

Summer Term Science:
Enquiry Type - Observation over Time

Question



How does a shadow change over time?

Shadows change due to the Earth rotating on its axis.

This activity works best on a sunny day (fingers crossed for sunshine!)

Attach a thin object to a window eg a pen, ruler or piece of opaque tape. Place a piece of white paper on the windowsill directly below the object. Make sure the object is in the centre of the page. A shadow should appear on your paper. Draw around the shadow and label it with the time. Check on the shadow every hour or half hour throughout the day, each time drawing and labelling the shadow.

Question

Predict

Observe

Record

Analyse

Report

Activity for all age groups - adult support may be needed for younger children

Look at the shadows that you have drawn.

- When was the shadow longest?
- When was it shortest?
- Create a labelled drawing showing how you set up your experiment.

You could take your learning further by making your very own sundial (a device used to tell the time) in your garden on a sunny day - see the attached sheet. If you don't have a printer, you could easily make your own sundial with a paper plate!

About this type of Scientific Enquiry

Observation over time enquires help us to identify and measure events and changes in the natural world as well as physical processes.

This enquiry type requires using observation, reasoning and analysis skills.

Some famous examples:

Jane Goodall used observation over time to research how chimpanzees behave.

NASA carried out a 'Year in Space' experiment to find out the effect of gravity on humans.

Since 1840 a bell has been ringing at Oxford University to test its battery duration!