Nova’s Magnetic Mysteries

Learning objective: To understand how magnets work, identify magnetic materials, and explore magnetic poles.

Read the text carefully and answer the questions below in full sentences.

Nova the barn owl loves investigating the invisible forces of the world. One chilly evening, she discovered that magnets are objects that produce an area of force called a magnetic field. Nova experimented with various items in her nest. She found that magnets only attract materials containing iron, nickel, or cobalt. When she tried to stick her magnet to a plastic leaf or a wooden twig, nothing happened!

Nova also learned that every magnet has two ends, called the North Pole and the South Pole. When she placed two North Poles together, they pushed each other away; this is called repelling. However, when she placed a North Pole near a South Pole, they snapped together instantly. This invisible pulling force is incredibly strong. Nova realised that magnets are not just for fun; they are used in everyday life, from keeping cupboard doors closed to helping compasses show us the way home. By observing these patterns, Nova proved that magnetism is a fascinating and powerful force of nature.

Word bank: attract · repel · pole · magnetic · force · material

1. Name two materials that a magnet is able to attract. (2 marks)

2. What happens when you place two North Poles of a magnet together? (2 marks)

3. Why did the magnet fail to stick to the wooden twig in Nova’s experiment? (2 marks)

4. Based on the text, why might a hiker find a magnet useful? (2 marks)

5. Do you think it is important for scientists like Nova to test different materials? Explain your answer. (2 marks)

Draw: Draw a diagram of two magnets showing what happens when a North Pole and a South Pole are brought close together. Use arrows to show the direction of the force.

Extension challenge: Research and list three items in your classroom or home that you think might be magnetic, then explain your reasoning for each choice.