Nova’s Magnetic Discovery

Learning objective: To identify magnetic materials and understand how magnets interact with each other.

Read each question carefully and use your knowledge of magnetic forces to provide your answers. Remember to use full sentences where required.

Word bank: attract · repel · magnetic · pole · iron · steel · force · non-magnetic

1. Nova has a box of objects. Which two of these materials are magnetic: a wooden block, a steel paperclip, an iron nail, or a plastic button? (2 marks)

2. If you bring two North poles of a magnet together, what will happen? Use the word 'repel' in your answer. (2 marks)

3. Explain what happens when a North pole and a South pole are brought close to one another. (2 marks)

4. Max the monkey wants to sort his toys. Why would a magnet NOT be useful for picking up his wooden toy cars? (2 marks)

5. If you hold a magnet near an object and nothing happens, what does this tell you about the material the object is made from? (2 marks)

Draw: Draw a picture of two bar magnets side-by-side. Use arrows to show whether they are attracting or repelling each other, and label the poles (North and South).

Extension challenge: Nova found a hidden treasure chest that she thinks is made of iron. Design a simple experiment using a magnet to test if the chest is magnetic or non-magnetic. Write down your steps clearly.