

BIOLOGY BASICS Need to Know

Photosynthesis

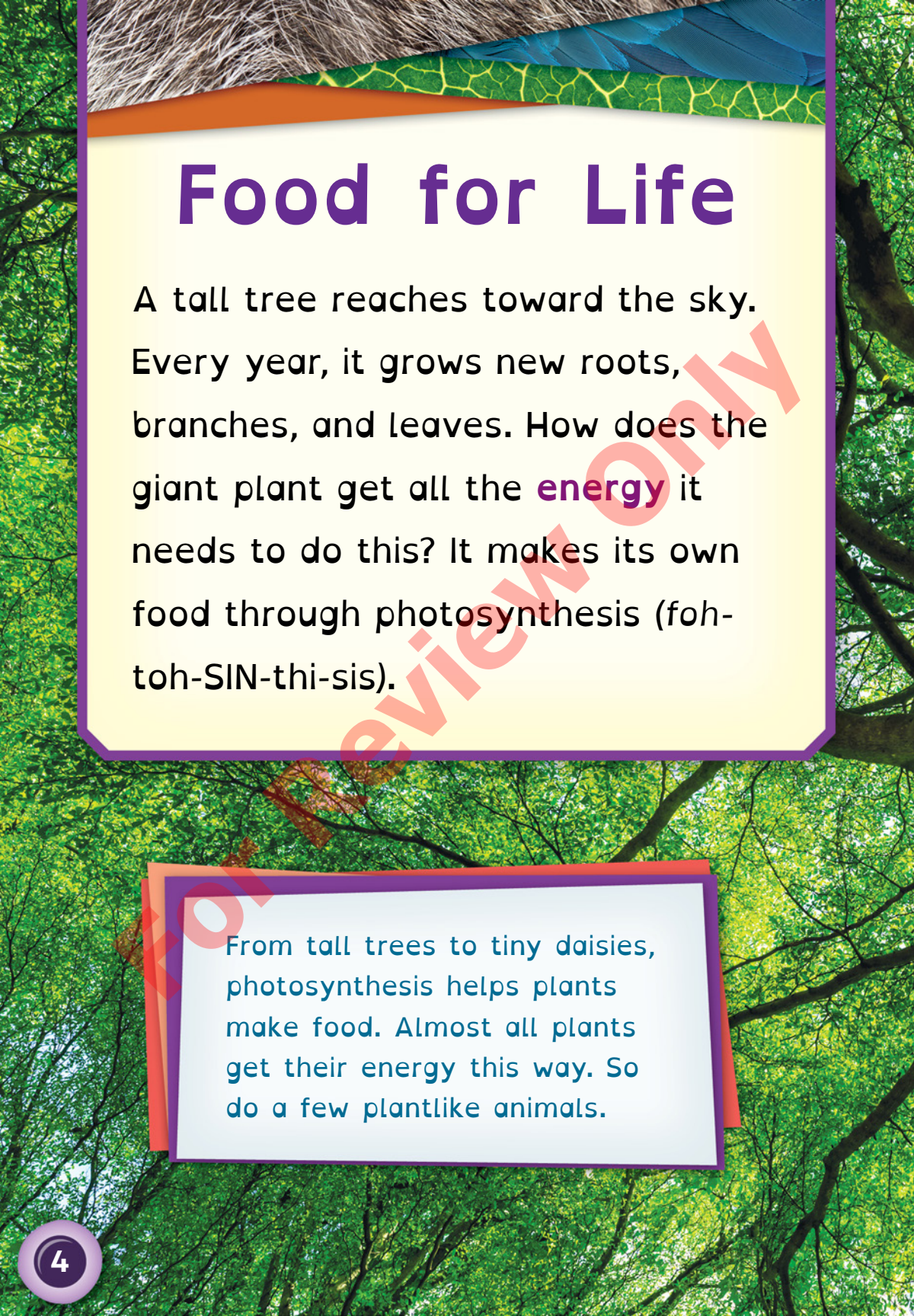


by Ruth Owen



