

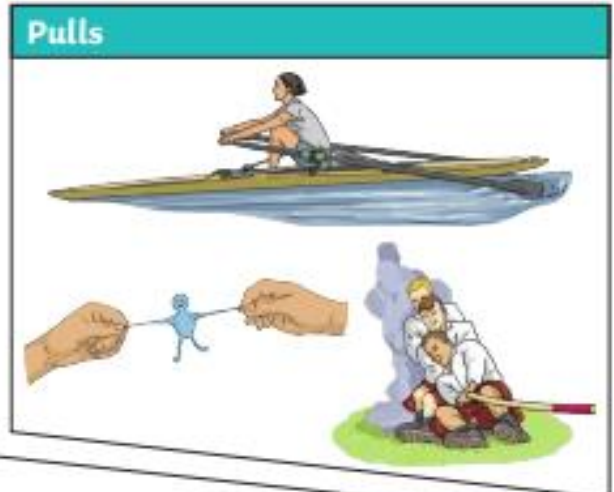
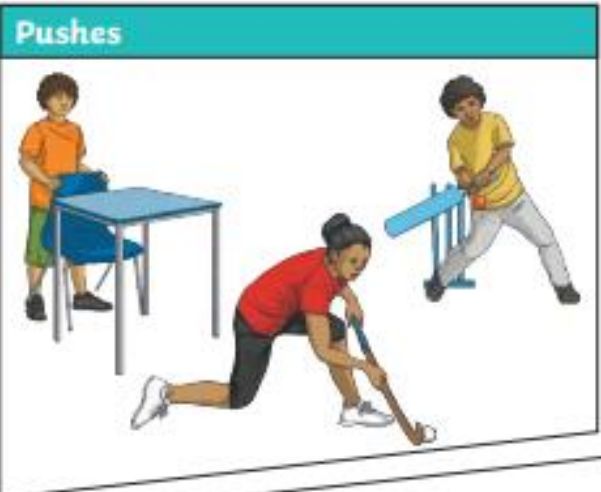
Term 1 knowledge organisers



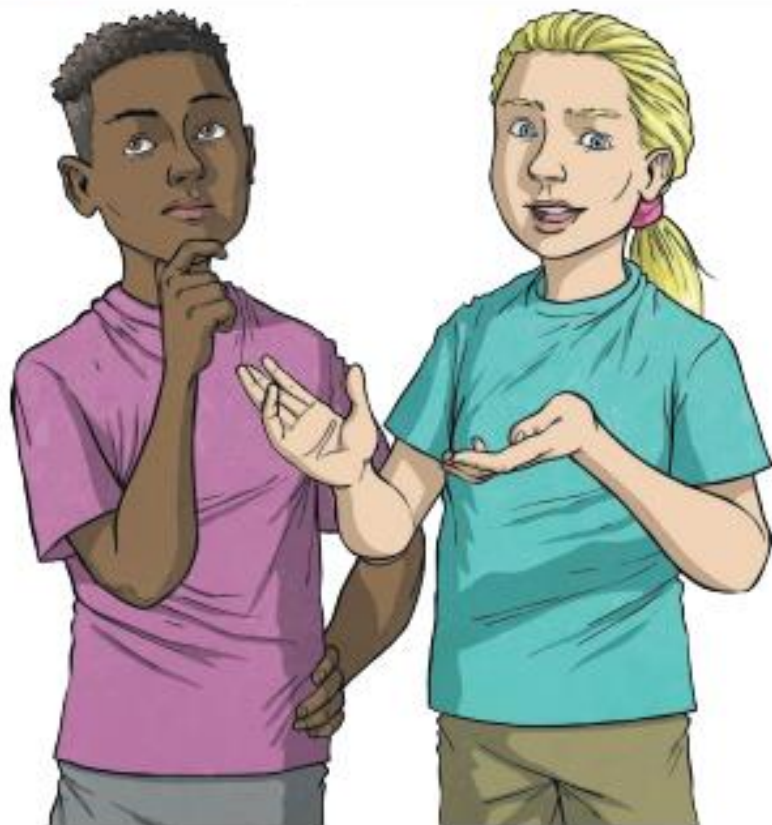
Key Vocabulary	
forces	Pushes or pulls.
friction	A force that acts between two surfaces or objects that are moving, or trying to move, across each other.
surface	The top layer of something.

