



## In a spin

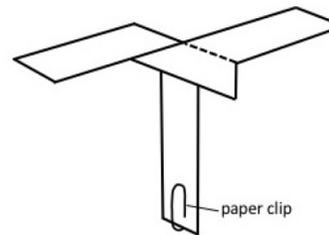
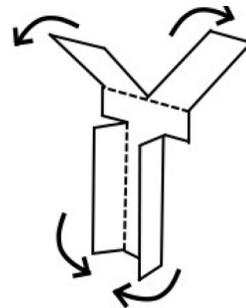
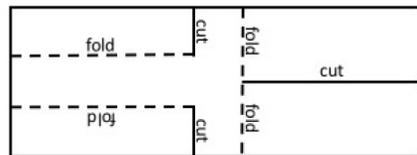
### LINKED CHALLENGE

To consider sycamore seed dispersal by making and testing a paper spinner

### ACTIVITY OVERVIEW

Show the children sycamore seeds; throw them up in the air and watch them spin to the ground. (\*If these are difficult to access, you could show this video <https://tinyurl.com/ycmhcule>). Discuss how plants spread their seeds (e.g. by wind, gravity (falling), force (propelled from the plant), floating away in water, or by animals).

Make a simple paper spinner to compare its flight to the sycamore seeds:



Drop the spinners and observe their flight. Next, encourage children to change their designs e.g. lengthen the wings or change the overall size of the spinner (you could photocopy and scale the template, which is available via the link below right).

### KEY FACTS/SCIENCE

There are forces acting on a paper spinner or (a sycamore seed) when it is in flight: *gravity*: a force pulling downwards on the helicopter; *lift*: a force from air pushing up under the wings. The air pushing upwards on the angled wings works against gravity and it also creates a sideways push on the spinner - this causes the wings and therefore the paper spinner to spin, which slows its fall.

Wind might provide an additional force (push) that will move a spinner or sycamore seeds in other directions. Wind-dispersed seeds rely on the wind to carry them to locations away from the original plant (and from each other) so they do not all compete for the same space, nutrients, water and sunlight for growth. This gives them a better chance of survival.

### RESOURCES

Sycamore seeds to explore (if available)  
Paper/ spinner templates  
Paperclips

Scissors  
Pencil crayons to decorate

### QUESTIONS/FURTHER LEARNING

- Does the size of the spinner make a difference to how they spin/fall?
- If you fold the wings down diagonally does that make a difference to how they fly?
- Can you blow the spinners as they fall? You could use a fan to create wind. What happens to the spinners in the wind?

Reproducible template for paper spinners available online:

<https://tinyurl.com/yb3p4zjg>

