

Nova's Night-Time Light Investigation

Learning objective: To understand that light travels in straight lines from a source, and to identify the difference between light sources and reflective objects.

Nova the Owl is stargazing! To help her see clearly, you need to sort the objects below. In the table provided, decide if each item is a 'Light Source' (it makes its own light) or a 'Reflective Object' (it bounces light from a source). Once sorted, answer the questions about how light travels.

Word bank: Light Source · Reflective Object · Straight line · Reflection · Darkness · Energy

1. Sort these items: The Sun, a shiny metal spoon, a lit candle, a mirror, a glowing torch, the Moon. Create a table with two columns: 'Light Source' and 'Reflective Object'. (6 marks)

2. Nova says that we can see objects because light travels in a specific way. How does light travel from a source to our eyes? Complete the sentence: 'Light travels in a _____.' (2 marks)

3. Explain why the Moon is classified as a 'Reflective Object' and not a 'Light Source', even though it looks bright in the night sky. (2 marks)

4. If you are in a room with absolutely no light, can you see your own reflection in a mirror? Explain your answer using the word 'reflection'. (2 marks)

5. Max the monkey wants to see a book in a dark room. He has a torch. Draw a diagram showing the path of the light from the torch, hitting the book, and bouncing into Max's eye. (3 marks)

Draw: Draw a diagram showing a torch shining light onto a book, and then show the light ray bouncing off the book and travelling to a pair of eyes.



Extension challenge: Research how shadows are formed. Write a short paragraph explaining what happens to light when it hits an opaque object, a translucent object, and a transparent object.