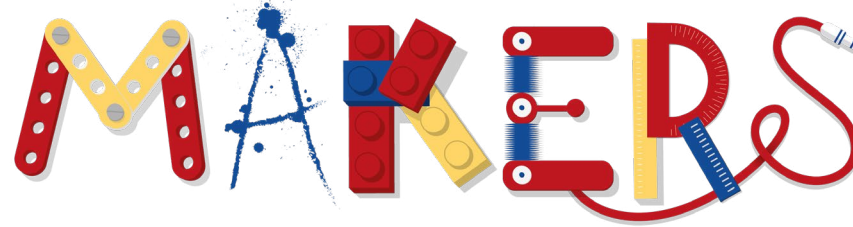


THE HOLIDAY



Wind powered weightlifting



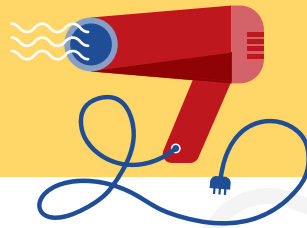
Harness the power of wind

In this fun experiment you'll use engineering to discover how to build the ultimate wind-powered weightlifting machine.

Keep a record of how many pennies you can lift with each design and think about what changes might make it even more powerful.

WHAT YOU'LL NEED

HAIRDRYER



PAPER CUP



STRING



PENNIES



A ROUND PENCIL



SCISSORS



TAPE

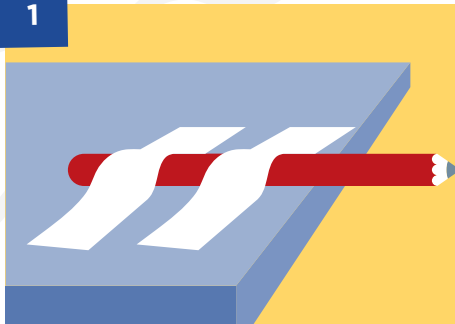


A4 SHEET OF CARD



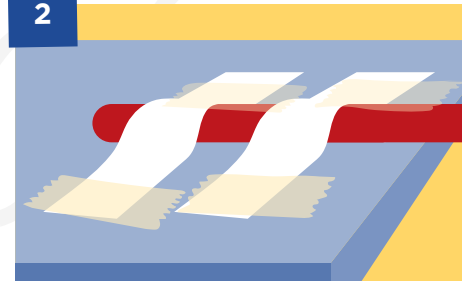
STEP-BY-STEP

1



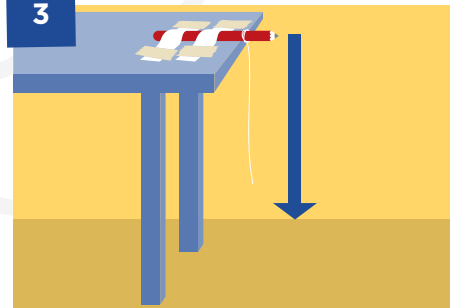
Cut two strips of card and bend around the pencil.

2



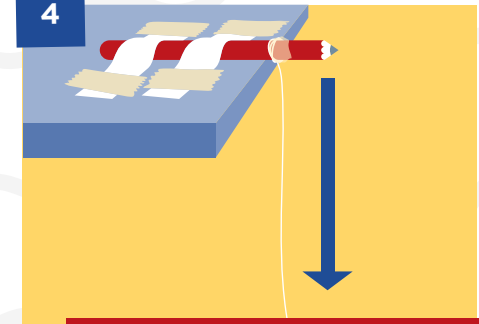
Use tape to attach the card to the edge of a table holding the pencil in place. The pencil should be able to rotate freely.

3



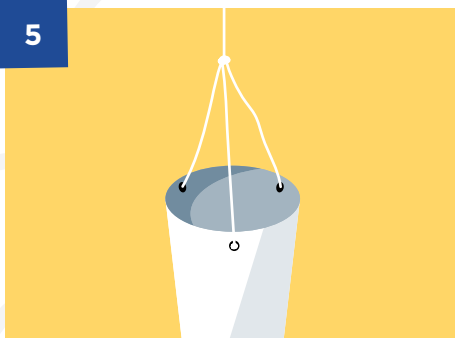
Cut a piece of string long enough to reach the floor whilst tied to the pencil.

4



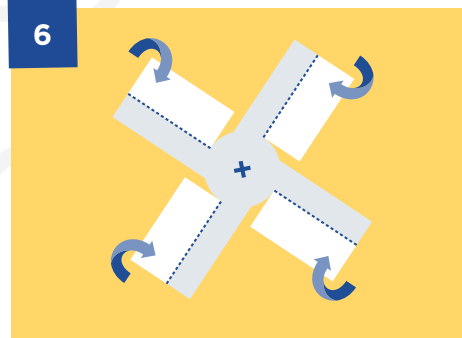
Tie the string to the end of the pencil. Secure with tape.

5



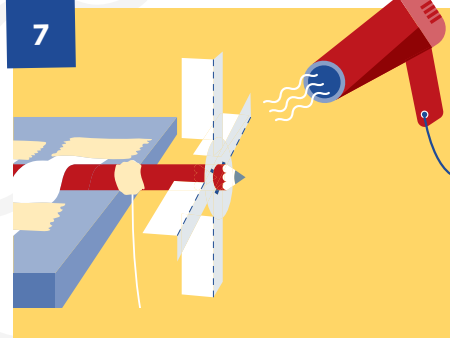
Attach 3 evenly spaced pieces of string to a paper cup and tie them to the first piece of string attached to the pencil.

6



Cut out a fan shape from light cardboard and bend each blade 90 degrees to make the air blades of your propeller.

7



Use a Hair Dryer to power the blades, they will turn the pencil and raise the paper cup.

8



See how much weight you can raise in your cup. Experiment with different blade designs.

DID YOU KNOW?

Mechanical engineers design and test different shapes of blades to make sure that turbines generate the most energy possible from the wind.

We would love to see how you get on! Share your inventions with us using #theholidaymakers Twitter: @YoEgovuk Facebook and Instagram: @yearofengineering

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