

Nova's Light and Shadow Lab

Learning objective: To identify light sources, understand that we need light to see, and explain how shadows are formed when light is blocked by an opaque object.

Nova the owl is preparing for a night of stargazing! Help her finish her science journal by sorting items into light sources and objects that reflect light, and by explaining how shadows are made. Use the word bank to fill in the gaps for each question.

Word bank: light source · opaque · shadow · sun · reflection · blocked

1. Nova sees the Sun in the sky. Why is the Sun called a natural light source? Explain using the word bank. (2 marks)

2. When Nova stands in front of a torch, a dark shape appears on the ground. What is this shape called and how is it created? (2 marks)

3. Is a mirror a light source? Explain why or why not. (2 marks)

4. If you hold a piece of clear plastic in front of a torch, does it create a dark shadow? Why? (2 marks)

5. List two items from your classroom that are light sources and two items that are not. (2 marks)

Draw: Draw a diagram showing Nova the owl standing in front of a lamp. Draw a shadow behind Nova and label the 'light source', the 'opaque object', and the 'shadow'.



Extension challenge: Investigate: If you move the lamp closer to Nova, does her shadow get bigger or smaller? Write a sentence describing what you discovered.