



Make a pinwheel.

Over the centuries people have come up with all sorts of ways to harness the wind to use it to push boats and power machinery. Wind power is currently of interest to those who would like to see us using cleaner and less expensive energy. Windmills can be used to generate electricity, and while you need plenty of wind to make this work, it's clean, and it's free!

Did you know that a pinwheel is just a miniature version of a windmill? Make a pinwheel to see how the sails catch the wind and make the wheel turn. You can make a pinwheel from a square of stiff paper (6" is a good size), a pencil that has an eraser, and a straight pin. Fold the paper diagonally both ways and cut along the crease lines to within 1" of the center point. Take each corner in turn and bring it to the center point (let it overlap slightly, as shown in the diagram). Push the pin through all four layers. To reduce the friction between the spinning sails and the pencil eraser, make a "bead" by rolling a strip of paper into a tube. Glue its end so that it won't unroll. Place the "bead" on the pin and stick the pin into the side of the eraser. The pinwheel should turn freely.

Experiment holding the pinwheel at different angles to the oncoming breeze. Which works best?