

Knowledge Organiser Year 3 Science: Forces and magnets

Concept: Forces

Key Vocabulary	
force	A push or pull on an object which can cause it to move, change speed, direction or shape. Measured in Newtons (N).
magnet	A material or object that produces a magnetic field. It attracts or repels magnetic objects, including iron.
attract	To pull towards. Opposite of repel.
repel	To push away. Opposite of attract.
propel	The act of driving or pushing forward.
friction	The resistance of motion when one object rubs against another. Friction causes objects to slow down and the energy becomes heat.
air resistance	The frictional force of air against a moving object. The faster an object moves, the greater the air resistance.
balanced force	Two forces of equal size acting in opposite directions on an object so that it will stay still or continue to move in the same way.



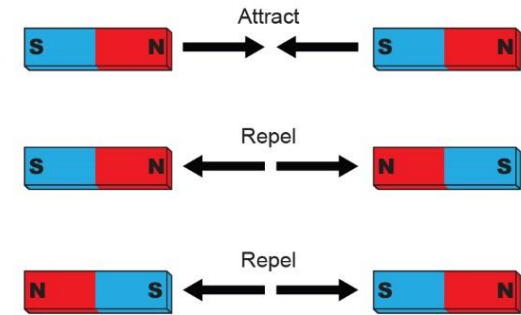
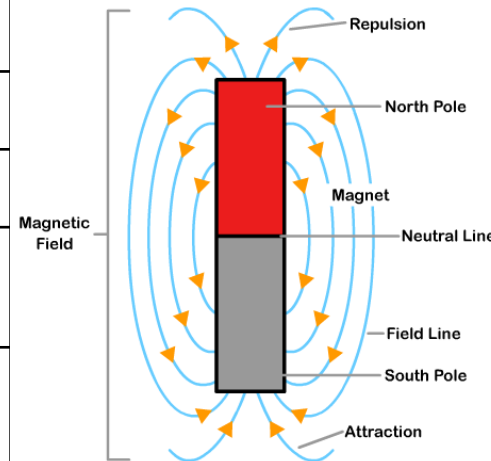
Bar Magnet



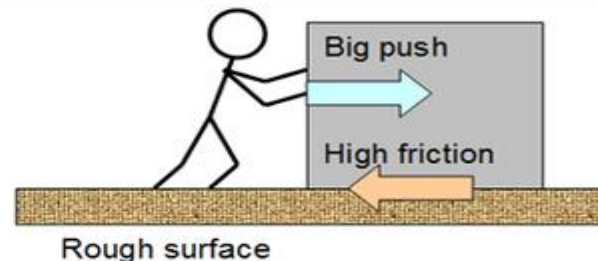
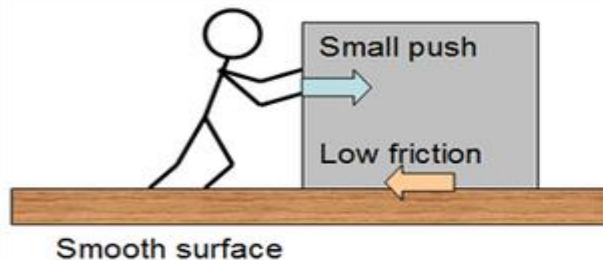
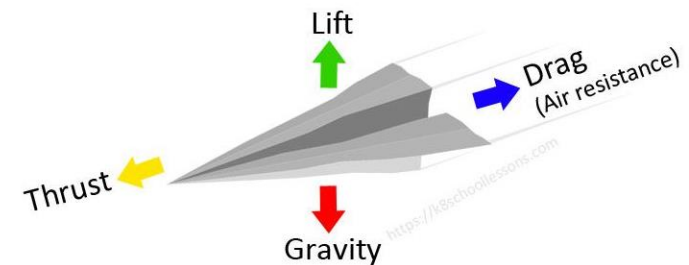
Horseshoe Magnet



Disc Magnet



Forces acting on a paper plane



Knowledge Organiser Year 3 History: Our Cornwall: Cornish Mining: Concept: Cause and Effect

