

Super Leaf Explorers!

Get ready to become a Super Leaf Explorer! Leaves are amazing parts of plants, like tiny food factories and breathing helpers. Let's dive in and learn all about them!

Materials You'll Need:

- A variety of leaves collected from outside (different shapes, sizes, colors if possible)
- Plain white paper
- Crayons (with paper peeled off is helpful!)
- Magnifying glass (optional but fun!)
- Notebook or paper for sorting
- Glue or tape (optional)

What Do Leaves Do?

Leaves have very important jobs for the plant:

1. **Making Food:** Leaves are like little chefs! They use sunlight, water, and air to make sugary food for the whole plant. This process is called photosynthesis (foto-sin-the-sis), but you can just think of it as the plant's kitchen!
2. **Breathing:** Plants need to breathe too, kind of like us! Leaves have tiny, tiny holes called stomata (sto-mah-tah) - too small for us to see without a special microscope. They take in air the plant needs and let out air it doesn't need through these tiny doors.

Look Closer! Leaf Parts

Let's look at one leaf. Can you find these parts?

- **Blade:** This is the main, flat part of the leaf.
- **Petiole (peh-tee-oh!):** This is the little stalk that connects the leaf blade to the stem of the plant. (Some leaves don't have one!)
- **Veins:** Look closely! See the lines on the leaf? Those are veins. They carry water to the leaf and food away from the leaf, like tiny straws and pipes.

Use your magnifying glass if you have one to see the veins up close!

So Many Different Leaves!

Look at all the leaves you collected. Are they all the same?

- **Shape:** Are some round? Long and skinny? Heart-shaped? Shaped like a hand?
- **Edges:** Feel the edge of the leaf. Is it smooth? Jagged like a saw? Wavy?
- **Size:** Are some tiny? Are some big?

Every type of tree or plant has its own special kind of leaf!

Activity 1: Leaf Rubbings!

Let's capture the beauty of your leaves!

1. Place a leaf on a flat surface, vein-side up (the bumpy side).

2. Carefully place a sheet of white paper over the leaf.
3. Hold the paper still with one hand.
4. With the other hand, take a crayon (paper peeled off works best) and lay it on its side.
5. Rub the side of the crayon firmly back and forth over the area where the leaf is underneath the paper.
6. Wow! Watch the shape and veins of the leaf appear like magic on your paper!
7. Try this with different leaves and different colors.

Activity 2: Leaf Sorting!

Let's be scientists and sort our leaves.

1. Look at all the leaves you collected.
2. Decide how you want to sort them. You could sort by:
 - Size (Big pile, Medium pile, Small pile)
 - Shape (Roundish pile, Pointy pile, Hand-shaped pile)
 - Edge (Smooth edge pile, Jagged edge pile)
 - Color (Green pile, Yellow pile, Brown pile - if you found different colors!)
3. Arrange your leaves into groups based on the way you chose to sort. You can draw circles on paper for your groups or just make neat piles.
4. You can glue or tape your sorted leaves into a notebook if you like!

Why Do Leaves Change Color?

Have you seen leaves turn yellow, orange, or red in the fall? That's because as it gets colder and there's less sunlight, the green color (that's called chlorophyll - klor-o-fill) fades away. When the green fades, you can see the other beautiful yellow and orange colors that were hiding underneath all along! Red colors are sometimes made new in the fall. Eventually, the leaves fall off the tree to help the tree save energy for the winter.

Wrap Up!

What was the coolest thing you learned about leaves today? Can you name the main jobs of a leaf? Leaves are super important and super interesting! Great job being a Super Leaf Explorer!