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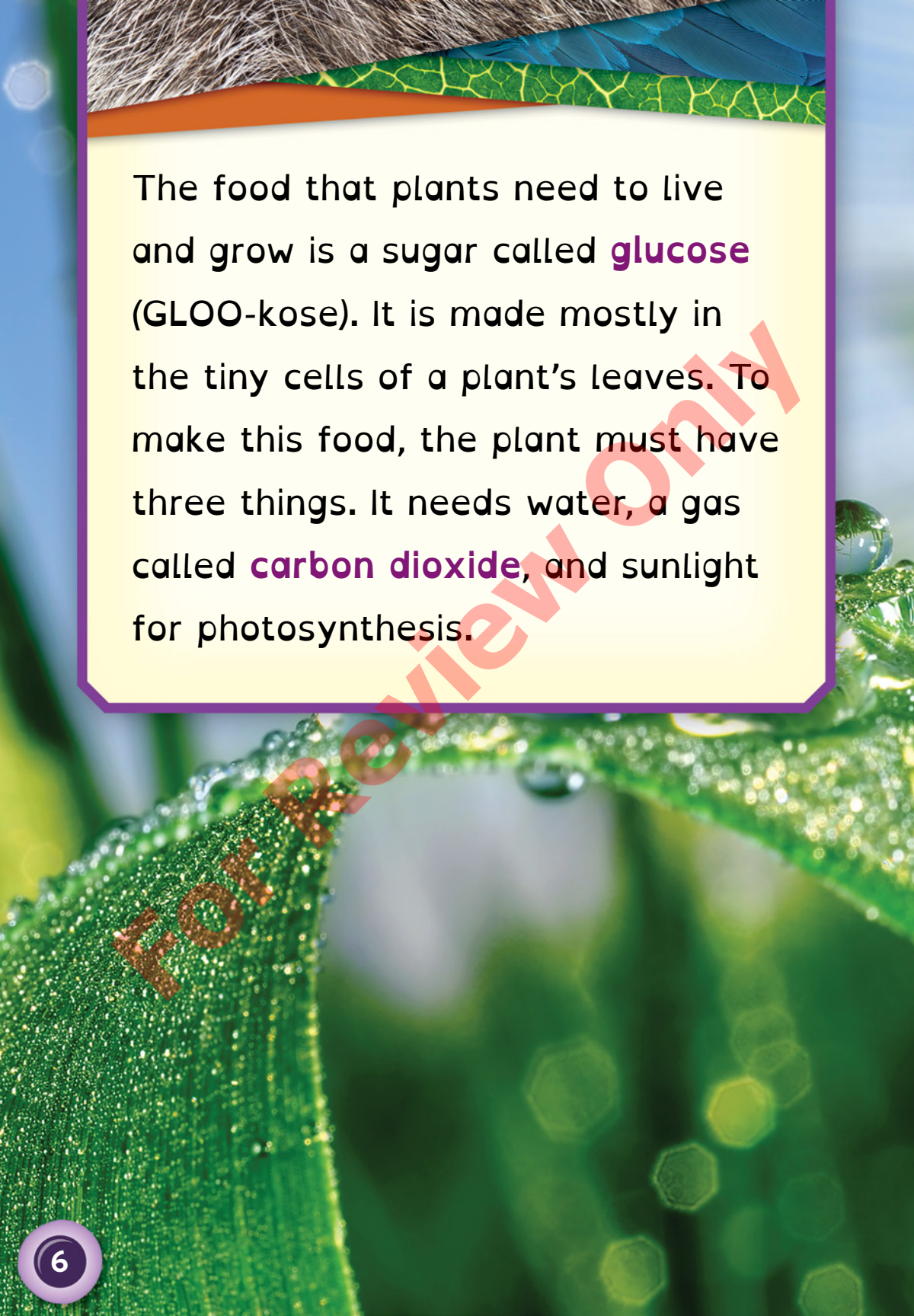


