

Science Overview – Light

Year 3/4 Cycle B

Spring 1

Key Question: How can natural resources help us?

National Curriculum

- Recognise that they need light in order to see things and that dark is the absence of light
- Notice that light is reflected from surfaces
- Recognise that light from the sun can be dangerous and that there are ways to protect their eyes
- Recognise that shadows are formed when the light from a light source is blocked by a solid object
- Find patterns in the way that the size of shadows change.

SUBSTANTIVE KNOWLEDGE

- Know that we need light to be able to see things.
- Know that light travels in a straight line and reflects off objects.
- Know that the surfaces that reflect light best are smooth, shiny and flat.
- Know that the pupils control the amount of light that enters the eye.
- Know that light from the sun can be dangerous and that their eyes should be protected.
- Know how shadows are formed.
- Know that shadows can change depending on the location of the light source.

Key words:

light source
opaque
translucent

Vocabulary:

light, reflect, reflective, ray, pupil, retina, shadow, transparent

Working scientifically

- Take accurate measurements using standard units, using a range of equipment

Enquiry type to cover and enquiry question

Fair test and pattern seeking (enquiry type)

How does the distance between the shadow puppet and the screen affect the size of the shadow?

Learning Milestones /Assessment

I can...

- identify a light source
- describe how light travels
- explain how the pupil controls light into the eye
- say which surfaces reflect light the best
- explain the dangers of UV light
- explain how a shadow is made