

Year 3 Science Assessment: Light and Shadows

Learning objective: To demonstrate understanding of light sources, reflection, and how shadows are formed.

Read each question carefully before writing your answer. Use a pencil to complete the drawing task. Write clearly in British English.

Nova the owl is stargazing in the forest at night, while Max the monkey is using a torch to find his missing maths puzzle pieces under his bed. They know that to see anything, light must travel into their eyes.

Word bank: light source · reflection · opaque · transparent · shadow · block · surface · sun

1. 1. Name two natural light sources that Nova might see while she is stargazing. (2 marks)

2. 2. Max shines his torch at a shiny metal tray. The light bounces off the tray and hits the wall. What is this process called? (1 mark)

3. 3. Explain why we need a light source to see objects. What happens when you walk into a completely dark room? (3 marks)

4. 4. If you hold a piece of clear plastic (transparent) in front of a torch, why does it not create a dark shadow on the wall? (2 marks)

5. 5. Max wants to make a shadow on the wall using his hand. Describe what he needs to do with his hand and the light source to make the shadow look bigger. (3 marks)

6. 6. Why is it dangerous to look directly at the Sun, even with sunglasses on? (2 marks)

7. 7. Extended Writing Task: Imagine you are exploring a cave with a torch. Describe how you would use light to explore safely. Include how you would identify objects made of opaque materials versus transparent materials, and why shadows appear on the cave walls. (5 marks)

Draw: Draw a diagram showing a torch shining light onto an opaque wooden block. Draw the shadow that would appear on the other side of the block. (Label your diagram with the words: 'Light source', 'Opaque object', and 'Shadow').



Extension challenge: Total: /25