

SCIENCE FOR ONE



Activities for doing practical science while respecting social distancing

- * Each activity sheet is based around **one easy to obtain resource**
- * Children **work independently** but should be encouraged to talk in pairs or groups
- * Any additional resources needed are minimal and easy to provide for each child
- * Activities are **linked to topics** and suggestions are given for **three age ranges**
- * The activities **can be done outside**.

Science with cups

Plastic or paper cups are versatile science resources. Paper cups are cheap, recyclable, available in a range of sizes, and local cafés might be happy to donate them. Plastic cups and beakers can be washed before and after an activity and then reused.



AGE 5-7 CHROMATOGRAPHY BUTTERFLIES



Tell the children to use a felt-tip to draw a single line circle around a piece of filter paper, about 2cm from the centre, then fold the paper into a cone shape and place it in a cup with the tip of the cone dipping into the water. It will be a few minutes before they see anything; while they wait, they can discuss what they would like to explore next.

Things the children could try:

- experimenting with different coloured pens
- exploring using different types of paper
- drawing more than one circle of ink
- drawing their circle in a different place
- drawing multiple circles with different colours



Once dry, the paper can be used to make a butterfly; the children can scrunch the middle together and use a pipe cleaner to make the body.

Resources per child

- 2 cups with 1cm of water in each
- 2 pieces of filter paper
- Felt-tip pens
- Pipe-cleaner
- OPTIONAL – other types of paper, e.g. tissue, sugar, card

Science explored

- Materials
- Observing over time

Interesting links

- [Challenge Chasers Blooming activity](#)

Important note: The Primary Science Teaching Trust is not liable for the actions or activity of any person who uses the information in this resource or in any of the suggested further resources. The Primary Science Teaching Trust assumes no liability with regards to injuries or damage to property that may occur as a result of using the information on this sheet and recommend that a full risk assessment is carried out before doing any of the activities suggested.

AGE 7-9 CUP CHAINS

Ask the children to discuss with their partner what they know about food chains. Ask them to think of the shortest and longest food chains they know, and to identify how they always start (with a producer). Challenge the children to form a food chain (simple or complex) using pieces of paper, each with a plant name, animal name or arrow on it. Can they describe their food chain to each other and show how they have included the arrows as an indicator of 'eaten by'?

The children could research different food chains before choosing one to create and present as a 'cup food chain'. They need to:

- write and draw each plant/animal in their chain on an upturned cup
- use key vocabulary for each one, e.g. producer, consumer (primary, secondary, tertiary could be included), predator, prey
- stack the cups in order stating 'eaten by' as they add each new cup

The children could make a second chain on the other side of their cups. They could discuss what would happen to their food chain if they rotated one cup - would it still work as a food chain?

Resources per child

- 5 cups
- Felt-tip pens (dry-wipe if using plastic cups)
- Paper towel
- Example of a food chain written on pieces of paper (e.g. grass, rabbit, fox)

Science explored

- Interdependence
- Food chains

Interesting links

- [What is a food chain – video clip](#)
- [Food chain challenge game](#)



SHADOW MAKERS

A piece of paper or object is held in place in the plastic wallet.

On a sunny day, it will make a shadow on the ground.



Resources per child

- Paper cup
- Clear plastic pocket
- Elastic band
- Different types of paper and card

Science explored

- Light
- Properties of materials

Interesting links

- [Science Sparks shadow activities](#)

AGE 9-11 SHADOW MAKERS

Ideally, start by watching a video of animal shadows made with hands (there are lots online). Outside, challenge the children to make their own animal shadows and explore how they can change their shape and size. Explain how to create their own shadow maker by cutting off the base of their cup to make a tube and putting a paper shape in the plastic pocket which they then secure over one end of the cup using an elastic band. Ask the children to make a shadow of their shape on the ground, and work out how to change the shadow's size. Then they could explore:

- shadows created by different types of paper
- shadows created by natural resources, e.g. leaves, petals, grass

The children could then group materials into transparent, translucent and opaque, or make a shadow story from the different shapes created.