Key Knowledge

Different **surfaces** create different amounts of **friction**. The amount of **friction** created by an object moving over a **surface** depends on the roughness of the **surface** and the object, and the **force** between them.



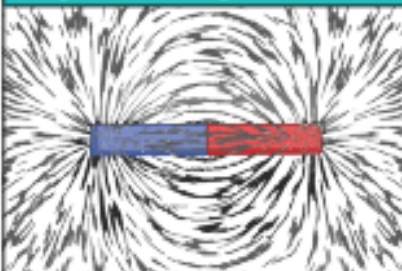
Forces will change the motion of an object. They will either make it start to move, speed up, slow it down or even make it stop.



To look at all the planning resources linked to the Forces and Magnets unit [click here](#)

Key Vocabulary	
magnet	An object which produces a magnetic force that pulls certain objects towards it.
magnetic	Objects which are attracted to a magnet are magnetic . Objects containing iron, nickel or cobalt metals are magnetic .
magnetic field	The area around a magnet where there is a magnetic force which will pull magnetic objects towards the magnet .
poles	North and south poles are found at different ends of a magnet .
repel	Repulsion is a force that pushes objects away. For example, when a north pole is placed near the north pole of another magnet , the two poles repel (push away from each other).
attract	Attraction is a force that pulls objects together. For example, when a north pole is placed near the south pole of another magnet , the two poles attract (pull together).

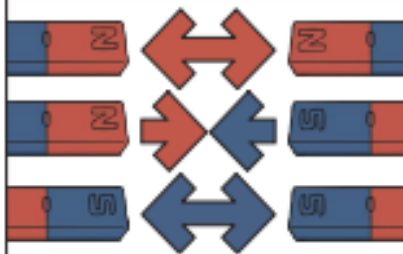
Key Knowledge



Like **poles repel**.
Opposite **poles attract**.



A **magnetic field** is invisible. You can see the **magnetic field** here though. This is what happens when iron filings are placed on top of a piece of paper with a **magnet** underneath.



The needle in a compass is a **magnet**. A compass always points north-south on Earth.

Magnetic ✓



These objects contain iron, nickel or cobalt. Not all metals are **magnetic**.

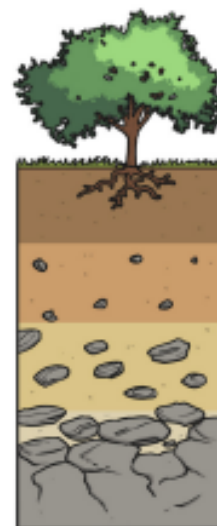
Non-magnetic ✗



These objects do not contain iron, nickel or cobalt.

Key Vocabulary

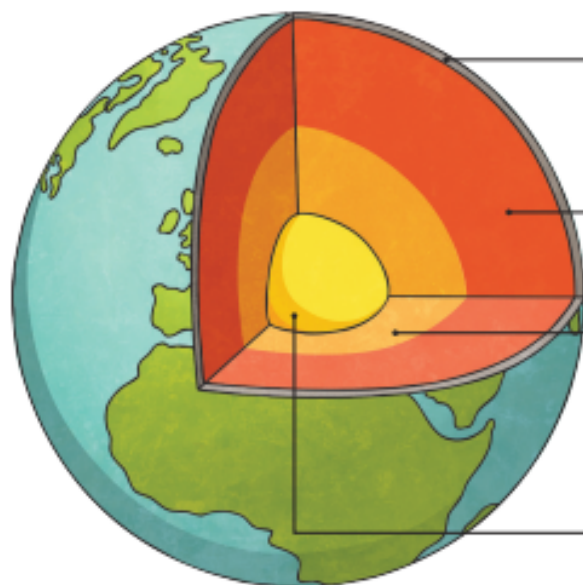
cumulonimbus cloud	Large thunderstorm clouds.
erupt	To suddenly burst out causing lava to explode out of the earth's surface.
fossils	The remains of plants or animals that lived a long time ago which can be found deep in the earth.
magma	Extremely hot, liquid rock.
tectonic plates	The earth's crust is made up of large areas called tectonic plates that join together.