Key Vocabulary	
China clay	A fine white clay used in ceramic production among other uses.
tin	A silvery white metal
copper	A red-brown metal
ore	A naturally occurring rock which contains metal or mineral
open cast mine	A form of mining which extracts rock from the surface of the earth.
sub-surface mine	A form of mining that involves digging tunnels or shafts to reach buried ore.
shaft	A vertical hole which that gives entrance to a mine.
engine house	A building where a large engine is located
mineral	A solid, naturally occurring substance

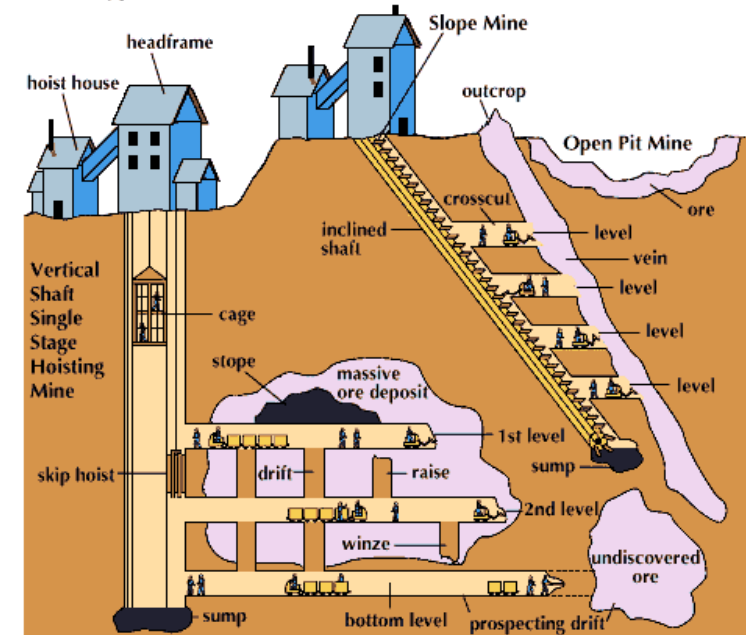


Richard Trevithick
Mining Engineer
1771-1833



Humphrey Davy
Inventor
1778-1829

Some Types of Mines



Copper



Tin



China Clay

By the mid-1700s, Cornwall was producing around 12,000 tons of copper ore a year! During the 19th Century, mining in Cornwall reached its peak, with around 2,000 mines in action across the county.

Year 3 RE: How and why do people try to make the world a better place?

Concept – ultimate questions Cornwall Agreed Syllabus: making connections

Key Vocabulary

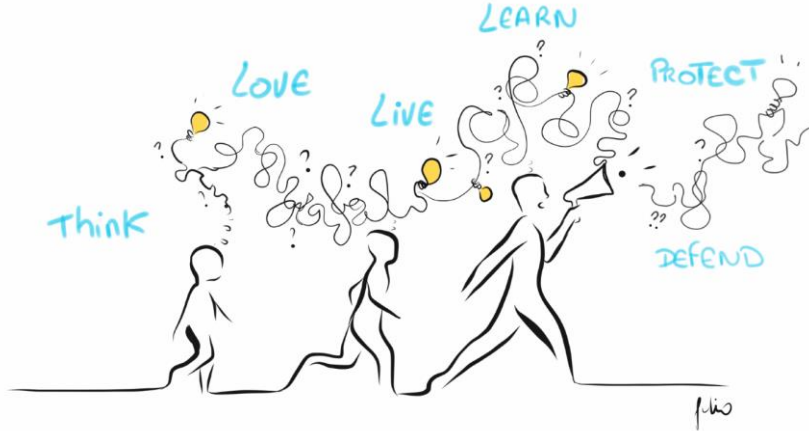
Commandments – a rule given by God

Teachings – lessons taught by religious leaders

Belief – something that an individual believes to be true

Humanism – the belief that human needs are more important than religion.

Charity – an organization which helps those in need.



