

Year 5



Forces

Key Vocabulary			

Pre existing knowledge

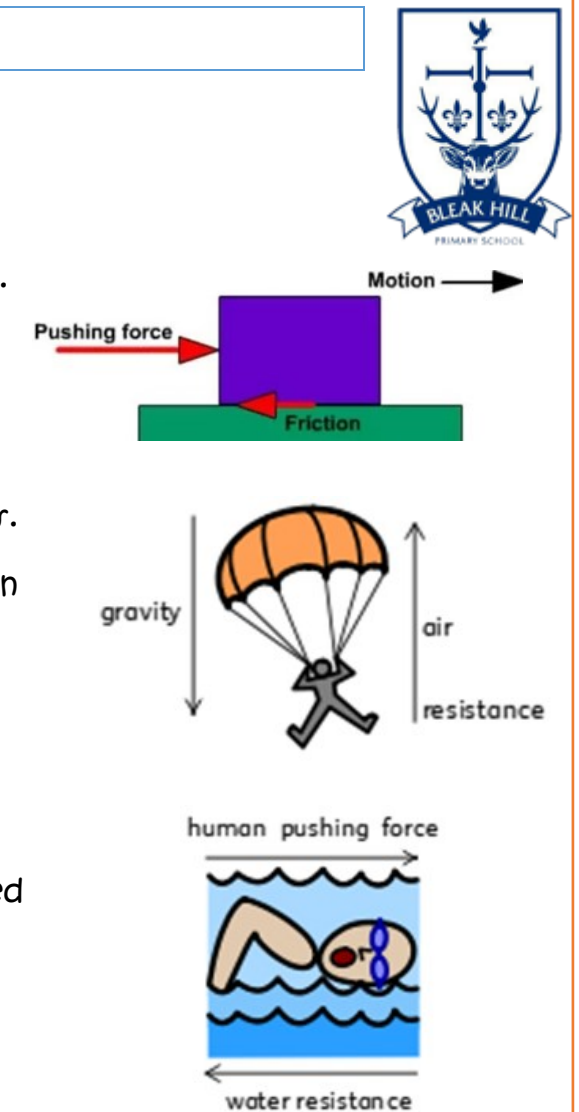
- Know what a force is and be able to explain that a push and pull are types of forces.
- That when forces are applied to an object they allow them to move or stop moving.
- The strength of the force determines how far and fast an object moves.
- Friction is the resistance of motion when there is contact between two surfaces
- The force that causes objects to move downwards towards the ground is gravity.
- That magnets have poles, and that opposite poles attract, while similar poles repel.

Key Vocabulary

Attract	If one object attracts another, it causes the second object to move towards it.
Friction	The resistance of motion when one object has contact with another.
Force	The pulling or pushing effect something has on something else.
Gear	A part of a machine that causes another part to move because of teeth which connect the two moving parts.
Gravity	The force which pulls things towards the ground.
Lever	A tool used to lift or pry something.
Motion	Changing position – movement.
Opposite	Used to describe something of the same kind which are completely different in a particular way e.g North and South are opposite directions.
Pulley	A machine to aid lifting. Using a wheel or wheels and chain or rope.
Repel	Pushing something away – used when talking about magnetism.
Resistance	A force which slows down a moving object.
Spring	Spiral of wire which returns to its original shape after being pressed or pulled.
Streamlined	A design feature to make movement easier due to reducing resistance.
Surface	The top or outside of something.

Key Information

- Forces are pushes and pulls.
- These forces change the motion of an object.
- They will make it start to move or speed up, slow it down or even make it stop.
- Friction is a force—it is the resistance of motion, when one object rubs against another.
- Other forces that create resistance of motion include water resistance and air resistance.
- Gravity is the force that pulls objects to the centre of the Earth.
- Air resistance opposes the force of gravity.
- Water resistance is the friction that is created between water and an object that is moving through it.
- Some objects can move through water with less resistance if they are streamlined.

Mechanisms

Some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.



gear



spring



lever



pulley