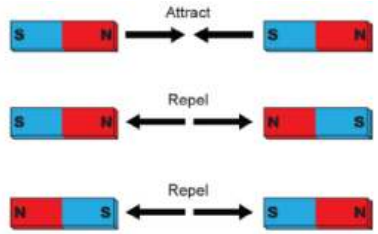
Science Knowledge Organiser

This is physics. Physics studies natural matter.

Forces and Magnets

Key Vocabulary

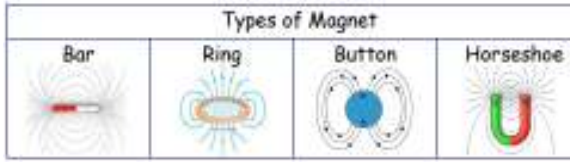
- twist
- metal
- friction
- magnetic
- contact
- non-contact force
- magnetic force
- attract
- repel
- magnetic material
- iron
- steel
- poles
- friction



Scientist

Prior Knowledge

- To know how the shapes of solid objects made by certain materials can be changed by squashing, bending, twisting and stretching.



Key Knowledge

- **Forces** are pushes and pulls.
- When you **push**, you move something **away from you**.
- **Pulls** move things **towards you**.
- The force changes the motion of an object, which means how it moves.
- Motions can make things move, speed up, slow down or stop.
- Forces act in opposite directions to each other.
- Friction is a force that holds back the motion of an object.
- When an object moves across a surface, friction acts as an opposite force.
- Some objects can move slower across a surface because some surfaces create more friction.

Magnets:

- A magnet is a piece of iron or other material that **attracts a magnetic material towards it**.
- Magnets produce an area of force around them called a **magnetic field**.
- Objects are attracted or repels from the magnet depending on if they are magnetic when the object enters the magnetic field.
- If a magnet **repels**, they **push each other away**,
- If a magnet **attracts**, they **pull together**.
- Magnets have two ends, called poles. One end is called '**North pole**' and the opposite end is called '**South pole**'.
- Opposite poles attract whilst similar poles repel.