

JUST FOR KIDS!

Why Is a Cactus Waxy?

From the authors of *Zoology for Kids* and *Marine Science for Kids*

Have you ever wondered how cacti survive in the hot, dry Sonoran Desert? These amazing plants have adaptations (special features) that help them thrive in Arizona's demanding climate. If you've touched a cactus (the non-spiky part, of course), you know that it feels waxy. What's with the wax? A cactus's thick waxy coating is important to its survival in the desert. Conduct the following experiment to discover why.

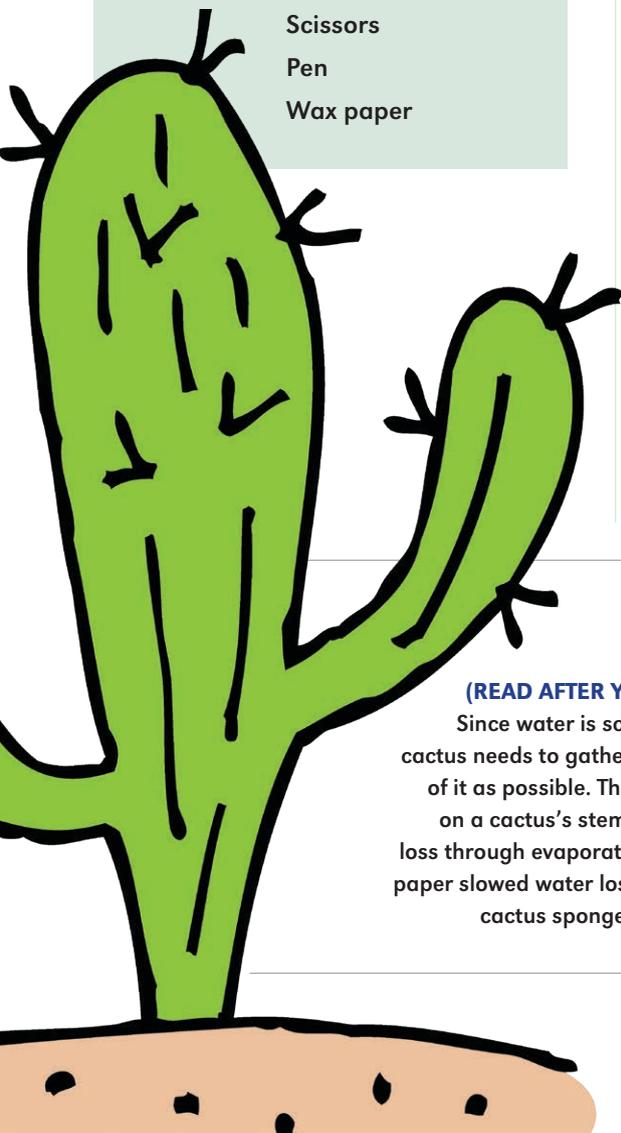
materials

2 sponges (same thickness) without a scrubbing surface on either side

Scissors

Pen

Wax paper



INSTRUCTIONS

- 1 | With scissors, cut a cactus shape out of a sponge.
- 2 | Trace the first cactus onto a second sponge with a pen, then cut out your second cactus.
- 3 | Hold each cactus sponge under running water for about 5 seconds, then give each one a quick squeeze over the sink to ring out the extra water.
- 4 | Wrap one of the cactus sponges in a piece of wax paper to represent a cactus's waxy coating.
- 5 | Place the two sponges — one wrapped and one unwrapped — outside in direct sunlight on top of a second piece of wax paper. If there's any wind, weigh the wax paper down by placing a rock or other heavy object on each side of the wax paper.
- 6 | Check on the sponges after 30 minutes and observe any differences between them, perhaps by poking each of them with your finger. Which sponge seems to have lost more water, the cactus without a waxy coating or the one with a waxy coating? If there is no noticeable difference after a half-hour, check the sponges again at intervals of 30 minutes until at least one sponge is dry.

DISCUSS

(READ AFTER YOUR EXPERIMENT)

Since water is scarce in the desert, a cactus needs to gather and store as much of it as possible. The thick waxy coating on a cactus's stem helps reduce water loss through evaporation, just like the wax paper slowed water loss from the wrapped cactus sponge in your experiment.

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WAYS to prepare your child for success this year

1 | Set up a dedicated homework space

Identify a quiet place for your child to do their homework. Let them add a personal touch to the space, such as a lamp, pencil holder or favorite framed drawing.

2 | Prepare lunch together

If your child brings lunch to school, consider teaching them to pack their own lunch with healthy foods of their choice. This bonding time also helps instill independence.

