Year 3

Science

Barnton Community Nursery & Primary School
Inspire - Believe - Achieve

All children – regardless of gender, starting point or background – will have the opportunity to engage with a high-quality science education. They will be equipped with the knowledge, skills and vocabulary to understand how science can be used to explain what is occurring, predict how things will behave and analyse caused. We intend to inspire a sense of enjoyment and curiosity about science.

Forces and Magnets

Spring 1

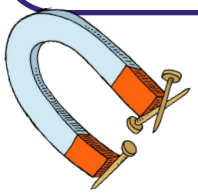
Igniting Prior Knowledge:

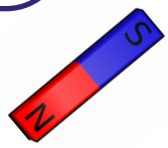
Year 1 (Use of Everyday Materials)

- The properties of a material determine whether they are suitable for a purpose.

Year 2 (Use of Everyday Materials)

- All objects are made of one or more materials that are chosen specifically because they have suitable properties for the task.





New Knowledge:

- A force is a push or a pull.
- A force can cause an object to accelerate, slow down, remain in place or change shape.
- When an object moves on a surface, the texture of the surface and the object affect how it moves. It may help the object to move better or it may hinder its movement e.g. ice skater compared to walking on ice in normal shoes.
- A magnet attracts magnetic material.
- Iron and nickel and other materials containing these, e.g. stainless steel, are magnetic.
- The strongest parts of a magnet are the poles.
- Magnets have two poles – a north pole and a south pole.
- If two like poles, e.g. two north poles, are brought together they will push away from each other – repel.
- If two unlike poles, i.e. a north and south, are brought together they will pull together – attract
- For some forces to act, there must be contact e.g. a hand opening a door, the wind pushing the trees.
- Some forces can act at a distance e.g. magnetism.
- The magnet does not need to touch the object that it attracts.
- Magnetic technology is now used in a variety of applications and reasons worldwide. For example, magnetic therapy is now used as a treatment of patients with Covid-19 pneumonia.

Key Vocabulary:

- Force
- Push
- Pull
- Twist
- Contact force
- Non-contact force
- Magnetic force
- Magnet
- Strength
- Bar magnet
- Ring magnet
- Horseshoe magnet
- Attract
- Repel
- Magnetic material
- Metal
- Iron
- Steel
- Cobalt
- Nickel
- Poles
- North pole
- South pole