

The Knowledge

Supporting the National Curriculum



Knowing More

Remembering More

Learning More

Light



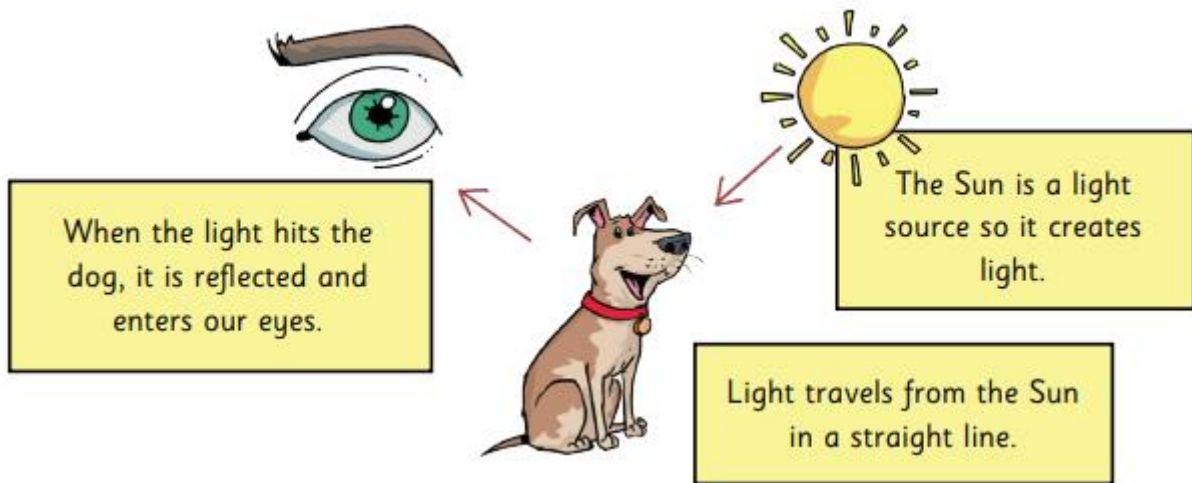
ARDLEIGH GREEN
JUNIOR SCHOOL

Year 3
Science

Key Facts

We need light to be able to see things. A **light source** makes light. The **Sun** and other **stars, fires, torches and lamps** all make their own light, so they are examples of sources of light. Remember the Sun can be **dangerous**.

Light travels in a **straight line**. When light hits an object, it is **reflected** (bounces off). If the reflected light hits our eyes, we can see the object. Some surfaces and materials reflect light well. Other materials do not reflect light well. **Reflective surfaces** and materials can be very useful.



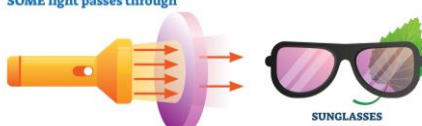
Objects are either **opaque**, **translucent** or **transparent**. Opaque objects let **no light** pass through. Translucent objects let **some light** pass through. Transparent objects **let light pass** through.

TRANSPARENT
ALL light passes through



WINDOW

TRANSLUCENT
SOME light passes through



SUNGLASSES

OPAQUE
NO light passes through



BACKPACK

Key Vocabulary

light - a source of **energy** that allows you to **see**

dark - the **absence** of light

reflect - the process that describes light **bouncing off** a surface

vitamin D - a vitamin that comes from **sunlight** or **food** and important for bone strength

ultraviolet rays - type of light that can be **harmful**

high visibility - can be seen **easily**

shadow - a dark image that is formed when an object **blocks** the light

position - where something is **placed**

transparent - can be seen through

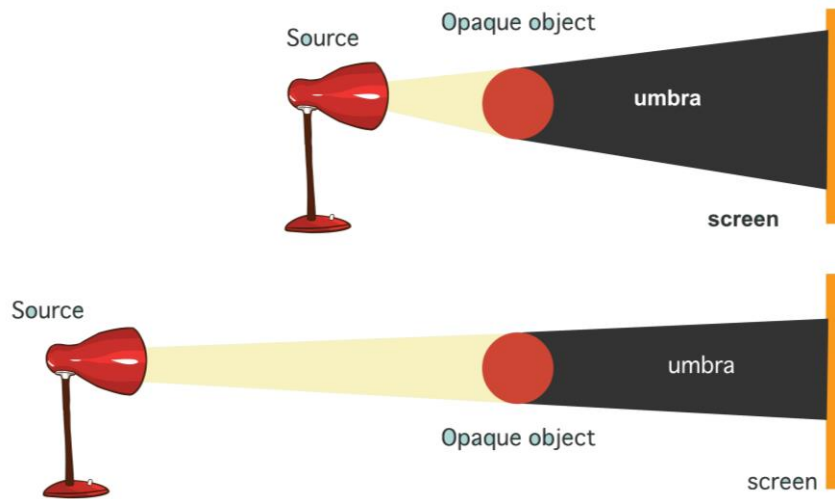
translucent - can be seen through, but not clearly

opaque - cannot be seen through



Shadows

A shadow is caused when **light is blocked** by an **opaque** object. A shadow is **larger** when an object is **closer** to the light source. This is because it blocks more of the light.



Test Yourself

- What is the difference between light sources and artificial sources?
- Can you name some different light sources?
- What materials are reflective?
- How can reflective materials be useful?
- How can we stay safe from the light coming from the sun?
- How are shadows formed?
- How do shadows change?
- How can you change the size of a shadow?