



Year Groups: Years 3 and 4 (KS2) Date: Monday 11th May 2020

Subject: Science - Light

LO: I am able to find patterns in the way that the size of shadows change



Key Facts:

- **Formation of shadows** - Light is reflected off an object. The area that the light is therefore unable to reach is called a shadow. Shadows are formed when the light from a light source is blocked by a solid object.
- **Apparent movement of the Sun.** Where the Sun is seen in the sky depends upon the rotation of the Earth on its axis. How long we see the Sun each day depends upon the seasons which are created by the tilt of the Earth on its axis. The Sun rises in the East and sets in the West.

Activity 1: Investigation over time - How does the length and place of a shadow change?

Plan with the children what times of the day you will measure a shadow (4 or 6 times at regular time intervals, eg. 10am/ 12pm/ 2pm/ 4pm etc...). Show them a pole which is going to be used to make a shadow outside. Ask the children where it could be placed so that they could see a shadow whenever there is day light. Ask the children to think about how they record what the shadow is like at different times of the day.

Take the children outside and choose a special place that will be your shadow pole position for the day. Then, place the pole in the ground and ask the children to think about what has caused the shadow. Photos of the shadow should be taken from the same position and children should be encouraged to measure the length of it using standard units of measurement (cm). They should take measurements over the period of a day. They can repeat this investigation on other days; each time using their previous measurements to predict what they might find and why.

Activity 2: Record

The children take photos (preferably) of the pole and its shadow (or draw) at different times of the day at regular intervals. They then write down the length of the shadow underneath it and the time of day measured. Use **Purple Mash - 2do - 2Publish - Storyboard (either 4 or 6 frames)** to record.

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