


Magnets and electromagnets

1. Choose the correct word to complete these sentences:

a. All magnets have two three four opposite poles.

b. Identical poles attract repel each other.

c. Opposite poles attract repel each other.

2. Drag and drop words from the box to complete the sentences.

temporary	**weakest**	**magnetite**	**magnetic poles**	**molten iron**
magnetic field	**induced**	**needle**	**artificial**	
permanent	**filings**	**cosmic radiation**	**strongest**	**nickel**

a. A/An _____ magnet never loses its magnetism.

b. A/An _____ is the area around a magnet where its force has an effect.

c. All compasses contain a magnetised _____ which points north.

d. The Earth has two _____, located near the geographical poles.

e. The magnetic force of an induced magnet is _____.

f. Small pieces of iron, called _____ can help us see the effect of a magnetic field.

g. The Earth's core contains _____, which acts like a giant magnet.

h. The areas around a magnet's poles are where the magnetic field is the _____.

3. What is electromagnetism? Fill in the gaps in the definition:

Electromagnetism is the relationship between _____ and _____

4. Which of the following materials are magnetic?

silver nickel copper glass steel iron

5. Electromagnets are objects which act like magnets when an electrical current passes through them. Watch this video to see how it works:

a. What components are used in the video to make the electromagnet?

1._____ 2._____ 3._____

b. Are electromagnets permanent or induced magnets? _____

c. If we want to increase the strength of an electromagnet, which 2 of these things can we do?

Use a less powerful battery	Have more coils of wire
Have fewer coils of wire	Use a smaller nail
Use more paperclips	Use a more powerful battery

6a. What do the letters *MRI* stand for? (Write one word per box.)

_____

b. *Maglev* is an abbreviation of which two words? (Write one word per box.)

_____

c. Are these statements true (T) or false (F)?

1. Speakers use magnets to convert sound into electricity **T** **F**

2. Home computers contain electromagnets **T** **F**