

Nova's Guide to Light and Shadows

Learning objective: To explain how light travels, how shadows are formed, and why we need light to see objects.

Use the prompts below to write a scientific report about light. Remember to use your word bank to make your sentences flow and to use clear, scientific language.

Nova the owl is fascinated by the night sky, but she knows that without a source of light, the world would be completely dark.

Word bank: travels in straight lines · light source · opaque · transparent · translucent · reflection · absence of light · consequently · furthermore · however

1. Introduction: What is a light source? Start by explaining that light travels in straight lines and give two examples of light sources... (2 marks)

2. Reflections: Explain how we see objects. What happens when light hits a shiny or smooth surface? Describe the process of reflection... (2 marks)

3. Shadow formation: Describe what happens when an opaque object blocks the path of light. Why is a shadow formed behind the object?... (3 marks)

4. Comparing materials: Use the terms opaque, transparent, and translucent to describe how light interacts with different materials. Give an example for each... (3 marks)

5. Conclusion: Summarise why light is essential for our vision. If there were no light sources, what would happen to our ability to see?... (2 marks)

Extension challenge: Imagine you are designing a shadow puppet theatre. Write a paragraph explaining which materials you would choose for your puppets and the screen, and why you made those specific scientific choices.