

Enquiry Question: How could you light up a dark room with just one light beam?

What should I already know?

- Light comes from a variety of sources: primary sources, which give out light directly; secondary sources, which reflect light.
- Understand that all light has a source.
- Understand that light travels in a straight line. Know that light passes through some materials but not others.
- Know that shadows are formed when the light from a light source is blocked by a solid.

Scientific Skills and Enquiry

To know that light is scattered off objects and travels in straight lines. Objects can be seen because they either give out light or reflect light. White light can be split into different colours.

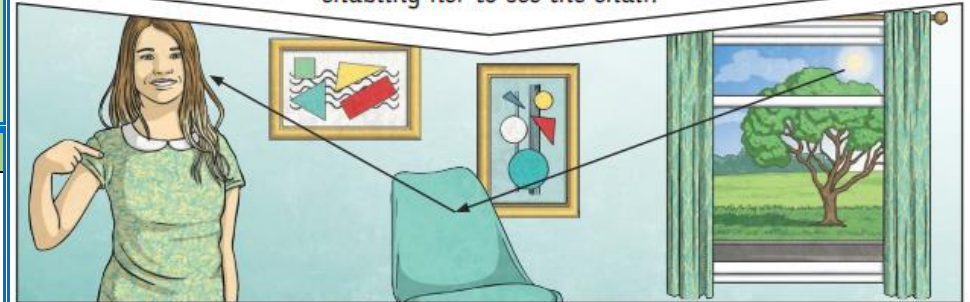
Skills:

- To ask relevant questions and use different types of scientific enquiries to answer them.
- Take measurements using a wide range of scientific language.
- To report on and record findings using correct scientific language.
- To give scientific reasons to answer questions and support claims using scientific language.
- To set up an investigation.

Key Knowledge

We need **light** to be able to see things. **Light** waves travel out from sources of **light** in straight lines. These lines are often called rays or beams of **light**.

Light from the sun travels in a straight line and hits the chair. The **light** ray is then **reflected** off the chair and travels in a straight line to the girl's eye, enabling her to see the chair.



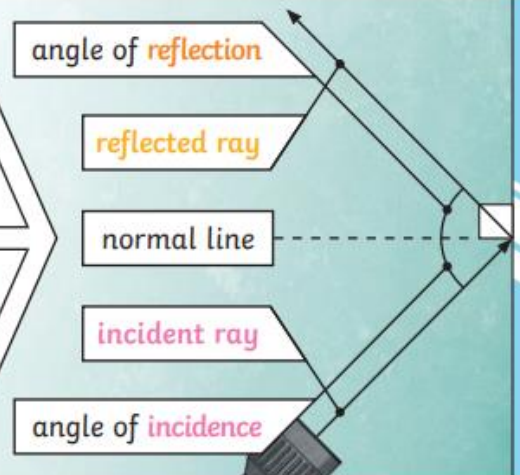
Key Vocabulary

light	A form of energy that travels in a wave from a source
light source	An object that makes its own light.
shadow	Light that is visible to the human eye. It is made up of a colour spectrum.
reflection	Reflection is when light bounces off a surface, changing the direction of a ray of light.
incident ray	A ray of light that hits a surface.
reflected ray	A ray of light that has bounced back after hitting a surface.
The law of reflection	The law states that the angle of the incident ray is equal to the angle of the reflected ray.
refraction	This is when light bends as it passes from one medium to another.
visible spectrum	Light that is visible to the human eye. It is made up of a colour spectrum.

The **law of reflection** states that the angle of **incidence** is equal to the angle of **reflection**. Whenever **light** is **reflected** from a surface, it obeys this law.

The angle of **reflection** is the angle between the normal line and the **reflected ray** of **light**.

The angle of **incidence** is the angle between the normal line and the **incident ray** of **light**.



Hyde Park Junior School - Science

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Topic: Light

Year: 6

Strand: Physics

Question 1: Name three light sources.	Start of unit:	End of unit:
A.		
B.		
C.		

Question 2:	Start of unit:	End of unit:
Explain how a shadow can be formed.		

Question 3:	Start of unit:	End of unit:
Explain how we can see objects which are not light sources.		

Question 4: True or false? Light can bend.	Start of unit:	End of unit:
True		
False		

Question 5:	Start of unit:	End of unit:
Explain the difference between a reflection and a refraction.		

Question 6:	Start of unit:	End of unit:
What type of surfaces do you think will reflect light the best?		

Question 7:	Start of unit:	End of unit:
Draw a picture to explain how just one beam of light could light up a whole room.		