

The Leaf Detective



Tap-tap-tap! One windy autumn morning, Pip Fox opened his door. On the step sat a little golden leaf. “I’ve lost my tree,” she sniffled. “The wind twirled me so fast that I cannot remember where I belong.”

“Then I will help you find your home,” said Pip. He carried her gently to the silver birch, but its tiny leaves were not the same. Next, Pip asked the old oak, but its leaves had soft, wavy bumps.

The little leaf drooped. “Perhaps no tree is mine.” Just then, five red leaves danced past like stars. Her five pointed tips began to tingle. Her branching veins hummed a familiar song. “Follow them!” cried Pip.

At the top of the hill stood a maple glowing red and gold. “My little leaf!” rustled the tree. The wind lifted her into one last joyful dance before laying her gently among the maple’s roots. From that day on, Pip was known as a leaf detective.



What clues helped Pip find the leaf’s tree?

Answer: her five pointed tips and branching veins

OBJECTIVES

In this activity, you will...

1. Explain why leaves look green and why some change color in fall.
2. Use leaf and plant photos to ask AI and check its guess.
3. Identify the leaf shape and vein clues AI can compare in a photo.

LEARN

Fall Nature Walk

Miss Stephanie's Virtual Learning Adventures - 10 min 24 sec

Walk through the woods with Miss Stephanie! Look and listen closely for clues about trees and leaves.



Scan me to watch



Inside a Leaf

The Daily ECO - 4 min 35 sec

Meet a special ingredient inside leaves! Look and listen closely to find out what it is and what it does.



Scan me to watch



After watching, answer two questions. Turn the page upside down to check!



Why are leaves green?



Why do leaves change color in fall?

In fall, leaves stop making green. Then yellow and orange show.



Leaves have a green helper called chlorophyll. It uses sunlight to make food for the tree.



Use Clues to Check AI

Use your video clues to check AI! With a grown-up, find one fallen leaf and the tree it came from. Do not touch or taste unknown plants.

1 Take two photos



PHOTO A · LEAF

One leaf, close and clear.



PHOTO B · TREE

The whole tree, from a safe distance.

2 Send Photo A to AI

Type or say:

“What tree is this leaf from? Name two clues.”

3 Send Photo B to AI

In the same chat, type or say:

“Here is the whole tree. What is your best guess now?”

4 Find the real answer

Ask your grown-up to check a trusted source:

tree sign or label

plant guidebook

teacher or nature expert

Was AI right?

☐

Yes

☐

Almost

☐

No



AI matches photo patterns, like leaf shape and veins, to labels it learned. This is image recognition.



AI Caveat

AI can make mistakes. A blurry photo or a look-alike leaf can fool it, so always check with a trusted source.

Turn Your Leaves into Art

You checked Al's guess. Now be the maker! Playing and building with your hands is one of the best ways to learn.



Finished example

Leaf Rubbing

Make a hidden leaf pattern appear by rubbing a crayon over paper.

You need: 1 fallen leaf, 1 sheet of paper, and 1 crayon with the wrapper peeled off.

- 1 Put the leaf under the paper. The bumpy side with the veins should face up.
- 2 Hold the paper still. Rub gently with the side of the crayon.
- 3 Keep rubbing. Watch the leaf's outline and veins appear!



Finished example

Leaf Creature

Collect more fallen leaves. Then make a leaf creature!

You need: fallen leaves, 2 sheets of paper, child-safe scissors, a glue stick, and crayons or markers.

- 1 Lay the paper flat. Arrange the leaves on the paper until you like your creature.
- 2 Lift one leaf at a time. Rub glue on its back, then press it onto the paper.
- 3 Draw eyes, a beak, and legs on the second sheet. Cut them out, then glue them onto the leaves.

Crack Pip's Secret Code!

Read each quiz, circle the best answer, and write its letter in the matching box. Turn the page upside down to check!

Quiz 1

Fall leaves turn yellow because they have...

- T.** more chlorophyll
- P.** less chlorophyll
- S.** more sunlight

Quiz 2

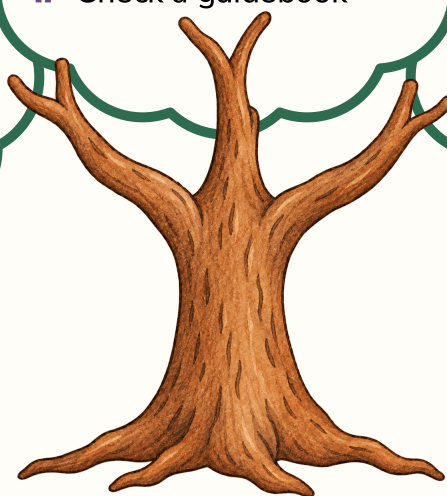
Al changes its guess after Photo B. What now?

- E.** Trust the new guess
- I.** Check a guidebook

Quiz 3

Which leaf clues showed up in your leaf rubbing?

- N.** The leaf's smell
- O.** The tree's name
- P.** Outline and veins



PIP'S SECRET CODE

