



St Bernadette's Catholic Primary School -Willow Class Forces

Gospel Value Justice

What I should know already- Compare how things move on different surfaces. (Y3 - Forces and magnets) Notice that some forces need contact between two objects, but magnetic forces can act at a distance. (Y3 - Forces and magnets) Observe how magnets attract or repel each other and attract some materials and not others. (Y3 - Forces and magnets) Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet and identify some magnetic materials. (Y3 - Forces and magnets) Describe magnets as having two poles. (Y3 - Forces and magnets) Predict whether two magnets will attract or repel each other, depending on which poles are facing. (Y3 - Forces and magnets)

Key Knowledge

- A force causes an object to start moving, stop moving, speed up, slow down or change direction.
- Gravity is a force that acts at a distance.
- Everything is pulled to the Earth by gravity. This causes unsupported objects to fall.
- Air resistance, water resistance and friction are contact forces that act between moving surfaces. The object may be moving through the air or water, or the air and water may be moving over a stationary object.
- A mechanism is a device that allows a small force to be increased to a larger force. The pay back is that it requires a greater movement. The small force moves a long distance, and the resulting large force moves a small distance, e.g. a crowbar or bottle top remover. Pulleys, levers and gears are all mechanisms, also known as simple machines.



Key Vocabulary

force - In physics, a force is an influence that causes the motion of an object with mass to change its velocity.

Gravity- the force that attracts a body towards the centre of the earth, or towards any other physical body having mass

Earth- the planet on which we live; the world

air resistance-air resistance is a kind of friction that occurs between air and another object.

water resistance- water resistance is a type of force that uses friction to slow things down that are moving through water.

Friction-the resistance that one surface or object encounters when moving over another.

mechanisms-a system of parts working together in a machine; a piece of machinery.

simple machines- any of the basic mechanical devices for applying a force, such as an inclined plane, wedge, or lever.

levers-a rigid bar resting on a pivot, used to move a heavy or firmly fixed load with one end when pressure is applied to the other.

pulleys-a wheel with a grooved rim around which a cord passes, which acts to change the direction of a force applied to the cord and is used to raise heavy weights.

gears-are wheels with toothed edges that rotate on an axle or shaft.