Food for Life

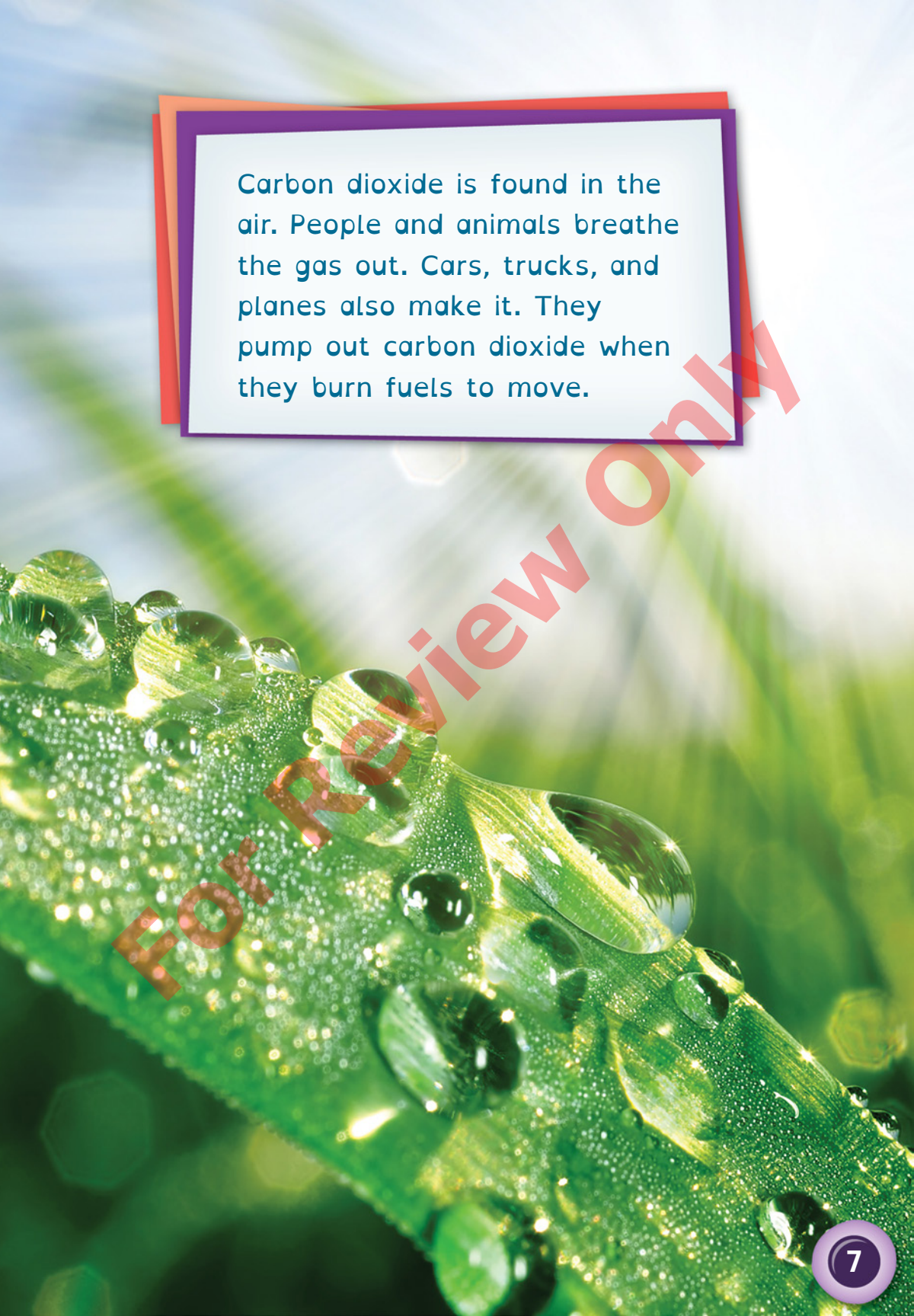
A tall tree reaches toward the sky. Every year, it grows new roots, branches, and leaves. How does the giant plant get all the **energy** it needs to do this? It makes its own food through photosynthesis (foh-toh-SIN-thi-sis).

From tall trees to tiny daisies, photosynthesis helps plants make food. Almost all plants get their energy this way. So do a few plantlike animals.





The food that plants need to live and grow is a sugar called **glucose** (GLOO-kose). It is made mostly in the tiny cells of a plant's leaves. To make this food, the plant must have three things. It needs water, a gas called **carbon dioxide**, and sunlight for photosynthesis.



