

Mexborough St John the Baptist C of E Primary School - Science

Topic: Mighty Metals

Year: 3

Strand: Forces and Magnets

What should I already know?

Forces

Magnets

- **Forces** are pushes and pulls which make things move and stop moving.
- Most forces need contact between objects, but magnets can act at a distance.
- Magnets have at least one **north pole** and one **south pole**.
- Magnets can **attract** or **repel** one another. They attract some materials & not others.
- Magnets are made of materials that create a **magnetic field** (the area in space where the force of magnets can be detected).

Magnetic Materials

Iron Steel Nickel Cobalt

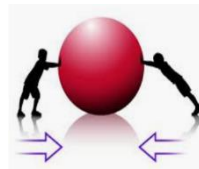
Non -Magnetic Materials

Copper Gold Wood Rubber



What are forces?

-A force is the push or pull of an object in a particular direction.



-Forces are shown by arrows in diagrams. The bigger the arrow, the bigger the force. The direction of the arrow shows the direction of the force.



A push is the force that moves an object away from something.



A pull is the force that brings an object towards something.

Balanced and Unbalanced Forces

-If two forces are balanced, they are the same size but are acting in opposite directions. If the two forces are acting on an object, then its motion will not change.

-When two forces acting on objects are not equal in size, they are called unbalanced. Unbalanced forces change the way and/or speed that something is moving, e.g. they can make objects speed up/slow d

magnetic



non-magnetic



Magnet: an object that is made of materials that create a magnetic field.

Magnetic force – this is a force that causes objects to attract (pull closer together) or repel (push further apart).

Magnets have two poles – a north pole and a south pole.

The north pole of one magnet will repel the north pole of another magnet. However, it will attract the south pole of another magnet.

