

Magnets Attract and Repel

Attract, repel or no force?

tick one for A and B, then explain why

1 **S N** **N S**

A B

☐ Attract ☐ Repel ☐ No force

Why? _____

2 **S N** **S N**

A B

☐ Attract ☐ Repel ☐ No force

Why? _____

3 **S N** **steel**

A B

☐ Attract ☐ Repel ☐ No force

Why? _____

4 **N S** **nickel**

A B

☐ Attract ☐ Repel ☐ No force

Why? _____

5 **S N** **copper**

A B

☐ Attract ☐ Repel ☐ No force

Why? _____

6 **N S** **plastic**

A B

☐ Attract ☐ Repel ☐ No force

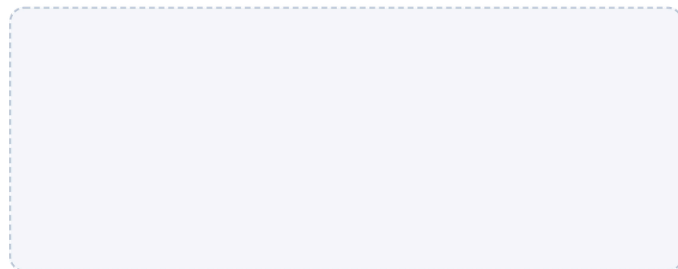
Why? _____

Circle the magnetic materials: copper iron plastic nickel aluminium steel wood cobalt

Magnetic fields

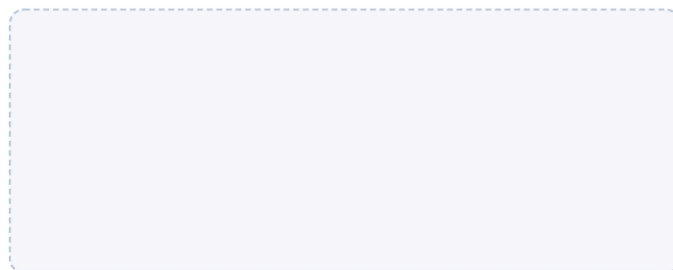
A magnetic field is a...

Draw one bar magnet and the field lines around it



- ☐ N and S labelled ☐ At least 4 field lines
- ☐ Symmetrical pattern ☐ Arrows point from N to S

Draw two bar magnets and the uniform field between the poles



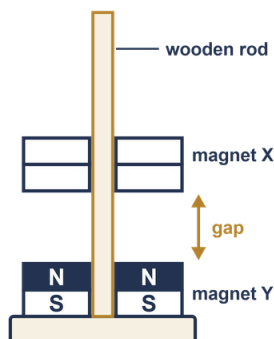
- ☐ N pole facing an S pole ☐ N and S labelled
- ☐ 3 parallel, evenly spaced lines ☐ Arrowheads from N to S

Exam-style question

Two ring magnets sit on a wooden rod. Magnet X floats above magnet Y.

- (a) Write **N** and **S** on magnet X to show its poles. [1]
- (b) Explain why magnet X floats. [2]
- (c) Give a reason why the rod is made of wood and not steel. [1]
- (d) Magnet X is turned upside down and put back on the rod. Describe and explain what happens. [2]
- (e) A copper coin is placed on top of magnet X. Explain what happens to the size of the gap. [2]

(Total for question = 8 marks)



ANSWER
