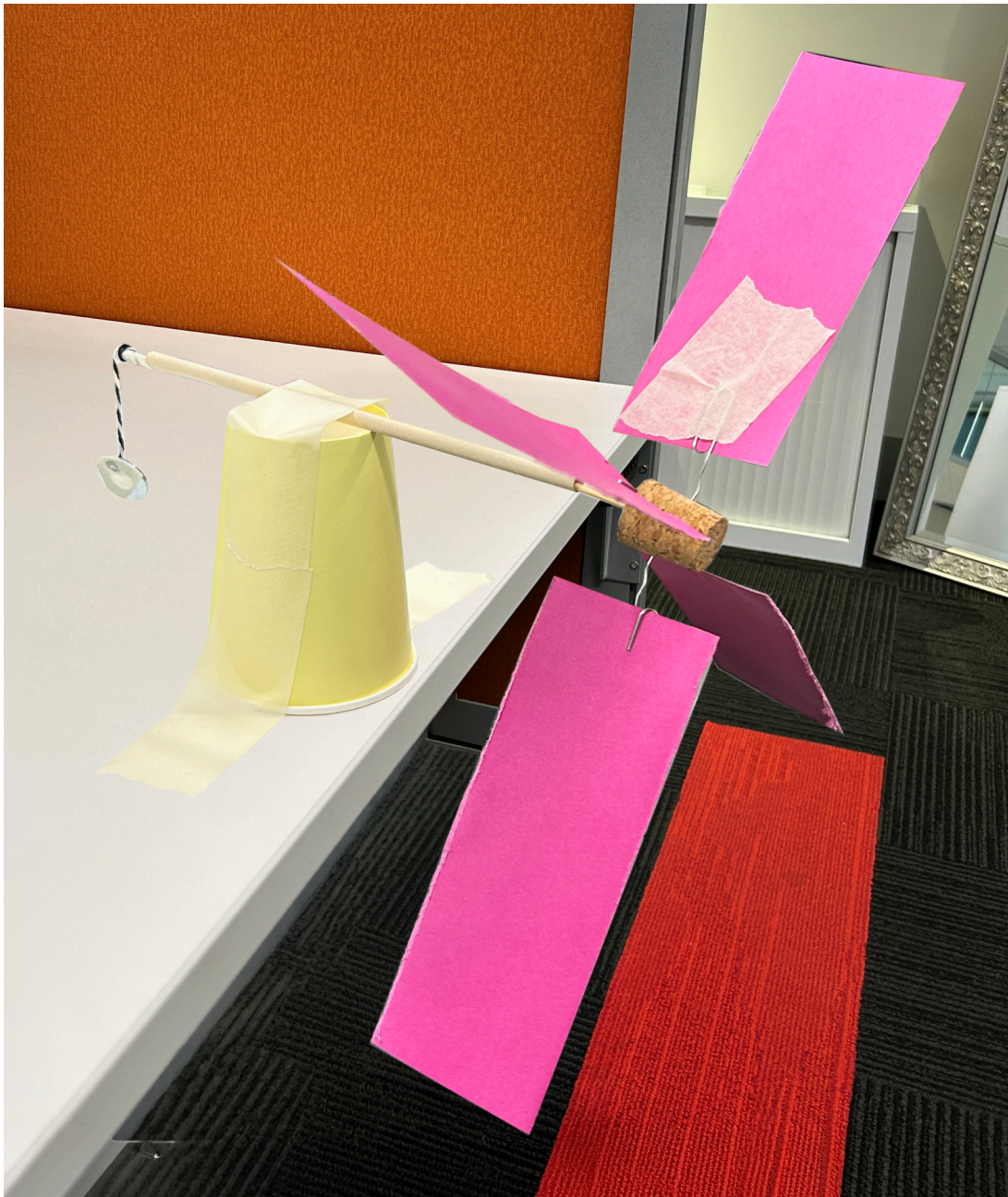


Wind turbine experiment guide

Includes the standard turbine model setup and step-by-step testing instructions, plus suggested variations for students to experiment with.

A full list of materials and costs can be found in the *Teaching materials and resources* table in the accompanying [lesson plan](#).

Standard model



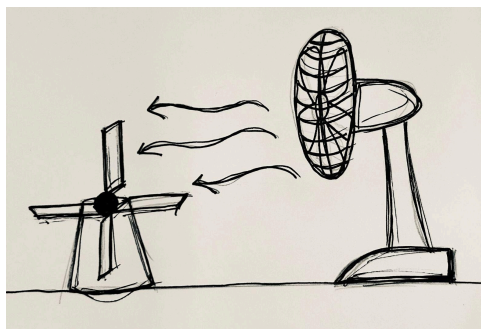
Model construction steps

1. Secure the cup to the table with some tape and/or blu tack
2. Tape down the straw to the top of the cup
3. Thread the skewer through the straw
4. Cut the twine and tie it through the washer
 - Make sure the twine is short enough so the washer hangs just above the desk
5. Attach the other end of the twine to one end of the skewer
6. To the other end of the skewer, stick on the cork
7. Now construct the blades:
 - Cut 4 rectangles from the card (~5cm by 3cm)
 - Bend the paperclip so that the bigger of the outside curve goes straight (It should look like a number 9 with a straight tail as pictured)
 - Attached one end to the card using tape, and the other stick into the cork
8. Arrange the 4 blades around the cork, with the blades angled sideways



Experiment instructions

1. Set up the model following the steps above
2. Measure how far the washer hangs below the skewer
3. Turn on the fan to spin the turbine
 - The fan will need to be positioned to the side of the model so the airflow hits the blades and spins the turbine



4. Time how long it takes for the washer to wind up and touch the skewer
5. Record the results