SCIENCE FOR ONE

foil

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 foil

Foil is cheap, recyclable, and simple to tear and manipulate. It is a good modelling material and its surface is reflective. It also conducts electricity so is useful for teaching circuits.

AGE 5–7 MODELLING BIRDS AND MAMMALS

Challenge children to use one piece of foil to create a bird. Encourage the children to think about the main features of their bird and how they move, and to discuss this with each other.

Next, ask them to choose a mammal to make with their second piece of foil. Before they start, give them time to think and discuss the features of their mammal. Ask them to think about if it is a carnivore, omnivore or herbivore, and how it is similar or different to their bird. Create a class aviary or zoo for children to view and identify each other's creations. Extend the activity to include other types of animal.

Resources per child

- Two 30cm x 20cm pieces of foil

Science explored

- Features of animals
- Identifying and classifying living things

Interesting links

- BBC Bitesize: all about animals
- Play a sorting game: feed the animals

why & how?
PRIMARY SCIENCE TEACHING TRUST

AGE 7–9 MAKING A SOLAR OVEN

Do this outside on a sunny day. The children need to:

- wrap one side of the card in foil (the extra foil folded around the edges should hold it in place)
- fold the card in half and lay it on its side so that one side becomes the lid and the other the base of the oven
- angle the oven lid so that the foil reflects sunlight onto the base
- put marshmallows or chocolate buttons onto the base

Ask the children to discuss and predict what they think will happen, why this is and how quickly it will happen. Encourage them to use scientific vocabulary: solid, liquid, melting, freezing. Ask them to record by writing or drawing what they notice is happening. They could also record timings. The children could explore the effect of changing the colour of the card base, or the angle of the oven lid. They could also try melting different materials, e.g. butter, crayons or ice cubes.

Resources per child

- One slightly larger than A4 piece of foil
- A4 piece of card
- Marshmallows or chocolate buttons

Science explored

- Changes of state
- Reflection of light
- Observing and recording findings

Interesting links

- BBC Bitesize - states of matter

SOLAR OVEN: fold the foil-covered card in half to form the oven base and lid.

JUMPING FISH: the foil fish should 'jump' to the ruler or the fleece.

Resources per child

- One piece of foil
- Plastic ruler
- School sweatshirt or fleece (or any fabric containing some polyester)

Science explored

- Static electricity
- Properties of materials

Interesting links

- Bend water with static electricity
- All about lightning

AGE 9–11 JUMPING FISH

Start by getting the children to cut lots of little fish shapes out of their foil. Challenge them to make the foil fish 'jump' to their ruler. Tell them to rub their ruler on their sweatshirt for around a minute and then hover it over the fish. Some of the fish should 'jump' to the ruler. Challenge the children to explore this further and explain what they think is happening.

They could explore:

- fish made of different materials, e.g. paper, tissue paper
- different sizes of fish
- rubbing the ruler for different amounts of time
- if the fish also 'jump' to other materials
- how long the fish stay 'stuck' to the ruler or other materials
- if the fish will 'jump' from the ruler to the sweatshirt or vice versa
- how to get the biggest number of fish to 'jump' to the ruler