



## SCIENCE REVISION PACK

### UNIT 4 - MAGNETISM

### WHAT HAVE YOU LEARNT?



Name: \_\_\_\_\_

Grade 4/ Year 5: \_\_\_\_\_

**Q1.** Find out whether these magnets will *attract* or *repel*



[ Attract / Repel ]



[ Attract / Repel ]



[ Attract / Repel ]



[ Attract / Repel ]

**Q2.** A compass uses magnetism. Which way does a compass always point?

East

West

North

South



**Q3.** Tick [ ✓ ] the metals that magnets can pick up:

Gold

Cobalt

Iron

Copper

Aluminium

Silver

Steel

Nickel

**Q4.** Complete the sentences using the word bank below.

repel      north      attract      south      pull      push      poles

Magnets have two \_\_\_\_\_. One is called the \_\_\_\_\_ pole and the other is the \_\_\_\_\_ pole. When opposite poles are near one another, they \_\_\_\_\_ together. This means the two poles \_\_\_\_\_. When two of the same poles are near one another, they \_\_\_\_\_ away from one another. This means the two poles \_\_\_\_\_ each other.

**Q5.** If we do an investigation on different magnets to see how far away they were before they picked up a paper clip, what would we find out about the magnets?

How far is the paper clip       How strong is the magnet

**Q6.** Here are the results of the magnet investigation.

**a.** Which is the strongest magnet?

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**a.** Which is the weakest magnet?

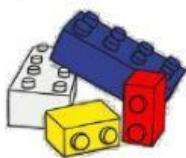
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Magnet	Distance when attracted paperclip
Medium sized horseshoe magnet	6cm
Large bar magnet	10cm
Fridge magnet	2cm

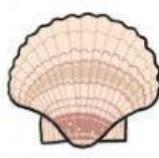
**Q7.** Tick (✓) the magnetic objects:



Steel can



Blocks



Shell



Cobalt ring



Glass



Nickel keyring

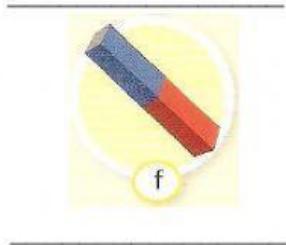
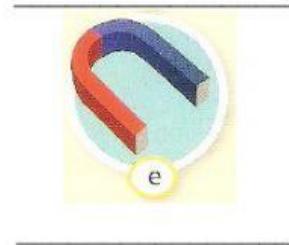
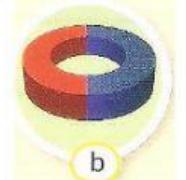


Sponge



Steel spanner

**Q8.** Name each type of magnet below:



Circular magnet

Cylindrical magnet

Bar magnet

U-shaped magnet

Horseshoe magnet

Ring magnet

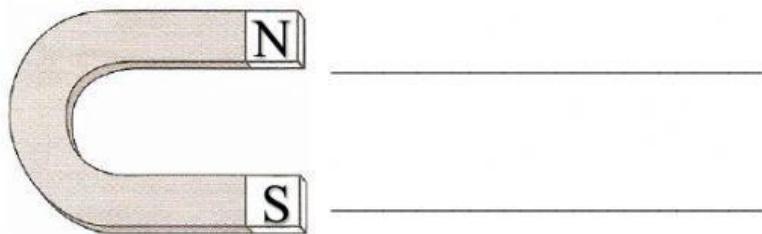
**Q9.** Tick ( ✓ ) the correct sentences and cross ( ✗ ) the wrong sentences:

- a. Some magnets have just one magnetic pole. [ ]
- b. Magnets can interact without touching. [ ]
- c. Electromagnets are useful because they can easily be turned on and off. [ ]
- d. The magnetic field strength of a magnet is weakest at the poles. [ ]
- e. An electromagnet is a permanent magnet. [ ]
- f. Magnets produce an area of magnetic force called a magnetic field. [ ]
- g. Iron, Nickel, Steel and Cobalt are magnetic materials. [ ]

**Q10.** Choose the right answer:

- 1. A magnet can attract any material that is made from \_\_\_\_\_  
{Wood      Plastic      Iron}
- 2. An example of non-magnetic material is \_\_\_\_\_  
{Paperclip      Glass cup      Steel can}
- 3. Magnetic field lines are close together at the \_\_\_\_\_  
{Lines      Poles      Centre}
- 4. Magnetic force between two magnets gets weaker with increase in \_\_\_\_\_ between them. {Distance      Attraction      Metals}
- 5. Maglev Trains use magnets to reduce \_\_\_\_\_ between the train and the tracks.  
{Speed      Friction      Gravity}
- 6. A rectangle shaped magnet is called a \_\_\_\_\_ magnet.  
{U-shaped      Bar      Ring}
- 7. \_\_\_\_\_ is a natural magnet.  
{Lodestone      Sandstone      Limestone}
- 8. \_\_\_\_\_ the strongest magnet in the universe.  
{Electromagnets      Magnetars      Granite}

**Q11.** Label the poles of the magnet below:



**Q12.** Amira and Faisal carried out a fair test to find out how many paperclips a magnet could hold. They wanted to know which magnet was the strongest. Use their table of results to answer the questions below:

a. Which magnet attracted the most paperclips?

