

Pinecone Humidity Lab

Wonder: Why do some pinecones close when they get wet?

MATERIALS • dry fallen pinecone • bowl + room-temp water • towel/tray • paper + pencil • optional dry comparison cone DO THIS 1. Sketch/photograph the dry cone. 2. Wet it thoroughly in a bowl. 3. Check every 10-15 min. 4. Remove when scales visibly draw inward. 5. Let it air-dry and watch for reopening. 6. Record the first visible change + one new question. MEMORY CAPTURE Keep one before-and-after photo pair or a two-panel sketch.	WHAT IS HAPPENING? Many mature pinecones respond to moisture hygroscopically. Their scale tissues gain and lose water unevenly, bending the scales inward when wet and outward again as they dry. Species vary. QC Start with a mature, dry cone. If it is already closed, dry it for a day and retry. A second dry cone makes a useful comparison. SAFETY Adult supervision for young children. Scales can be sharp; loose pieces can be choking hazards. Avoid moldy, insect-filled, animal-soiled, or very sappy cones. No oven, microwave, flame, or high-heat drying. IF NOTHING HAPPENS The cone may be immature, already moist, a different conifer type, or resin-sealed. Let it dry fully, try another mature cone, and extend observation time.
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Rabbit hole: U.S. Forest Service - Monterey Pine and Jack Pine, Silvics of North America. Verified September 8, 2026.