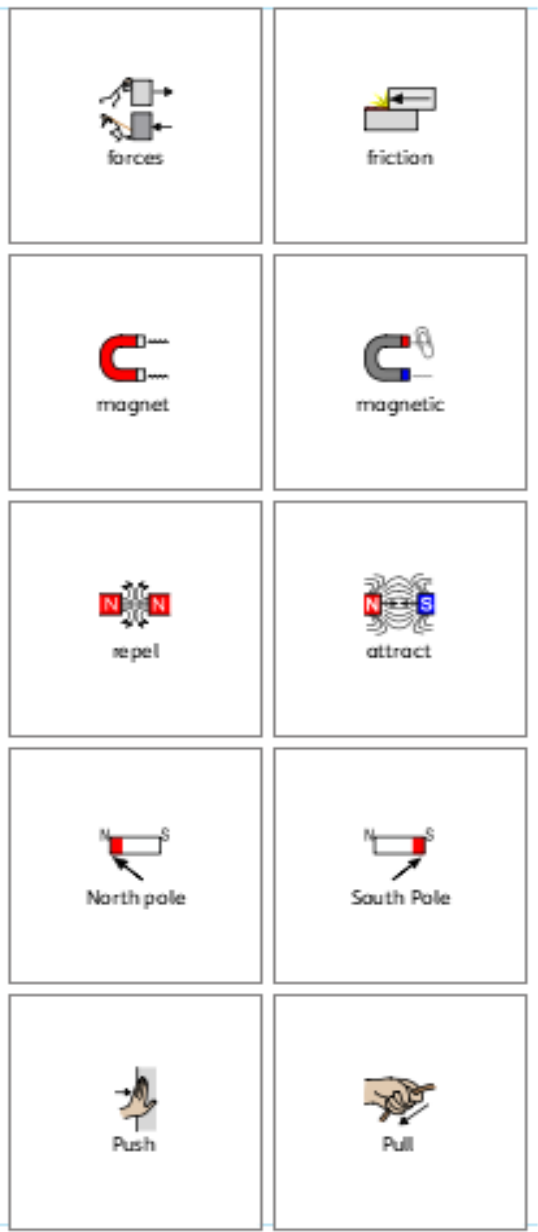


Forces and Magnets.



| | |
|------------|---|
| Forces | A force is a push or pull that causes a change in speed, direction or shape. |
| Friction | Friction is a force between two surfaces that are sliding, or trying to slide, across each other. |
| Magnet | A magnet is an object that is made of materials that create a magnetic field. |
| Magnetic | Magnetism is the force of attraction or repulsion between certain materials. |
| Repel | To force something to move away or apart from an object. |
| Attract | To pull or draw something towards an object. |
| North Pole | The side of the magnet that points towards the north, often the red side of the magnet. |
| South Pole | The side of the magnet that points towards the south, often the blue side of the magnet. |
| Push | A push is a force that moves an object away from something. |
| Pull | A pull is a forces that moves an object towards something. |

In the future:

Recognise that some mechanisms including levers and pulleys allow a smaller force to have a greater effect.

I will learn:

- Notice that some forces need contact between two objects, but magnetic forces can act at a distance.
- Observe how magnets attract or repel each other and attract some materials and not others.

I should already know:

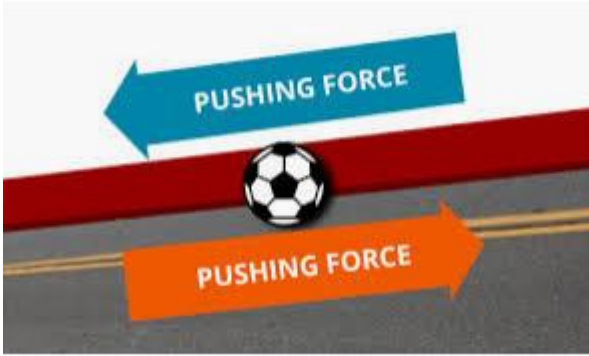
- How to compare everyday materials and objects.
- How to compare how different things move along different surfaces.
- That things move by pushing or pulling them.

Challenge:

Carry out a search for all of the magnetic materials in your home.
 Answer the question...
 'Which material is the most magnetic?'
 How do you know?

Forces and Magnets.

Forces and friction



Forces are just **pushes** and **pulls** in a particular direction.

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

Friction is a force between two surfaces that are sliding, or trying to slide, across each other. For example, when you try to push a book along the floor, friction makes this difficult.

Friction always works in the direction opposite to the direction in which the object is moving, or trying to move. Friction always slows a moving object down.



A force is always a **push**, a **pull** or a **twist**.

WHAT ARE FORCES?

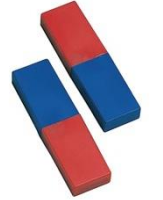
A force is a push, pull or twist that can change an objects motion



Magnets

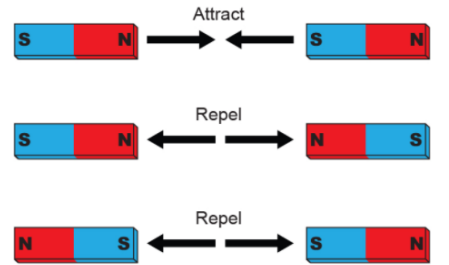
When two magnets are close, they create pushing or pulling forces on one another.

These forces are strongest at the ends of the magnets. The two ends of a magnet are known as the north pole and the south pole.



Same poles repel

If you try to put two magnets together with the same poles pointing towards one another, the magnets will push away from each other. We say they repel each other.



Different poles attract

If you put two magnets together with different poles pointing towards one another, the magnets will pull towards each other. We say they attract each other.

Magnetic materials are always made of metal, but not all metals are magnetic.

