the leaves that are left on the ground all winter.
- 2.** Explain that leaves left on the ground where trees naturally grow is a good thing. The leaf layer is its own mini ecosystem. Go through the reasons found on the printable.
- 3.** Create a collage of leaves on the ground. Start by collecting brown leaves, acorns, and seeds from the ground.
- 4.** Glue the leaves around the paper. Then glue on acorns, seeds, or other things found on the ground. You can also draw in other creatures or items that would be on the ground during winter or finding food in the spring.

Why are Leaves on the Ground a GOOD Thing?

- *provides food for wildlife animals
- *natural mulch that keeps weeds from growing and fertilizes the soil
- *many butterflies find shelter in leaves, either in egg, pupal, or adult form, to safely wait out winter
- *great environment for spiders, which are essential in keeping pest insects in balance.
- *home to ladybugs, salamanders, toads, and other predators of pest insects.
- *a place for birds to pick through the leaves in search of food during the spring

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**Happy Learning!
-Angela**