

# SCIENCE FUN AT HOME



Have some fun at home with these science activities from **Science Sparks** and the **Primary Science Teaching Trust**



**BEFORE YOU START!** Please read through this with an adult:

- \* Make sure you have read the 'IMPORTANT NOTICE' on the back of this page.
- \* If you have a space outside that you can use safely, then you can do the 'Try this outdoors' activity outside. Don't worry if not as you could still do it indoors.
- \* Talk to your adult about sharing the science you have done and if they want to share on social media, please tag **@ScienceSparks** and **@pstt\_whyhow** and use **#ScienceFromHome**

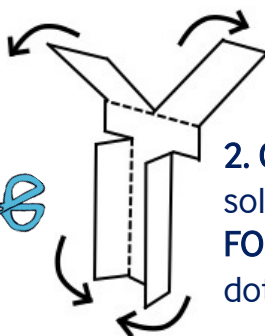
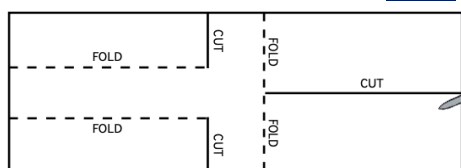
## SPINNING SCIENCE

### You will need

- \* paper
- \* paper clips
- \* Scissors
- \* different types of paper or card

### 1 TRY THIS INDOORS .... MAKE A SPINNER

1. Cut out the spinner - you can download a template [here](#).



2. **CUT** along the solid lines and **FOLD** along the dotted lines.

3. **PAPER CLIP** the three folded pieces of the tail of the spinner.



### WHAT DO YOU NOTICE?

#### Things to talk about ...

What happens when you let the spinner go?  
Can you slow the spinner down? How?  
What happens if you use different sorts of paper? Does tissue paper fall fast or slower than cardboard? What happens when you make the wings longer or shorter? What if you make a giant one? A tiny one?

4. **FOLD** the two 'wings' of the spinner in opposite directions. Hold the spinner high up, let go and watch what happens!

5. **MAKE** more spinners .... you could make different sizes, use different types of paper, use more paper clips or change the length of the wings.

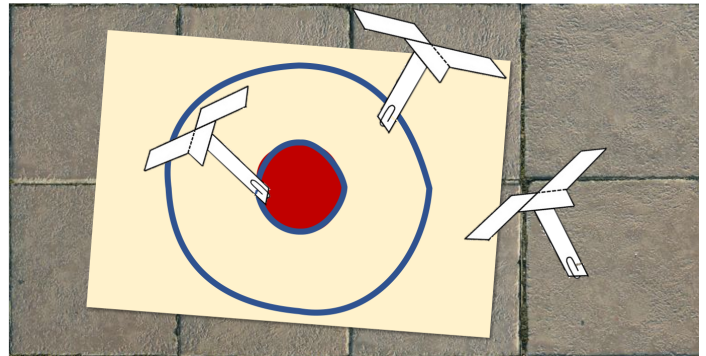
## 2 TRY THIS OUTDOORS ....

Take your spinner outside. Make a target on the ground – you could do this by drawing a circle on a large sheet of paper, or you could use a big shallow bowl. Hold your spinner up and drop it, trying to get it to land on your target. Have ten goes and count how many times you hit the target. Try moving the target to a different place outside and see if your score increases or decreases.

### WHAT DO YOU NOTICE?

#### Things to talk about ...

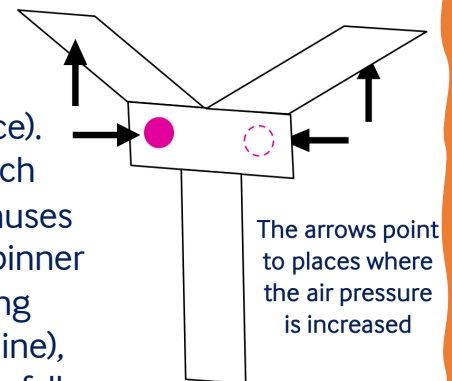
Where outside is it easiest to get the spinner to hit the target? Why do you think that is? What happens if you make the target bigger or smaller?



## 3

### WHAT IS THE SCIENCE?

The paper spinner spins as it falls. When it starts its fall, the air pressure under the wings increases (air resistance). This causes an upward force underneath the wings which slows the spinner down. The increased pressure also causes a sideways push on the vertical part at the top of the spinner (where the pink dot is). The same thing will be happening diagonally opposite under the other wing (dotted pink line), which causes the spinner to spin. The faster the spinner falls the greater the sideways push, and so the more it spins.



The arrows point to places where the air pressure is increased

## 4

### MORE ACTIVITIES YOU COULD TRY

**MAKE A DIFFERENT KIND OF SPINNER!** <https://www.science-sparks.com/easy-paper-spinners/>

**MAKE A PARACHUTE AND FIND OUT MORE ABOUT AIR RESISTANCE**

<https://wowscience.co.uk/resource/bitz-and-bob-parachute/>

**HAVE A LOOK AT DR CHIP'S WONDER WEDNESDAY - PAPER HELICOPTERS**

<https://www.youtube.com/watch?v=RurbAsctWrk>

**TAKE A SCIENCE SELFIE!** Maybe you could show other people what you have been doing?

**IMPORTANT NOTICE:** Science Sparks and The Primary Science Teaching Trust are not liable for the actions of activity of any person who uses the information in this resource or in any of the suggested further resources. Science Sparks and The Primary Science Teaching Trust assume no liability with regard to injuries or damage to property that may occur as a result of using the information and carrying out the practical activities contained in this resource or in any of the suggested further resources.

These activities are designed to be carried out by children working with a parent, guardian or other appropriate adult. The adult involved is fully responsible for ensuring that the activities are carried out safely.