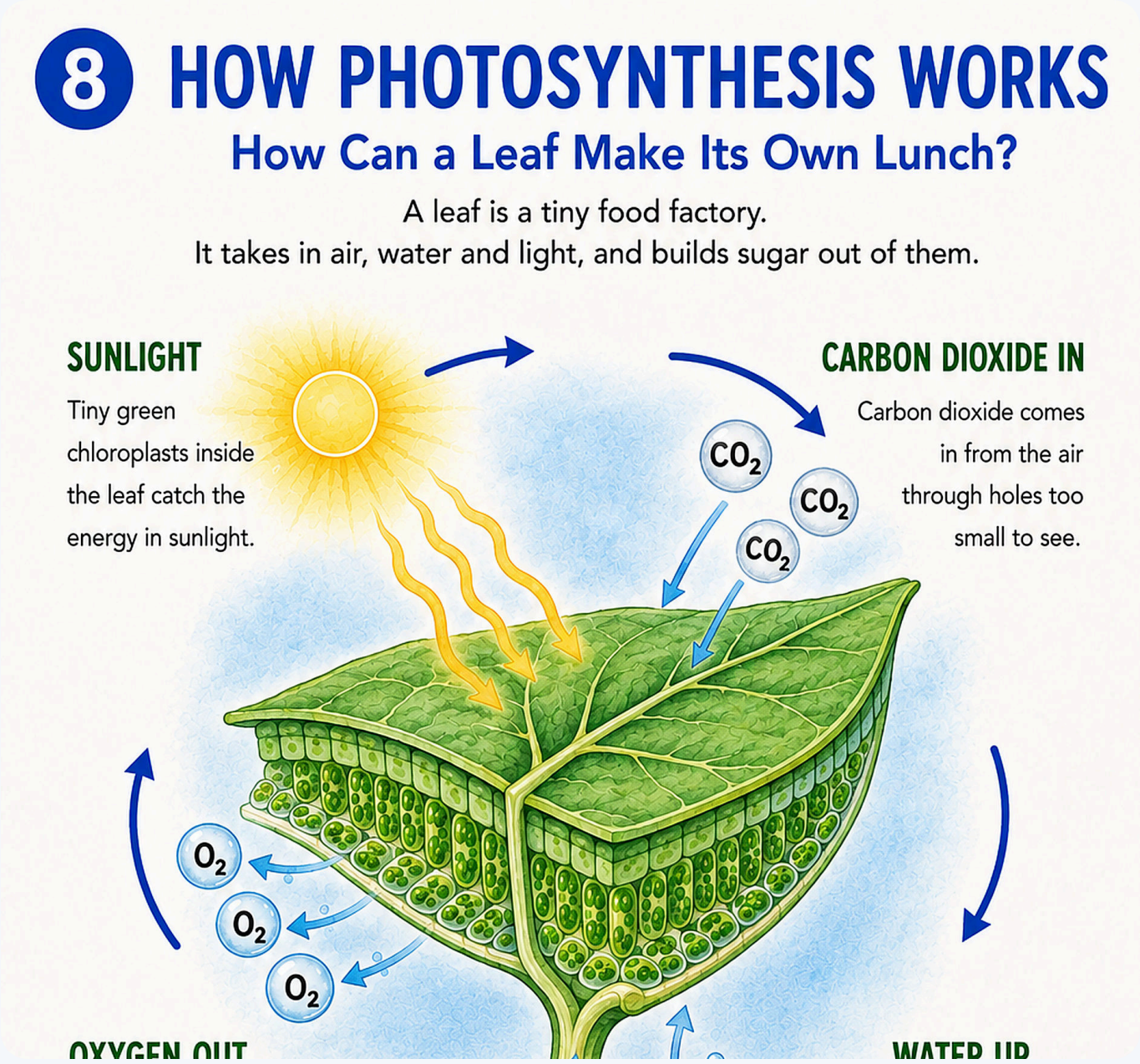
FREE PLANT SCIENCE PRINTABLE · GRADES 2–5

How Does a Leaf Make Its Own Food?

Photosynthesis diagram + color-and-label page, with answer key



8 HOW PHOTOSYNTHESIS WORKS

How Can a Leaf Make Its Own Lunch?

