

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

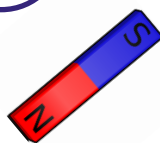
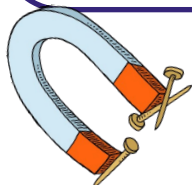
### Igniting Prior Knowledge:

#### Nursery Forces

- When I push something, it moves.
- When I pull something, it moves.

#### Year R Forces and Motion

I can make things move faster or slower when I change where and how I push it.



### Key Vocabulary:

- Force
- Contact Force
- Non contact Force
- Magnetic
- Magnet
- Bar Magnet
- Ring Magnet
- Horseshoe Magnet
- Attract
- Repel
- Metal
- North Pole
- South Pole

### New Knowledge:

- A force is a push or a pull in a particular direction.
- A force can cause an object to move, accelerate, slow down, stop, 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.
- A smooth surface and smooth object, helps the object to move better, a rough surface and rough object will hinder the objects movement.
- 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.
- A magnet attracts magnetic material.
- The metals, Iron and nickel and other materials containing these, e.g. stainless steel, are magnetic.
- There are different types of magnets e.g. horseshoe, bar magnet and ring magnet.
- 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

