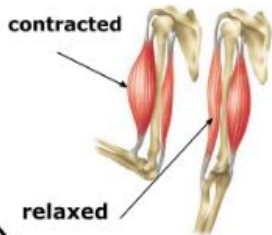


Muscles

Skeletons move because bones are attached to muscles.

When a muscle **contracts** (bunches up), it gets shorter and so pulls up the bone it is attached to.

When a muscle **relaxes**, it goes back to its normal size.



HEALTHY EATING

To keep your body fit and healthy you need a balanced diet using all of the food groups.

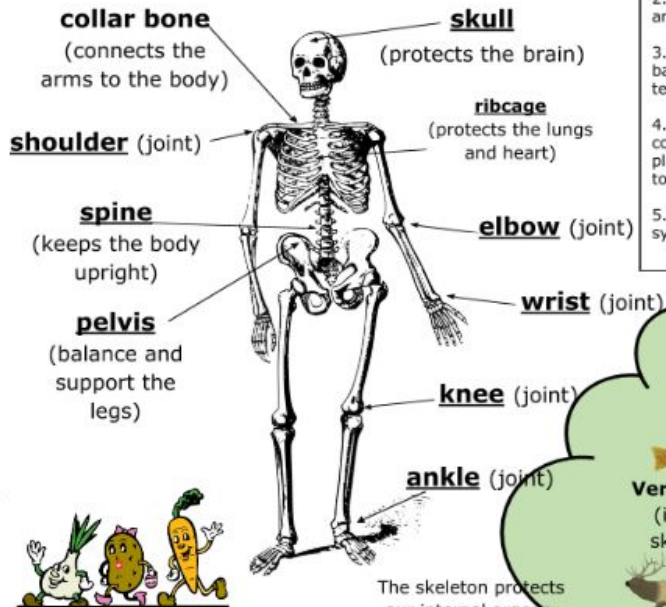
Carbohydrates – Main source of energy for our bodies (rice, potatoes, pasta and bread).

Protein – Repairs and builds muscles, organs and immunity (fish, meat, eggs and cheese).

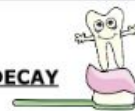
Sugar and Fats – Stored for energy and creates a layer of fat to keep us warm. Should not have too much of these (chocolate, sweets, butter, oil, cream).

Vitamins and Minerals – Keeps us growing and fighting infections (fruit and vegetables).

The Skeleton and Muscle System



TOOTH DECAY



- 1.) Tooth decay is the destruction of your tooth enamel
- 2.) Milk is a good source of calcium and good for your teeth.
- 3.) Plaque, a sticky film of bacteria, constantly forms on your teeth.
- 4.) When you eat or drink foods containing sugars, the bacteria in plaque produce acids that attack tooth enamel.
- 5.) Tooth ache and bad breath are symptoms of tooth decay.

Vertebrates
(internal skeleton)



Invertebrates
(no internal skeleton)



The skeleton protects our internal organs, keeps us supported and helps us move.

Year 3 Health and Movement

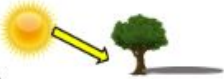
As the earth spins, it makes the sun appear to rise in the east in the morning. Because the sun hits an object at an angle, the shadow is long.



As the earth continues to spin the sun is overhead by midday. Because the sun hits the object from above, the shadow is short.



As the earth spins and the sun sets in the west in the evening, the shadow is long.



- 1.) We can see objects because light reflects off them and into our eyes.
- 2.) Light reflects off most objects, especially colours like white and yellow.
- 3.) If there is no light at all (pitch-black), then there is no light to reflect and we can't see anything at all.
- 4.) At night you can still see a bit in the dark because the moon is reflecting light.

Light & Shadow



Light travels in straight lines. It travels from the light source either directly into our eyes, or reflecting off objects at 670 million mph.



Because light travels in straight lines, when it hits an object, it is blocked. It can't bend around the object so it casts a shadow.



When light hits a smooth object, it bounces off (reflects) making it appear shiny.



LIGHT SOURCES



A mirror is not a light source. It reflects light so doesn't create it.



Opaque: This is the name given to objects which light *cannot* travel through. They block light and create shadows

Translucent: This is the name given to objects which *some light can* travel through.

Transparent: This is the name given to objects which *light can* travel through.

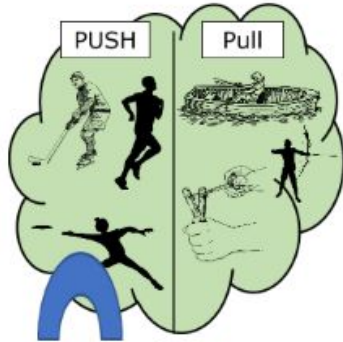
Rainbows are formed when the sun shines through water particles (transparent) and make white light.