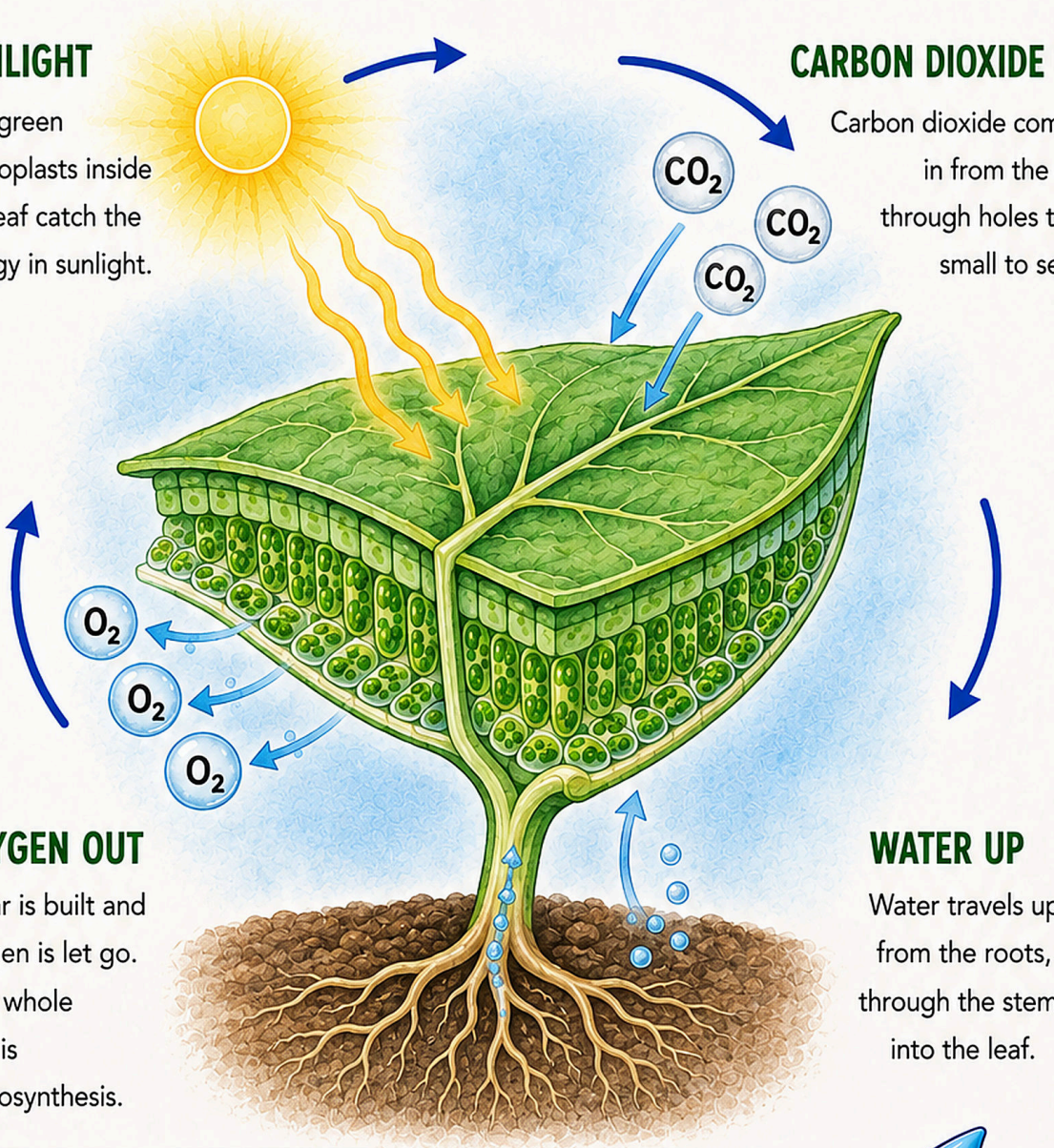
A leaf is a tiny food factory.
It takes in air, water and light, and builds sugar out of them.

SUNLIGHT

Tiny green chloroplasts inside the leaf catch the energy in sunlight.

CARBON DIOXIDE IN

Carbon dioxide comes in from the air through holes too small to see.



OXYGEN OUT

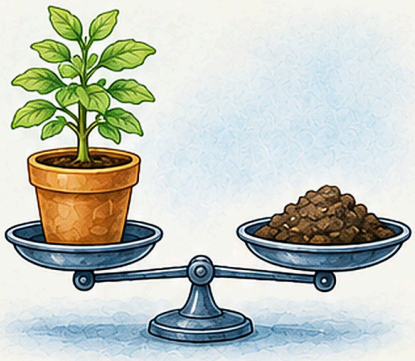
Sugar is built and oxygen is let go. That whole trick is photosynthesis.

WATER UP

Water travels up from the roots, through the stem, into the leaf.

DID YOU KNOW?

Most of a tree is built from air, not from soil. If you weigh the soil in a pot before and after growing a big plant, hardly any has gone.

