Norwood Green Junior School – Science

Topic: Forces	Year 5	Term: Summer 1

Important Facts

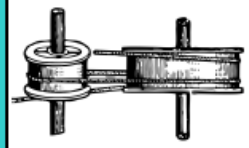
Sir Isaac Newton (1643-1726)

- Explained the three laws of motion.
- Explained the theory of gravity, including gravitational pull of the Earth.
- Invented the reflecting telescope
- His physics book 'Principia' contained many theories of physics.

Vocabulary

Sir Isaac Newton	An English physicist and mathematician, one of the most influential scientists in history.
Gravity	A force that attracts something with mass towards earth, measured in Newtons per kilogram.
Resistance	A force exerted on something to slow it down or stop it.
lever	A simple machine used to move an object or operate a machine.
gear	Toothed wheel that engages with another to change speed or direction of a machine.
Pulley	A wheel which a cord passes through; it helps to raise heavy weights.
Mass	The measure of how much matter is in an object.
Friction	The force or resistance when one object rubs on another.

Diagrams

Name	Picture	How it Works	Used For
Lever		Helps to reduce the amount of force needed to move or lift an object, by increasing the distance through which the force acts.	• stapler • door handle • claw of hammer • tweezers
Pulley		Helps to reverse the direction of the lifting force, therefore multiplying the force your body produces on the object.	• elevator • wells • theatre curtains • bulldozer
Gear		The 'teeth' on the gears turn one another, and in doing so, helps to increase the power of a turning force.	• cars • bikes • pendulum clock • vacuums

What will I know by the end of this unit?

- Learn what gravity is.
- Explore air resistance and water resistance.
- Investigate simple machines such as levers, pulleys, gears, wheels and screws and how they allow small forces to have a bigger impact.
- Further develop their knowledge of how forces can slow or stop objects moving.