ROY G BIV



Year 3 Light and Shadow

PUSHING AND PULLING
A force is a push or pull acting on an object as a result of the object's interaction with another object. Forces can make objects stop or start moving.



- FUN FACTS ABOUT MAGNETS**
- The most powerful magnet in the universe is a star called 'Magnetar'.
 - Animals can be affected by magnetic pulls. Birds and turtles navigate by them and sharks are repelled by them!
 - Earth's core is said to be filled with iron and nickel (metals which give it a magnetic field).

Forces and Magnets

Friction

When objects are pushed or pulled, an opposing force can be felt. This opposite force is called 'friction'. Friction causes things to slow down or stop. The grip on our shoes stops us slipping. Therefore, friction is great.

Ice-skates on an ice-rink will move for a long time because there is very little friction. The rougher the surfaces, the greater the friction.

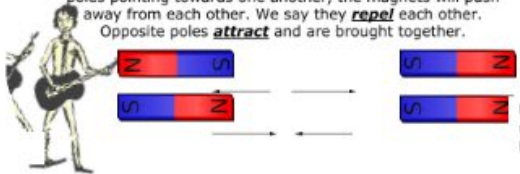


This rubbing of two surfaces can release energy, causing heat. (Try rubbing your hands together!)

Magnetic Poles

When two magnets are close, they create pushing or pulling **forces** on one another. These forces are strongest at the ends of the magnets. The two ends of a magnet are known as the **north pole (N)** and the **south pole (S)**.

The Same poles repel / The opposite poles attract
If you try to put two magnets together with the **same** poles pointing towards one another, the magnets will push away from each other. We say they **repel** each other. Opposite poles **attract** and are brought together.

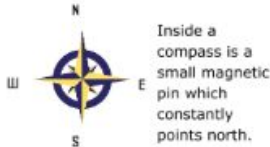
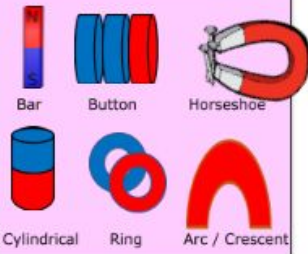


What is a Magnet?

A magnet is a special object which produces an area of magnetic force around itself called a **magnetic field**.

If a **metal** object enters this magnetic field, they will be attracted towards the magnet and end up sticking to it. (Non-metallic objects such as wood, plastic or fabric would not be attracted to it.)

Here is a range of different magnets:



Earth has a natural magnetic field which means the pin turns to always face north and helping people find their way.

Year 3 Forces and Magnets



ANCIENT EGYPTIANS



Egypt
(Africa)

Timeline

6000 B.C.	5000 B.C.	4500 B.C.	3500 B.C.	3000 B.C.	2500 B.C.	1500 B.C.	1325 B.C.	332 B.C.	30 B.C.
People settle near the River Nile	Farmed wheat, barley and cattle	Use of sails for the first time	First use of hieroglyphics	Buildings of mud brick	Sphinx and Giza Pyramids	Valley of the Kings tombs built	King Tutankhamun buried	Alexander the Great rules	Death of Cleopatra

Key Vocabulary

canopic jar	Jars with intestines, stomach, lungs and liver - all of which were thought to be needed in the afterlife.
cartouche	An oval containing hieroglyphics with a horizontal line underneath indicating a royal name.
hieroglyphics	A writing system where picture symbols stood for meanings or sounds. It meant 'sacred carving'.
irrigation	Using the Nile, Egyptians would use annual flooding to channel water to dry areas to help crops grow.
mummy	A body prepared for burial according to ancient Egyptian practice.
sarcophagus	A stone coffin adorned with a sculpture or inscription containing a mummy.
scarab	The use of the common scarab beetle was often used as a symbol for rebirth.
tomb	A chamber or vault to protect the dead, the most elaborate built within pyramids or underground.
papyrus	A type of plant grown in abundance in ancient Egypt turned into a paper-like material for writing.
pyramids	Over 130 giant pyramids were created as tombs for pharaohs, mostly built west of the River Nile.

DID YOU KNOW?

The River Nile is about 6,670 km (4,160 miles) in length and is the longest river in Africa and in the world. Fertile soil along the banks of the river were used to produce food for themselves and their animals.

GENERAL KNOWLEDGE

Gods

Amun - King of gods (head of a ram).

Anubis - God of mummification and priests often wore masks of Anubis during ceremonies (head of a jackal).