Layers of Soil

humus	Rotting dead leaves and animals.
topsoil	Plant's roots grow here. Very few rocks.
subsoil	Rocks and stones. Full of nutrients. Tree roots may reach. Fossils .
bedrock	A mass of rocks. Fossils .

Layers of Earth



Crust
Thin outer layer. Hard rock. 10km-90km thick.

Mantle
Extremely hot rock that flows. 3000km thick.

Outer core
Iron and nickel. Mostly liquid with some rocky parts. 4000°C.

Inner core
Iron and nickel. Hottest layer at over 5000°C.

Volcanoes

- Volcanoes are made when pressure builds up inside the earth. This affects the earth's crust causing **magma** to sometimes **erupt** through it.
- Active volcanoes have **erupted** in the last 10 000 years.
- Dormant volcanoes haven't **erupted** in the last 10 000 years but may erupt again.
- Extinct volcanoes aren't expected to **erupt** again.



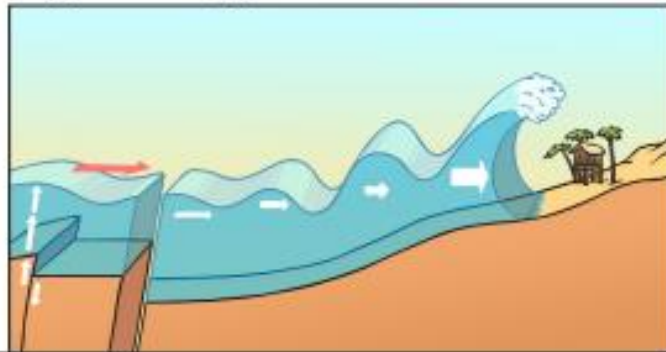
Tornadoes

- A tornado is a swirling funnel of air that forms when warm air rises from near the ground into big **cumulonimbus clouds**.
- There can be thunder and lightning at the same time.
- You can see tornadoes due to the dust and water droplets caught in the clouds.
- Storm chasers are film-makers and scientists who head towards the storms. They film the tornadoes and collect data about them.
- Most tornadoes happen in Tornado Alley in America – more than 500 each year.
- Tornadoes can happen in the UK but only around 30 per year.



Tsunamis

- A tsunami is a giant wave caused by a huge earthquake under the ocean.
- The earthquake causes a large amount of water to be displaced very quickly causing a series of waves.
- As the waves travel through shallower water near land, they get bigger and bigger. The wave crashes onto the land causing devastation to buildings and sometimes even lives.



Earthquakes

- Earthquakes are caused when the earth's **tectonic plates** suddenly move.
- Most earthquakes occur near the **tectonic plate boundaries**.
- Earthquakes can cause lots of damage to roads, buildings and property.



Number and Place Value

Knowledge Organiser

Key Vocabulary

hundreds

tens

ones

zero

place value

greater than

less than

order

more

less

partition

digit

3-Digit Numbers

256

two hundred	fifty	six
		
200	50	6

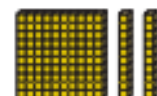
Counting in 4s and 8s

0	4	8	12	16	20	24	28	32	36	40
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0	8	16	24	32	40	48	56	64	72	80
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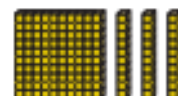
10 and 100 More or Less

