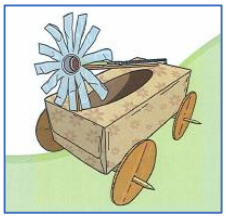
Sawtry Science Week STEM Challenge

Propeller Car – Y5/6 Testing date April 24th 2025

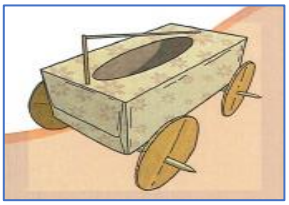
These are general instructions to help everyone to make a propeller car. Your adaptations and science knowledge will aim to make yours travel the furthest!

You will need:

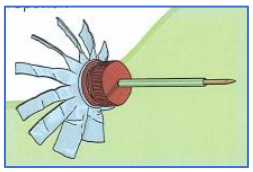
- Cardboard or plastic bottle lids (for wheels)
- 2 rubber bands
- 3 straws
- Wooden skewers
- 2 paper clips
- 1 plastic bottle with lid
- Tape
- Tissue box



1. Make wheels out of carboard or plastic lids. Put holes in each wheel big enough to fit your axle.
2. Place skewers inside straws to make axles. Secure the wheels to the end of your axles.
3. Secure the straws to the bottom of the tissue box.
4. Use a section of skewer and stand it up at the one end of your car. It should be like a flagpole.
5. Make a triangle by attaching another skewer from the top of your small section of skewer to the front of your car.



6. Use the top of a plastic bottle with the lid on. Make cuts down to the lid and fan out the 'blades'. Make a small hole in the lid (like you did with the wheels).
7. Place the last skewer in the blades and put skewer inside half a straw. Attach this blade construction to the top of the stand on the car.



8. Attach one paper clip to the stick on the propeller and one to the bottom of the ramp on the car.
9. Attach two rubber bands to each paper clip so that they stretch down the ramp on top of the car.
10. You are now ready to test your model. Hold the car away from you, turn the propeller so that the rubber bands wind around each other. Let go!

To make your model travel the furthest there are a lot of variables that you can experiment with – size of wheel, materials, angle of 'ramp', adapting the propeller, shape of car (does not have to be a tissue box) and possibly much more.