LEAF-RUBBING PINWHEELS

Project from Whatever the Weather by Annie Riechmann and Dawn Suzette Smith Reprinted by arrangement with Roost Books | RoostBooks.com



Unlike the sun or snow, the wind isn't something that we can see. We see flags flap or trees sway because of the action of the wind, but we aren't actually seeing the moving air itself. Scientists solve this conundrum with the use of special tools and instruments designed for measuring the wind. For our purposes here, some pretty paper pinwheels will do just fine. Colorful pieces of paper outfitted with leaf rubbings for extra pizazz easily transform into basic pinwheels that show the movement of the wind and promise to be as fun to play with outside as they are in.

WHAT YOU WILL NEED

- A SQUARE PIECE OF PAPER APPROXIMATELY 6" × 6" (Origami paper with one white side works well if it will not be used in very strong winds. Strong winds will require something thicker, such as card stock.)
- 🖶 A PUSHPIN
- A SMOOTH STICK OR PENCIL WITH AN ERASER
- 🖶 CRAYONS
- FALLEN LEAVES FOR RUBBING
- RULER AND PENCIL
- SCISSORS

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SCIENCE BEHIND THE SCENES:

Wind around the World

When kids think about the wind, they generally consider the current conditions outside their own home or school. That is, after all, what they can feel when they step out the door. So when contemplating the wind, it can be good fun to think globally instead. To this end, consider the Coriolis effect. The Coriolis effect is how scientists describe the way that the Earth's rotation affects the wind. The spinning of the Earth on its axis forces winds in the Northern Hemisphere to bend to the right, while winds in the Southern Hemisphere bend toward the left.

WHAT YOU WILL DO

On the white side of the paper, draw two lines from corner to corner making an X.

Place a leaf under the paper, white side up, and rub with the crayons until the leaf outline shows up on the paper. Change the position of the leaf so the tips line up with the X and the design shows up when the pinwheel is folded down. Try different leaves and colors, or possibly even a different leaf for each tip of the wheel.



Cut approximately halfway down each of the four lines toward the center of the X. Fold down one flap from each corner to meet in the middle. You can poke the pushpin through each point as you fold them down to make it easier to collect them together. (Taping as you go will also work for this.)



Once all of the corner points are in the center, poke the pin through the middle of the X and then into the stick or pencil eraser, leaving some space for the pinwheel to spin. If using a stick, whittle one end to be flat so that the wheel does not get hung up on the bark or bits poking out from the twig. This is a great opportunity for an older child to practice their skills with a pocketknife.

Hold your pinwheel up to catch the wind, angling it in different directions as needed to get the most movement.

WHATEVER 1 WEATHER



Go to different locations around your yard or down your city street to check for wind direction by holding the pinwheel different ways to catch the wind.



Make a collection of pinwheels of different sizes and using paper of various thicknesses. Keep this collection by the door ready for windy-day play. As they blow in the wind take note of which pinwheels handle different types of wind better and spin more consistently in the breeze.



Try to find places where the wind blows with more or less force. Do buildings affect the wind direction? Does the pinwheel stop working when it is turned the opposite direction? Do hedges or trees affect the strength of the wind? Check often and keep a chart making note of wind direction.

Does the movement of the pinwheel change with the season, time of day, or when a storm is blowing in?

For the exceptionally interested young meteorologist, this is a good time to break out the compass to fine-tune those notes and make more precise documentation of wind direction for future reference.