

Nova's Night-Time Light Investigation

Learning objective: To identify how light travels and understand that we need light to see objects.

Follow the drawing prompts carefully to create a scientific diagram showing how Nova the owl sees a shiny object in the dark. Use your ruler for straight lines and label your drawing using the word bank provided.

Draw: Draw a scientific diagram on a piece of A4 paper. On the left, draw a flashlight shining a straight beam of light towards a silver coin placed on a table on the right. Use a ruler to make the light beam a perfectly straight line. Add a small drawing of Nova the owl's eyes looking at the coin. Draw a second line bouncing off the coin and traveling to Nova's eye to show reflection. Keep the style clear and neat, like a science textbook diagram.



Label words: Light source · Light ray · Reflect · Object · Eye

Steps:

1. Step 1: Draw a small flashlight on the left side of your page. Draw a straight line from the flashlight to a shiny coin on the right. What do we call the object that produces light?
2. Step 2: Draw an arrow on your line showing the direction light travels. Why can we see the coin? Explain what happens when light hits the shiny surface.
3. Step 3: If you put a piece of cardboard in front of the flashlight, what would happen to the light ray? Use the term 'opaque' in your answer.

4. Step 4: Label the 'Light source', the 'Object', and the 'Light ray' on your drawing.
5. Step 5: Why is it impossible to see the coin in a room that is completely dark?