

# Wacky wheels

If you have taken a ride on a bike or wagon, you'll know that wheels help you go places. How? Make this toy car and find out.

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## You will need:

- an empty cardboard milk carton, 1 L (1 quart) size
- scissors
- a long smooth board
- some thick books
- 2 long colored pencils
- 4 large thread spools

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## What to do:

1. Cut the milk carton in half lengthwise to make two cars.
2. Raise one end of the board on a pile of books. Place one car at the top of the board ramp. What happens?
3. Ask an adult to use the scissors to poke holes at the front and back of the other car. Each hole should be about the size of a dime.



4. Slide a colored pencil through the front holes. Slide another colored pencil through the back holes.

5. Push a spool onto the end of each colored pencil. Leave a small space between the spool and the outside of the car.

6. Put the car at the top of the ramp again and let it go.

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## What's happening?

Without wheels, your car can't move. There's too much friction (rubbing) between it and the ground. Wheels reduce the amount of friction so that your car can zoom down the ramp.

### A wheel and axle

When you combine a wheel (the spool) with an axle (the colored pencil), you have a simple machine called a wheel and axle. You can move heavy objects by putting a wheel and axle under them.



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