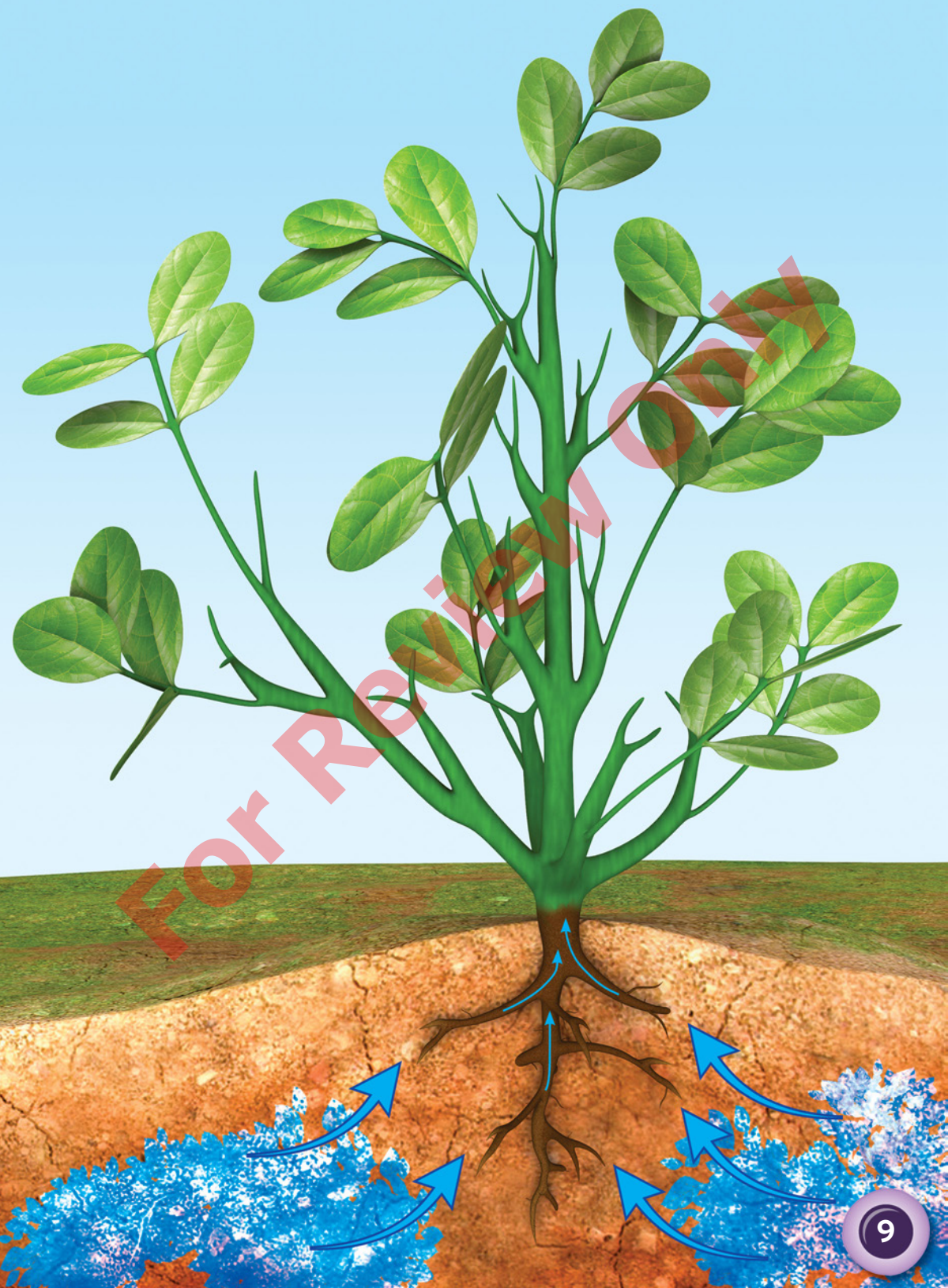
Carbon dioxide is found in the air. People and animals breathe the gas out. Cars, trucks, and planes also make it. They pump out carbon dioxide when they burn fuels to move.

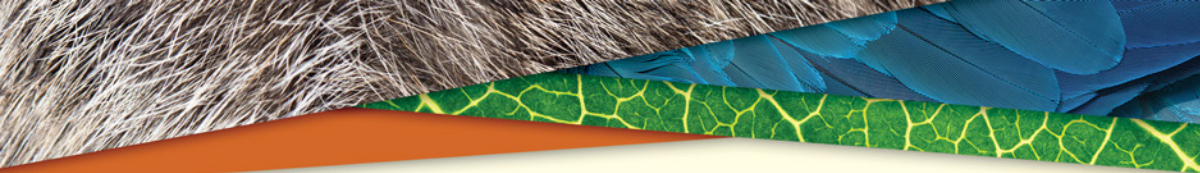
Wonderful Water

Most plants get the water they need from the soil around them. Their roots act a bit like straws to suck up the water. Then, plants send the water up their stems through thin tubes. Finally, the water moves into the leaves.