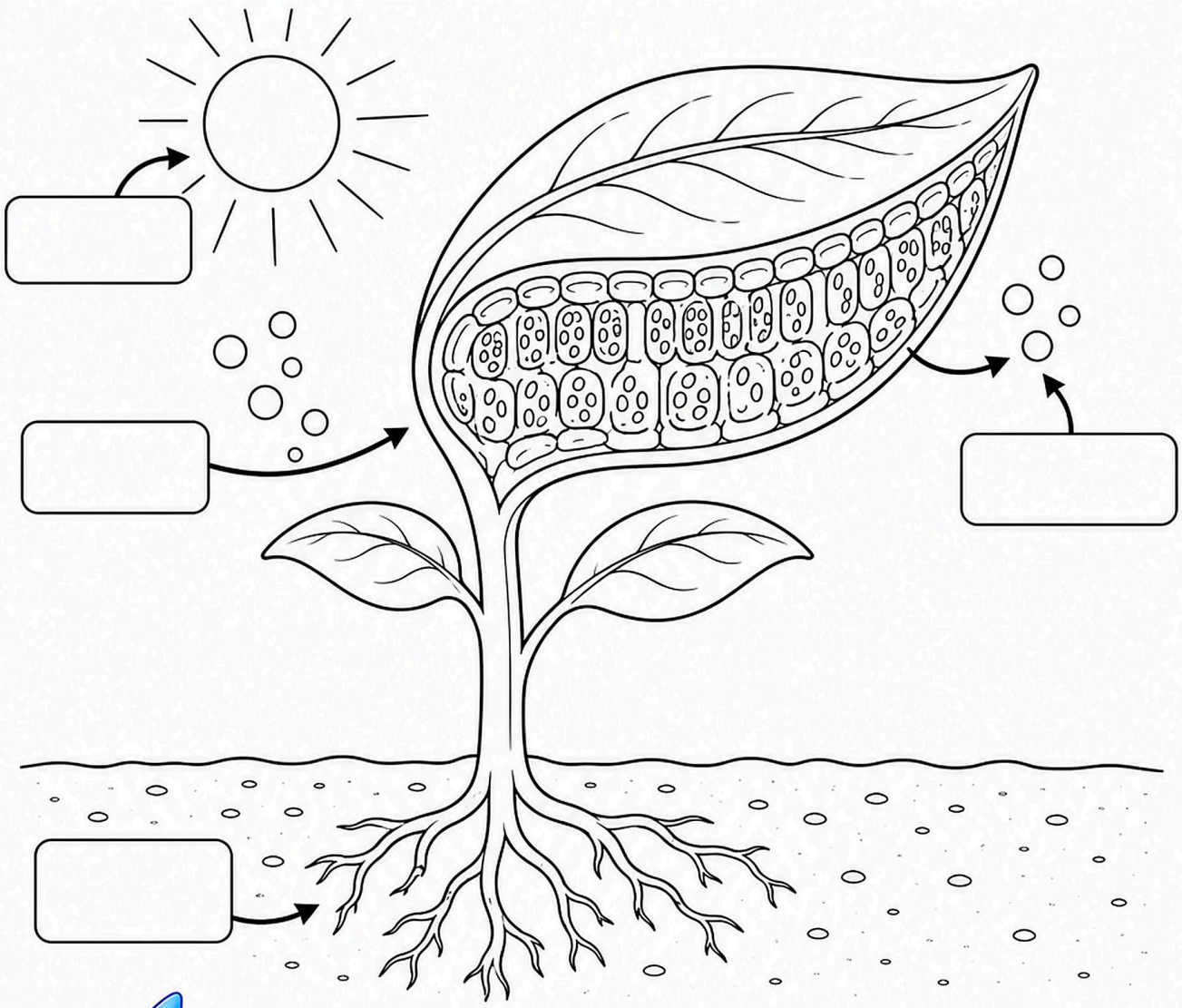




LET'S UNDERSTAND!
HOW PHOTOSYNTHESIS WORKS

Color the picture and label each step using the word bank below.

sunlight	carbon dioxide in	water up	oxygen out





AMAZING FACT!

The green you see in a leaf is the colour it did not want. Chlorophyll uses red light and blue light, and throws the green back at your eyes.

RIDDLE!

I am a tiny green machine inside a leaf. I catch the light, and I am the reason leaves are green. What am I?

(Answer key at the back)

Answer Key

Color and Label: How Photosynthesis Works

1. **sunlight** — the leaf catches its energy from light
2. **carbon dioxide in** — a gas from the air, taken in through tiny holes in the leaf
3. **water up** — drawn up from the roots, through the stem, into the leaf
4. **oxygen out** — let go into the air for us to breathe

RIDDLE

"I am a tiny green machine inside a leaf" — **a chloroplast**. It holds the green stuff called chlorophyll.

Talk about it

- Most of a tree is built from something you cannot see. What is it? *(Carbon dioxide from the air.)*
- Why do houseplants lean toward the window? *(They need light to make their food.)*
- What do you think would happen to a plant kept in a dark cupboard for a week? Why?

THE FULL UNIT

This freebie comes from **Photosynthesis — No-Prep Science Unit**: an illustrated story with Anna and Bella, the full diagram, riddles, a word search, comprehension questions, a hands-on "catch a leaf breathing out" experiment and a complete answer key. Search "AnnaLand photosynthesis" on TPT.

TERMS OF USE

Free to print as many times as you like for your own classroom or home. Please share the link to this page rather than the file itself.