8J Magnets and electromagnets

Extension questions

Science Interactive LTD. PO BOX 50764 LONDON NW6 9AT email: sales@science-interactive.co.uk web: www:science-interactive.co.uk

Answer the following questions:

Click mouse to reveal answer

Q1. Name something that can separate iron filings from sand?
Q2. What do you call a magnet that can be turned on and off?
Q3. Which pole of a bar magnet points towards the earth's Arctic magnetic pole?
Q4. Which pole of a bar magnet points towards the earth's Antarctic magnetic pole?
Q5. What type of magnet remains indefinitely (for ever)?
Q6. What do we call a wire wound into a spiral of loops?
Q7. What do we call a coil of wire used as an electromagnet?
Q8. Name a device that uses a magnet to show directions north and south?
Q9. Name a sound generator that uses an electromagnet and a chime?
Q10. What do we call an electrical switch operated by an electromagnet??
Q11. Where do old cars and other waste metals ends up?
Q12. What word means to use again? (Think environmentally friendly)
Q13. What is the central part of a transformer or electromagnet, usually made of iron, called?
Q14. What fills the volume surrounding a magnet, often represented by a pattern of lines?
Q15. What do we call the movement of electric charge in a complete circuit?
Q16. What is the most common magnetic element?

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Answers:

A1. A magnet
A2. An electromagnet
A3. The north pole
A4. The south pole
A5. A permanent magnet
A6. A coil
A7. A solenoid
A8. A compass
A9. An electric bell
A10. A relay
A11. A scrap yard
A12. To recycle
A13. The core
A14. A magnetic field
A15. An electric current
A16. Iron

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multiple choice

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Click mouse to reveal answer

1: Which of the following two metals would be attracted to a magnet ?

A Gold and silver

B Iron and lead

C Iron and nickel

D Silver and copper

2: Which material can be made into a magnet by stroking with another magnet ?

A Lead tube

B Copper wire

C Iron nail

D Glass rod

3: A temporary electromagnet could be used to separate out which two metals ?

A Iron from nickel

B Iron from copper

C Copper from aluminium

D Gold from silver

4: A compass, if free to move with point toward Earth's ?

A Equator

B Centre

C North pole

D Axis

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multiple choice

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1: Which of the following two metals would be attracted to a magnet ?

A

B

C Iron and nickel

D

2: Which material can be made into a magnet by stroking with another magnet ?

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C Iron nail

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3: A temporary electromagnet could be used to separate out which two metals ?

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B Iron from copper

C

D

4: A compass, if free to move with point toward Earth's ?

A

B

C North pole

D

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literacy in science

Science Interactive LTD. PO BOX 50764 LONDON NW6 9AT email: sales@science-interactive.co.uk web: www:science-interactive.co.uk

Answer all the questions below:

Click mouse to reveal answer

1) Unscramble the following words:

lepo	agticnem	amscops	inro

2) Make <u>three sentences</u> using the following nine words or phrases:

magnet	exerts	force of attraction
compass	direction	north and south
electromagnet	electric current	magnetic field

3) Match the word or phase with the right meaning:

Magnetic field	→	A magnet's same poles are pushed away from one another
Attraction	→	The region where a magnetic material experiences a force
Repulsion	→	A magnet's opposite poles are pulled towards each other

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literacy in science

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Answer all the questions below:

1) Unscramble the following words:

pole	magnetic	compass	iron

2) Make <u>three sentences</u> using the following nine words or phrases:

magnet	exerts	force of attraction
compass	direction	north and south
electromagnet	electric current	magnetic field

3) Match the word or phase with the right meaning:

Magnetic field	→	The region where a magnetic material experiences a force
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complete the sentence

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Place the right word or words to complete the sentence:

Click mouse to reveal answer

move	force	iron	opposite	lines	search
magnet	stroking	vibrate			

a) A magnet exerts a _____ of attraction on other magnets, iron, nickel and cobalt.

b) There is a magnetic field around a _____ and also around the Earth.

c) Loudspeakers work by using large magnets to _____ the speaker membrane.

d) You can magnetise iron by _____ it with a permanent magnet.

e) In magnets, _____ poles attract, same poles repel.

f) Iron filings show the _____ of force around a bar magnet.

g) Electromagnets are used by army personnel to _____ for buried land mines.

h) We can sort scrap aluminium from scrap _____ by using an electromagnet.

i) A simple door bell uses an electromagnetic to _____ the striking clanger.

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complete the sentence

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Place the right word or words to complete the sentence:

move	**force**	**iron**	**opposite**	**lines**	**search**
magnet	**stroking**	**vibrate**			

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g) Electromagnets are used by army personnel to search for buried land mines.

h) We can sort scrap aluminium from scrap iron by using an electromagnet.

i) A simple door bell uses an electromagnetic to move the striking clanger.