Ten Less



120

Ten More



130

One Hundred Less



212

One Hundred More



312



412

Counting in 50s and 100s

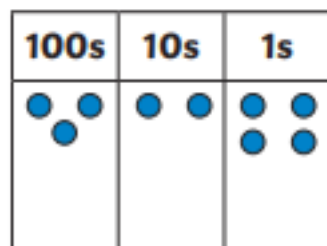
0	50	100	150	200	250	300	350	400	450	500
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0	100	200	300	400	500	600	700	800	900	1000
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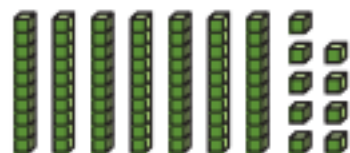
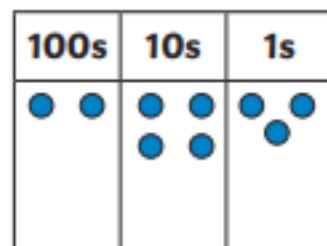
Number and Place Value

Knowledge Organiser

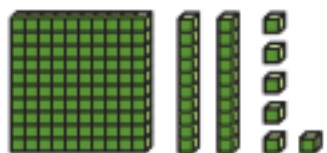
Compare and Order



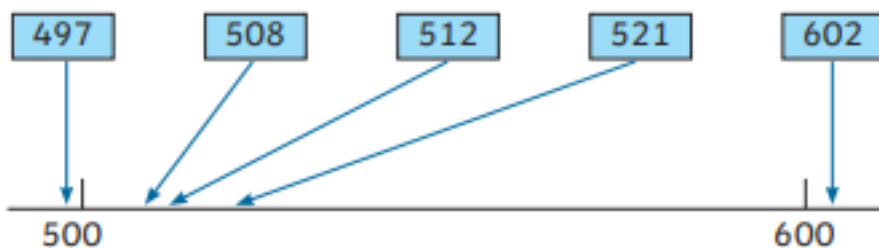
$324 > 243$
greater than



$79 < 126$
less than



smallest

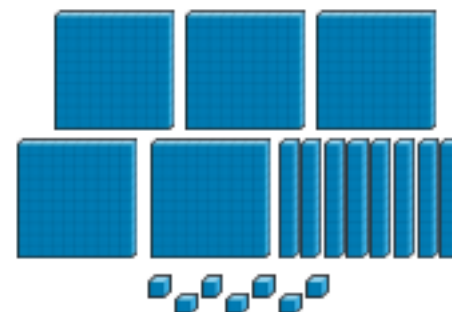
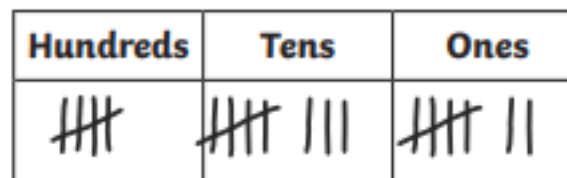


greatest

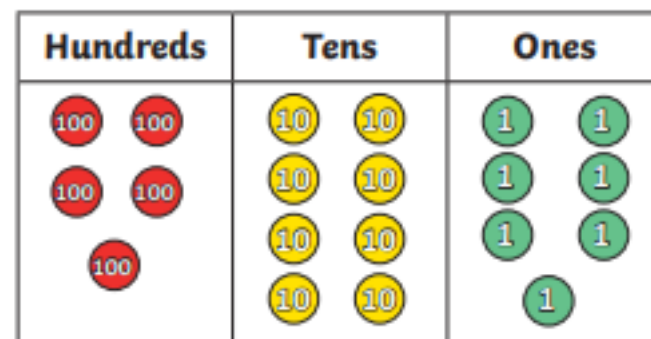
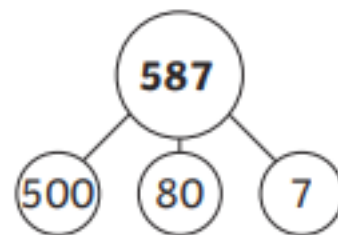
Represent Numbers to 1000

587

five hundred and eighty-seven



$$500 + 80 + 7$$



Numerals and Words to 1000

