

Make A Pulley

You will need:

A pencil

Tape

Yarn or twine

An empty ribbon or thread spool

Small plastic cup (an applesauce or yogurt cup from your recycling would work)

Hole Punch



Instructions

1. Punch three holes in the cup, evenly spaced from one another. This will be your bucket for lifting objects.
2. Cut three short lengths of yarn or twine (about 3 in. each). Tie one to each hole in the cup.
3. Tie the three loose ends of yarn together.
4. Cut a long (about 12 in.) piece of yarn or twine, and tie one end around the knot connecting the three small pieces of yarn/twine.
5. Wrap the long piece of yarn/twine around the spool.
6. Push the pencil through the hole in the center of the spool.



7. Choose a high place to mount your pulley. It could be between two tables or bookcases, or cut a hole in a box.



8. Holding on to the loose end of yarn/twine so that your spool doesn't unwind, tape the ends of the pencil to the surface where you wish to mount your pulley.



9. Test your pulley by putting objects in the cup to raise and lower.



Which objects did you place in the cup?

Draw a diagram of your investigation which shows the direction of the forces.

A large empty rectangular box with a blue border, intended for drawing a diagram of the investigation showing the direction of forces.