

HARNESS THE WIND

Windmills have been used for centuries to convert the wind's kinetic energy into mechanical power. See if you can design a windmill to lift a load off the ground.

MATERIALS:

- Card stock
- Plastic cups (e.g. red Solo cup)
- Small cup (e.g. Dixie)
- 3-4 ft of string
- 1 wide straw
- 1 dowel rod
- Scissors
- Masking tape
- Rubber bands
- Pennies
- Handheld fan or blow dryer

METHOD:

1. Design a windmill to lift a small cup of pennies using the materials provided. The windmill should include blades, rotational shaft, base and bucket (small cup) to lift the pennies.
2. Test the windmill using a fan or blow dryer and refine your design.

TAKE IT BACK TO CLASS:

- How many pennies can your windmill lift?
- Try different blade designs for your windmill. Do different blades change how your windmill operates?
- Research how windmills provide clean energy to power our homes. Have you seen a wind farm in your area?

SOURCE:

"Harnessing the Wind STEM Challenge" from Georgia Youth Science & Technology Centers

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