\_\_\_\_\_

b. Which magnet attracted the least paperclips?

\_\_\_\_\_

c. Which magnet was the strongest?

\_\_\_\_\_

d. Which magnet was the weakest?

Type of magnet	Number of paperclips
circular	6
cylinder	18
horseshoe	2
bar	8
ring	10
U-shaped	3

e. How many paperclips did the ring magnet attract?

\_\_\_\_\_

f. How many paperclips did the circular magnet attract?

\_\_\_\_\_

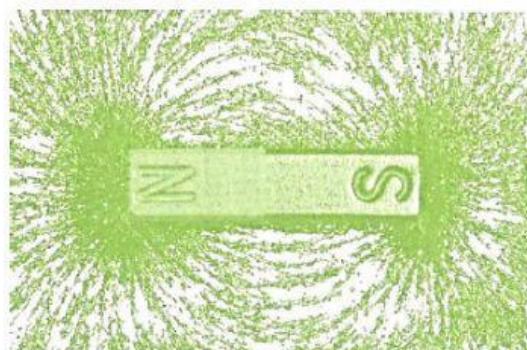
**Q13.** Observe the magnet and its magnetic force field and answer the questions given:

a. Where is the force field the strongest?

\_\_\_\_\_

b. Where is the force field the weakest?

\_\_\_\_\_



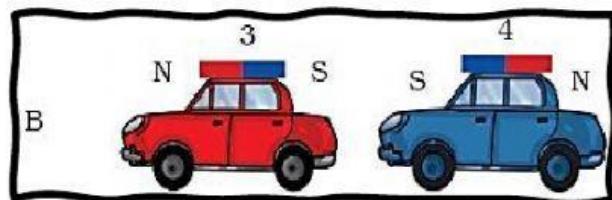
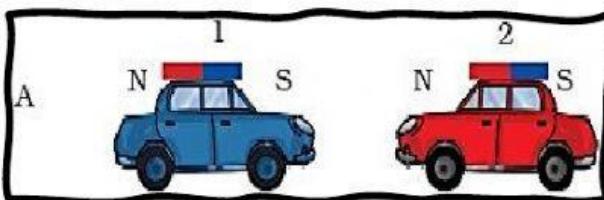
**Q14.** Sort the objects into magnetic materials, non-magnetic materials or both:



Magnetic Materials	Non-Magnetic Materials	Magnetic & Non-magnetic

**Q15.** Observe the pictures A and B.

Which of the following statements is correct for the below given pictures?



- In A, cars 1 and 2 will come closer and in B, cars 3 and 4 will come closer.
- In A, cars 1 and 2 will move away from each other and in B, cars 3 and 4 will move away.
- In A, cars 1 and 2 will move away and in B, 3 and 4 will come closer to each other.
- In A, cars 1 and 2 will come closer and in B, 3 and 4 will move away from each other.

**Q16.** Which of the following ways will NOT cause a magnet to lose its magnetism?

- Heating it strongly over a flame
- Dropping it on the floor repeatedly
- Coating it with a layer of oil
- Hitting it with a hammer repeatedly

**Q17.** How is a compass useful to us?

- In finding the altitude of a place.
- In finding only the north of a place.
- In finding all the directions of a place.
- In making artificial magnets.

**Q18.** In which direction does a magnet always point when suspended freely?

- South-West
- North-South
- East-West
- West-South

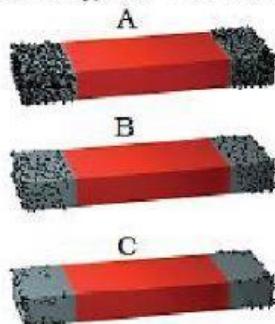
**Q19.** A bar magnet is immersed in a heap of iron filings and pulled out. The amount of iron filings clinging to the:

- North pole is almost equal to the south pole.
- North pole is much more than the south pole.
- North pole is much less than the south pole.
- Magnet will be same all along its length.



**Q20.** Three magnets A, B and C were dipped one by one in a heap of iron filings. The picture shows the amount of iron filings sticking to them. The strength of these magnets will be:

- A is the strongest, B is strong, and C is the weakest.
- A is the weakest; B is strong, and C is the strongest.
- B is the strongest, C is strong, and A is the weakest.
- All magnets are equally strong.



**Q21.** Where does a compass work?

- Only in oceans or seas.
- Only on land, where the earth's magnetic field is strong.
- Only on high mountains.
- At all the places within the earth's magnetic field