

The cone that changed its shape

Pinecones

Name _____

Date _____



Little Wonderer set a fallen pinecone on the porch table. It felt woody, but it was not a piece of bark. "A pinecone is a seed case," said Big Wonderer. Its many parts are called scales. They overlap in a spiral, winding around the cone. Little followed the spiral with a curious gaze.



The dry cone had gaps between its scales. Dry means there is little moisture, or water, around it. The scales spread outward like small shelves. Seeds could slip through the spaces. Little drew the wide shape. Would the cone stay open if the air changed?



Big placed another cone in a shallow dish of water. Over time, its scales curled closer together. Wet scales take in a little water and bend inward. Humid air has water in it too. Little checked the drawing again. The cone had become narrower without anyone squeezing it.

pinecone	a woody seed case with overlapping scales
scale	one of the woody parts stacked around a cone
dry	having little water or moisture
humid	having moisture in the air
tissue	the material that makes up a plant part
seed	a small package from which a new plant can grow

The cone that changed its shape

Pinecones

Name _____

Date _____



One dish stayed dry. The other held the damp cone. Little sketched both shapes in a notebook: open and closed. "Let's give the damp one time to dry," said Big. They left it on a dry dish. Later, spaces began to appear between its scales again.



Little leaned toward the magnifier. A scale was made of plant tissue, the material that makes up plant parts. Different parts of that tissue take in water differently. That makes the scale bend. The fallen cone needed no muscles to move. Water in, water out: its shape could change.



A winged seed rested beside the open cone. Its thin wing could catch a breeze. Wet seeds can cling instead of drifting. "Why would a tree open its cones only when the air is dry?" Little wondered. Their two drawings held a clue.

1. How do a dry cone and a wet cone usually look different?
2. How can a fallen cone move without muscles?
3. Why might dry weather help a winged seed leave its cone?

Your turn

Write one command sentence for watching the cones.

Example: Watch one dry cone and one damp cone, then draw how the scales look.
