



# St Bernadette's Catholic Primary School

## Beech Class

### Science Spring 2 Forces and Magnetism

Gospel Value - Joy



#### What I should already know...

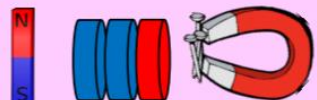
- How to make things stop and start using push and pulls.
- Have experimented and can talk about floating and sinking.

#### What is a magnet?

A magnet is a special object which produces an area of magnetic force around itself called a **magnetic field**.

If a **metal** object enters this magnetic field, they will be attracted towards the magnet and end up sticking to it. (Non-metallic objects such as wood, plastic or fabric would not be attracted to it.)

#### Here is a range of different magnets:



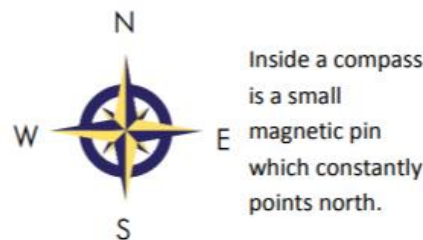
Bar Button Horseshoe



Cylindrical Ring Arc / Crescent

#### Key Knowledge

- Magnets exert forces which can either push or a pull materials.
- Some forces need contact between two objects, but magnetic forces can act at a distance.
- Magnets exert non-contact forces, which can work through some materials.
- Magnets exert forces which attract some materials.
- Magnetic materials are iron, nickel, steel, gold.
- Non-magnetic materials are bronze, copper, tin.
- Magnets as have two poles (North and South).
- Magnets with opposite poles will attract each other.
- Magnets with the same poles will repel each other.



#### Key Vocabulary

**Force** - A push or a pull.

**Push** - To push away from something.

**Pull** - To pull towards something.

**Surface** - The outside part or uppermost layer of something.

**Magnet** - An object which produces a magnetic force that pulls certain objects towards it.

**Magnetic** - Objects which are attracted to a magnet are magnetic.

**Magnetic field** - The area around a magnet where there is a magnetic force which will pull magnetic objects towards the magnet.

**Attract** - Attraction is a force that pulls objects together.

**Repel** - Repulsion is a force that pushes objects away.

**Friction** - A force that acts between two surfaces or objects that are moving, or trying to cross each other.

**Compass** - A device that show north and south on earth.

**Pole** - North and South poles are found at different ends of a magnet.

**North** - A position on a compass opposite of south.

**South** - A position on a compass opposite of north.