Cacti are desert plants. There isn't much water found in the dry soil nearby. So, these plants store water in their stems. That way, they have it when they need it.



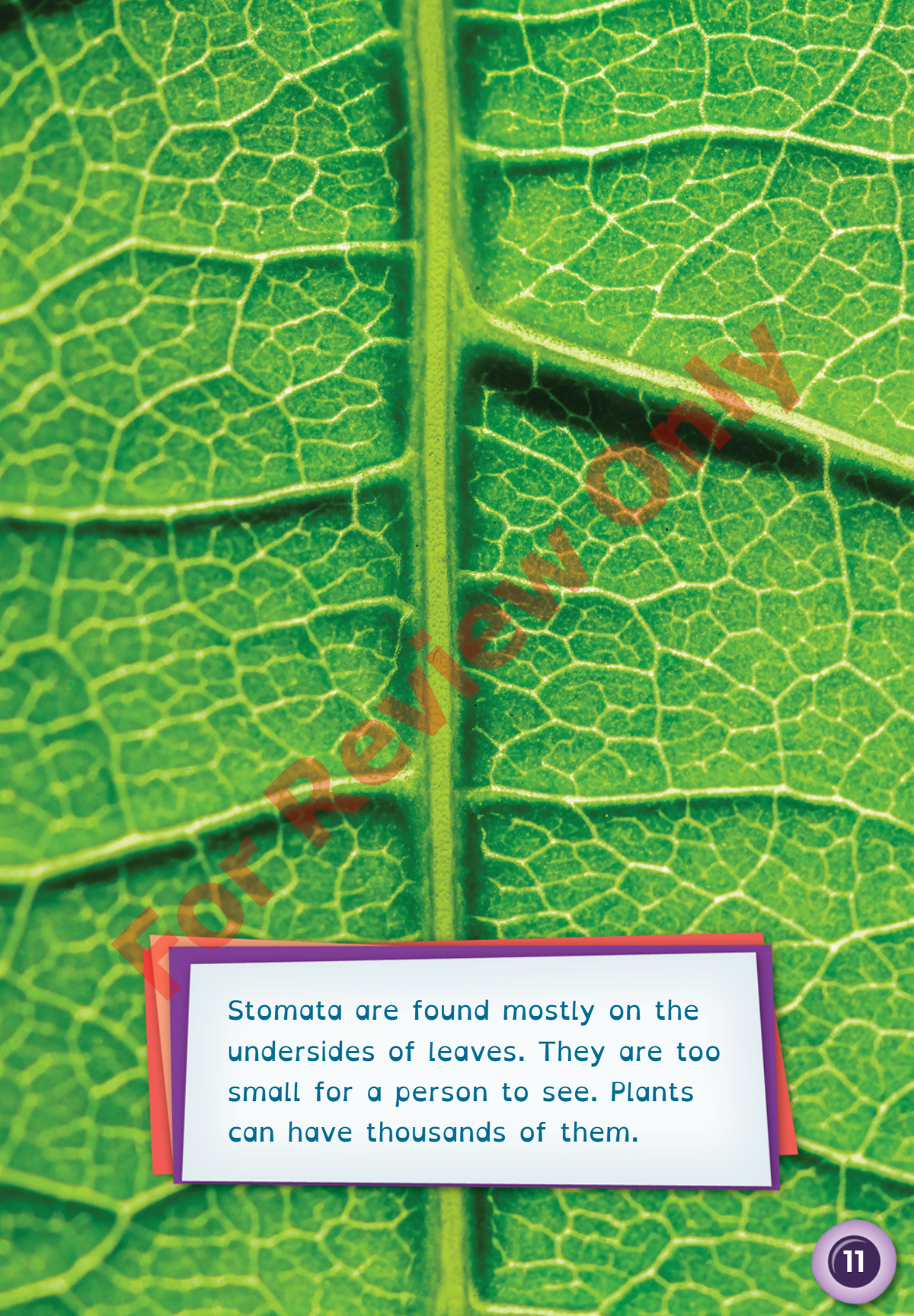




Turning Up the Gas

The leaves are also where plants take in carbon dioxide. The gas comes in through tiny holes called **stomata** (STOH-muh-tuh). This happens mostly during the day.

At night, the stomata usually close up. Plants don't need carbon dioxide then. They can't do photosynthesis in the dark.



Stomata are found mostly on the undersides of leaves. They are too small for a person to see. Plants can have thousands of them.