

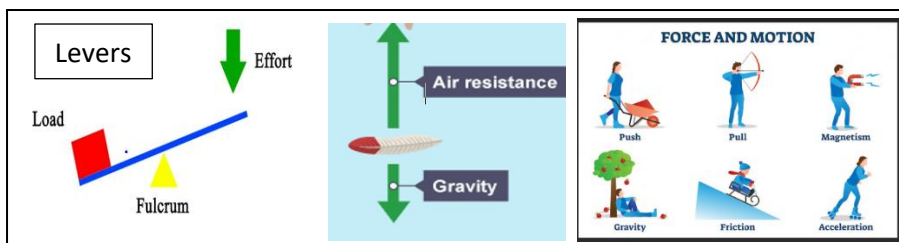
Knowledge Organiser

Year: 5

Term: Spring 1

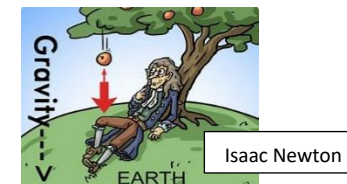
Topic: Vikings

Forces



Key Knowledge:

A force is a push or a pull. There are many objects in our homes and daily lives which we push and pull to make them move.



Friction, gravity, air resistance, magnetism and water resistance are all types of forces.

Objects fall towards the Earth because of the force of gravity between Earth and the falling object. Gravity is the reason we do not fall off the Earth. When you drop two objects, they hit the floor at the same time. This is because of the LAW OF GRAVITY – The pull of gravity is the SAME on all objects, no matter what their weight is.

Friction is a force between two surfaces that are moving across each other. Air resistance slows an object's movement through the air.

Levers allow us to use force to do work. The LAW of the lever: You need a pivot (aka fulcrum) to move a BIG force a SHORT distance from the pivot. You need to move a SMALL force a LONG distance from the pivot. Pulleys are used to move heavy objects from one place to another. Gears can be used to change speed and direction of movements.

Vocabulary	Meaning
Forces	Pushes or pulls.
gravity	A pulling force exerted by the Earth (or anything else which has mass).
air resistance	A type of friction caused by air pushing against any moving object.
water resistance	A type of friction caused by water pushing against any moving object.
magnetism	A force exerted by magnets when they attract or repel each other.
friction	A force that acts between two surfaces or objects that are moving, or trying to move, across each other.
mechanisms	Machines or devices which help to achieve a result.
levers	Levers can be used to make a small force lift a lighter load. A lever always rests on a pivot.
pulleys	Pulleys are used to reduce the amount of force needed to lift a load.
gears	Gears are used to change speed, direction or force of a motion.
weight	The measure of the force of gravity on an object
mass	A measure of how much matter (or stuff) is inside an object.

Examples of forces in action:



Learning Objectives

Lesson 1	I know what a force is. I can talk about gravity		
Lesson 2	I know that friction is a force which slows objects movements down.		
Lesson 3	I know that air resistance is a force which slows objects movements down in the air.		
Lesson 4	I know that levers use force to do the work.		
Lesson 5	I can show what I have learnt.		