Combined science - Physics

Key stage 4 - Magnetism

Magnetic Fields

Mr van Hoek

Independent Task

Write a method to explain how to plot the magnetic field of a bar magnet.

Use these keywords to help you: **plotting compass, tail, pointer, mark**

The first couple of sentences have been started for you

1. *Put a bar magnet in the middle of .....*
2. *Draw around ....*
3. *Mark a dot by .....*
4. *Place a plotting compass on the dot so that .....*
5.
6.

Independent Task 2

Draw the shape of a magnetic field for a bar magnet.

Independent practice

1. Draw the magnetic field between two bar magnets that would attract each other.

1. Draw the magnetic field between two bar magnets that would repel each other.

Independent practice

3. Describe the shape of the Earth’s magnetic field.

4. Identify where the north magnetic pole and south magnetic pole of the Earth are found (roughly).

Exam question

Two students, A and B, use different methods to see magnetic field patterns.

i) Describe how student A can use a compass to plot a magnetic field pattern.

You may draw a diagram to help you answer this question.

ii) Student B uses iron filings to show a magnetic field pattern.

Describe how student B uses iron filings to show a magnetic field pattern.

You may draw a diagram to help you answer this question.

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Additional answers and guidance not checked by OCR

Exam question

Sketch the field pattern around a bar magnet.

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Exam style question

Draw the magnetic field pattern between the North and South poles of the magnets.

Include arrows on your field lines.

Exam question

The behaviour of a magnetic compass is evidence that the core of the Earth is magnetic. Explain why.

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Additional answers and guidance not checked by OCR