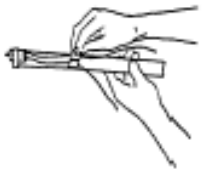
WIND MACHINE INSTRUCTIONS

This sheet tells you how to build your own wind machine for generating electricity.

First, get a small motor and a ruler or piece of wood from your teacher. Attach the motor to the end of the ruler by wrapping it with a rubber band.

Second, cut two 30-cm pieces of electrical connecting wire. With a pair of scissors, take off 2 cm of rubber insulation from both ends of the two wires. Do this by pinching softly with the scissors on the rubber casing, cutting it slightly; then pull the scissors towards the wire's end, pulling off the casing.

Next, attach one end of each wire to one of the motor's outlets. Tape the wires to the molding, at the end without the motor. Attach the other two ends of the wire to alligator clips. We will use these later to attach to the voltmeter.



Now you're ready to build the actual wind propellers.

Take six paper clips. Snip off part of each clip with pliers or wire cutters. Straighten out the bottom part of each clip.

Then cut out six pieces of cardboard 1 cm x 3 cm. Glue /or tape central part of each paper clip to the bottom of a cardboard piece. Leave time for glue to dry (20 min.). Here is where you can vary the size, shape, weight and alignment of the blades. You can change the number as well.

Take a cork and poke the wind blades into it. Insert the blades at about 5 mm from the end, spaced equally around the circumference of the cork. To loosen up a hole, you may want to stick a pin in beforehand.

Place the cork end furthest away from the wind blades on the motor's shaft. Make sure the shaft goes in the exact center of the cork and do not wiggle it (this will loosen its hold on the motor).

Connect to the voltmeter and test your design. Be sure to wear goggles to protect your eyes.

Source: Adapted from the booklet found at http://www.nrel.gov/docs/gen/fy01/30926.pdf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