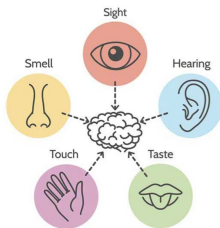




Knowledge I already have

In year 1:

- I identified, named, drew and labelled the basic parts of the human body and was able to say which part of the body is associated with each sense.



- I described the simple physical properties of a variety of everyday materials for example plastic is see-through and waterproof.



New Knowledge

During this unit:

- I will recognise that light is needed in order to see things and that dark is the absence of light.
- I will notice that light is reflected from surfaces.
- I will recognise that light from the sun can be dangerous and that there are ways to protect my eyes.
- I will know that shadows are formed when the light from a light source is blocked by an opaque object.
- I will find patterns in the way that the size of shadows change.



Future Knowledge

In year 6:

- I will recognise that light appears to travel in straight lines and use this idea to explain that objects are seen because they give out or reflect light into the eye.
- I will explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes.
- I will use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.

Scientific Enquiry

Comparative and fair tests:

- I will make predictions and explore how different objects are more or less visible in different levels of lighting.
- I will make predictions and explore how objects with different surfaces, for example, shiny or matt, are more or less visible.

Comparative testing and pattern seeking:

- Plan an enquiry to explore how shadows vary as the distance between a light source and an object or surface is changed.

We see objects because our eyes can sense light. Dark is the absence of light. We cannot see anything in complete darkness. Some objects, like the sun, light bulbs and candles are sources of light. Objects are easier to see if there is more light. Some surfaces reflect light. Objects are easier to see when there is less light if they are reflective. The light from the sun can damage our eyes. We should not look directly at the sun and can protect our eyes by wearing sunglasses or sun hats in bright light. Shadows are formed on a surface when an opaque or translucent object is between a light source and the surface and blocks some of the light. The size of the shadow depends on the position of the source, object and surface.

light source



Makes light. Natural light sources are the sun and stars. Lamps provide artificial light.

opaque



Not able to be seen through.

reflect



To throw back light without absorbing it.

shadow



A dark area or shape produced by something coming between rays of light and a surface.

translucent



Not see-through but clear enough to allow rays of light to pass through.

transparent



Allows light to pass through. See-through.