

Year 4 Science Assessment: Marvellous Magnets

Learning objective: To assess understanding of how magnets attract and repel, which materials are magnetic, and how poles behave.

Read each question carefully. Use your scientific knowledge to answer in full sentences where required. Write clearly and check your spellings.

Max the monkey is helping his friend Nova the owl sort through a box of objects found in her observatory. They have a collection of items including paperclips, wooden blocks, a steel ruler, a plastic spoon, a bag of iron filings, and a rubber eraser. Nova uses a bar magnet to test which items are magnetic.

Word bank: attract · repel · poles · magnetic · non-magnetic · force · iron · steel · north · south

1. Using the passage, list two items from the box that will be attracted to Nova's magnet. (2 marks)

2. Explain why the plastic spoon and the wooden blocks are not attracted to the magnet. (2 marks)

3. Max has two magnets. He tries to push the two north poles together. What will happen and why? (3 marks)

4. If Max wants to make the magnets stick together, what must he do with the poles? (2 marks)

5. Describe the difference between a 'contact force' and a 'non-contact force'. Give an example of each. (4 marks)

6. Nova finds a magnet that has lost its labels. Design a simple experiment to help Nova identify the North and South poles of her magnet. Explain the steps she should take and how she will know which pole is which. (5 marks)

7. If a shop sells a set of 5 strong magnets for £3.50, how much would it cost to buy 10 magnets for the science club? (2 marks)

8. Name one place in your home or school where magnets are used and explain why they are useful there. (3 marks)

Draw: Draw a diagram showing two bar magnets repelling each other. Label the poles clearly using 'N' for North and 'S' for South.



Extension challenge: Total: /25