



Year 3 Term 2: Feel the force, see the light!



During this unit, the children will gain a deep understanding of both kinetics and optics. They will begin by studying forces by looking at the impact different surfaces have on how things move, before moving on to exploring magnets through a variety of hands-on exploration and investigation. When learning about optics, children will explore light, dark, reflection and shadows. This unit will also provide vast opportunity for children to refine their investigative skills. In Design Technology, children will learn about linkages and levers.

Vocabulary

Force: A force is either a push or a pull. It changes or maintains the motion

Contact force: Forces that act when contact is made between objects.

Non-contact force: Forces that act between objects that are not touching.

Magnet: A metal that attracts or repels other materials.

Attract: When a metal is pulled in towards the magnet

Repel: When a metal is pushed away from the magnet.

Magnetic poles: A magnet has two ends. They are called the North Pole and the South Pole.

Magnetic vs Non-Magnetic Metals

Magnetic		Not Magnetic	
Iron	Nickel	Aluminum	Copper
Cobalt	Steel	Lead	Brass

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.

A magnet has two ends: the north pole and the south pole.

Some magnets are stronger than others. Strong magnets will create bigger pushing or pulling forces than weak magnets.

Vocabulary

Light: Electromagnetic radiation that can be seen by the human eye.

Light Source: A source of light makes light.

Dark: The absence of light.

Transparent: All light passes through it and you can see through it.

Translucent: Some light passes through it but you can't see clearly through it.

Opaque: No light passes through it, and you cannot see through it.

Reflect: When light from an object is reflected off a surface it changes direction.

Shadow: Shadows are formed when a light source is blocked by an opaque object.

Sources of Light

Technology

oscillating

A backwards and forwards motion in an arc.

linkage

A system of links.

linear

Linear motion moves in a straight line, e.g. a train moving down a track.

rotary

Rotary motion moves in a complete circle, eg a wheel turning.

reciprocal

A backwards and forwards motion in a straight line

mechanism

A device used in a product to create movement.

lever

A bar featuring a pivot that can be pushed or pulled to make the moving of a load easier