Year 3: Forces and Magnets

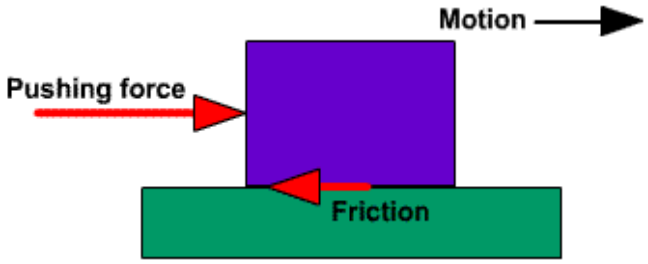
Forces:

A **force** is a push or pull. **Forces** cannot be seen but it is possible to see what forces do. When force is applied to an object, it can change the direction of the object's speed, direction of movement or shape.

Friction:

Friction is a **force** between two surfaces that are sliding, or trying to slide, across each other. Friction works in the direction opposite to the direction in which the object is moving or trying to move.

Friction always slows down a moving object. The amount of friction depends on the materials from which the two surfaces are made. The rougher the surface, the more friction is produced



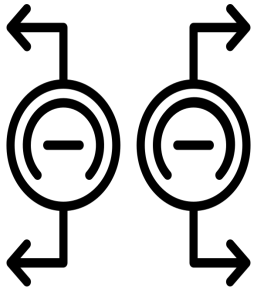
Friction also produces heat. If you rub your hands together quickly, you will get them warmer.

Magnetic Field:

When two **magnets** are close, they create pushing or pulling forces on one another. These **forces** are strongest at the ends of the magnet. The two ends of a magnet are known as the north **pole** and the south **pole.**

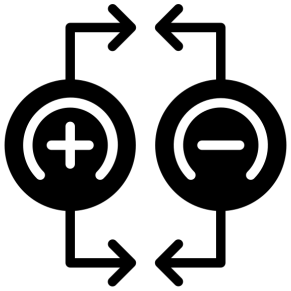
Repulsion

Two **poles** of the same type push each other away. They repel each other. This is magnetic repulsion.



Attraction

Two **poles** of the same type pull towards one another. This is magnetic attraction.



Key Vocabulary:

Attract: Two magnets with different poles will pull towards each other. They attract each other.

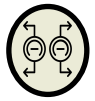
Friction: The force between two surfaces that are sliding, or trying to slide, across each other.

Force: A force is simply a push or a pull in a particular direction.

Magnet: A metal which attracts or repels other materials.

Magnetic field: An invisible field which allows magnets to attract or repel certain materials.

Pole: The ends of the magnets are known as the north pole and the south pole. Opposite poles attract each other.



Repel: Opposite poles will repel each other which means they will give out a force that pushes the other pole away.

Balanced Forces:

If two **forces** are balanced, it means the forces are the same size but are acting in opposite directions.

If two balanced forces are acting on an object, that object will not change its motion.