Desmond
Tutu

Martin Luther
King Jr

Mother
Teresa



HUMANISM in a nutshell

1. Putting **human beings** and other **living things** at the centre of your moral outlook

2. Seeing the world as a **natural place** and looking to **science** and **reason** to make sense of it

3. Promoting and supporting human **flourishing** across all frontiers, and championing **human rights** for everyone

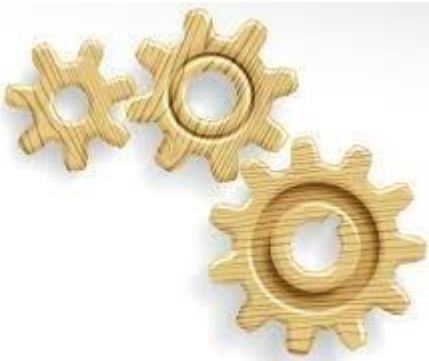


And that's
about it.

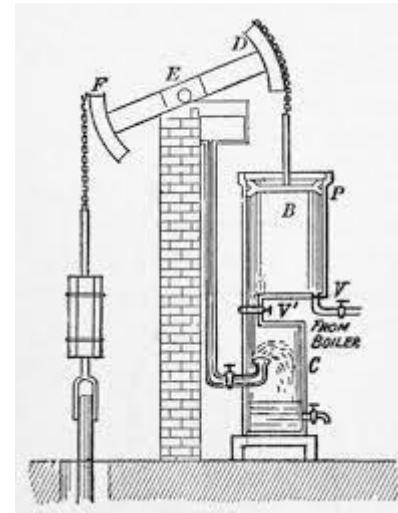


Knowledge Organiser Year 3 DT: Mining Technology Concept: Design, Make, Evaluate

Key Vocabulary	
Mechanism	A mechanism is a mechanical device used to perform a task.
Lever	A lever is a long rigid body balanced on a point. If one side is pushed down, the other will rise.
Pulley	A wheel on a fixed axle which has a rope or cable around it. They are used to reduce the time and energy used to lift heavy objects.
Gear	Gears are wheels with teeth that slot together. When one gear turns, so does the next. They can be used to increase the power of a turning force.
Engine	An engine is used to change energy into movement that can be used.
Machine	A machine is a device that does a physical task such as moving or lifting objects.



Gears



A beam engine used in a mine.

The steam from the engine forces the beam to move. This then lowers and raises the cable on the left.

Simple Machines

a basic tool that is used to do work

Inclined plane

a flat surface with one end higher than the other

ramp dump truck slide

wedge

an object that is thick at one edge, tapered to a thin edge at the other

axe knife nail fork

screw

an inclined plane that is wrapped around a cylinder

drill jar lid spiral staircase

lever

a straight bar that pivots on or around a fulcrum

F=fulcrum

first class

E=effort

second class

L=load

third class

seesaw crowbar bat

wheel & axle

a wheel attached to a bar so that they rotate together

doorknob roller skates toy car

pulley

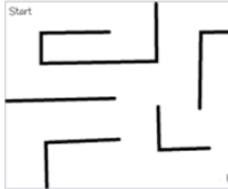
a chain, belt, or rope wrapped around a wheel

mini blinds flagpole drapes

Computing Knowledge Organiser Year 3: We are Programmers

Key Vocabulary	Definition
Stages of a programme	<p>Task — this is what is needed</p> <p>Design — this is what it should do</p> <p>Code — this is how it is done</p> <p>Running the code — this is what it does</p>
Events	An action in a programme triggered by a click on a mouse or by the programme.
Actions	Sprites in Scratch create actions by moving, making sounds or appearing.

Concept- Programming

<p>Which sprite will you choose?</p>	<p>Backdrop</p> 
<p>How will you move your sprite?</p> <p>What will the pen do?</p>	<p>Setup — what needs to happen at the start of your project?</p>

Event	Action	Description (algorithm)
Press 'D'	Put the pen down on the page	
	Lift the pen off the page	Stops the pen drawing a line
	Rub out all the lines	
Press 'R'		Change the colour of the line to red
		Makes the line thicker
	Make the line one size thinner	