Bast - Goddess of protection and of household entertainment (head of a cat).

Sekmet - God of war and battle (head of a lion).

Horus - God of the sky (head of a falcon)



Afterlife

Ancient Egyptians believed that when they died, they would make a journey to another world where they would lead a new life. They would need all the things they had used when they were alive, so families would put those things in their graves. Egyptians paid vast amounts of money to have their bodies properly preserved. Those who were poor were buried in the sand whilst the rich were buried in a tomb.

Farming

Egyptians grew many crops, the most important being grain used to make bread, porridge and beer. They also grew vegetables and used irrigation to their advantage.

FAMOUS FIGURES



King Tutankhamun (1394 B.C.)

Known for his intact tomb discovered in the Valley of Kings in 1922 by Howard Carter (English archaeologist). Known now simply as 'King Tut', he took the throne aged 9 and died aged 19. His tomb was filled with precious jewellery, artefacts, gold, a mural of his journey to the afterlife and his now famous death mask and sarcophagus.

Ramses III (1155 B.C.)


Best known for defending his country in three great wars, twice against the advancing Libyans and once against the Sea People.

Cleopatra VII (69 B.C.)

She reigned as the queen of Egypt and inspired a Shakespeare play and several movies. She was part of the Macedonian dynasty and became romantically involved with Roman leaders Julius Caesar and Mark Anthony. In a male dominated society, her political ambition and power led to her legacy.

Year 3 Egypt

Our European Neighbours

Subject Specific Vocabulary			Exciting Books
continents	any of the world's main continuous expanses of land		Learning about Europe - Roberta Baxter
population	all the inhabitants of a particular place		Europe (Mathalon Maps) - Joanne Randolph
government	the group of people with the authority to govern a country or state		A Short History of Europe - Gordon Kerr
identity	the fact of being who or what a person is (eg. the person could be French, German or Polish)	Living in Europe: France - Annabelle Lynch	
customs	a traditional and widely accepted way of behaving in a particular place or time	<h3>Sticky Knowledge</h3> <p>Some of the countries in Europe belong to the European Union. This means that the governments of each country work together to try and make Europe better. Countries have to pay to belong to the EU but they then receive certain benefits.</p>	Over the Hills and Faraway - Els Boekelaar, Ineke Verschuren, et al.
currency	a system of money in general use in a particular country		Sweet Pizza - Giancarlo Geminin
capital city	the city that functions as the seat of administration for a country	<h3>More Sticky Knowledge</h3> <p>Lots of countries in the EU now use the same currency, the euro. This makes it easier for everyone to travel around Europe without changing currency. It was introduced on January 1st 2002 and was used by 12 countries. The Euro is divided into 100 cents.</p>	<p>Athens is one of the oldest cities in the world. Today you can still see the Parthenon, a temple from ancient Greece. Ancient Greece was famous for its theatre and you can still see the ancient Theatre of Dionysus today.</p>
community	a group of people living in the same place and having characteristics in common		
sightseer	a tourist or a person who goes sightseeing		
attractions	A place which draws visitors by providing something of interest or pleasure (eg. the Eiffel Tower,	Europe has a population of 741 million . It is the world's third most populous continent. Europe's population is equivalent to 9.38% of the total world population. Asia has the largest population in the world followed by Africa. Antarctica has the	Istanbul in Turkey is the largest city in Europe with a population of 14.7 million people. Until 1930 this country was called Constantinople .

Year 3 Europe

What Makes the Earth Angry?

Subject Specific Vocabulary				Exciting Books	
volcano	a rupture in the crust of the Earth, that allows hot lava, volcanic ash, and gases to escape			Escape from Pompeii - Christina Bailit	
magma	the molten or semi-molten natural material from which all igneous rocks are formed			The Pebble in my Pocket: A History of Our Earth - Meredith Hooper & Chris Coady	
lava	Molten rock generated by geothermal activity and expelled by volcanoes when they erupt			The Rock Factory: A Story About Rocks and Stones - Jacqui Bailey and Matthew Lilly	
crater	A circular depression in the ground caused by volcanic activity			The Street Beneath My Feet - Charlotte Guillian & Yuval Zommer	
Earth's crust	The outermost shell of our planet, it is around 100km thick			<h3>Sticky Knowledge</h3>	
Eruption	the emission of carbon dioxide, magma and other substances from a volcano	The word volcano originally comes from the name of the Roman god of fire, Vulcan .			
Earthquake	a sudden violent shaking of the ground as a result of movements within the earth's crust or volcanic action	Volcanic eruptions can send ash high into the air, over 30km (17 miles) above the Earth's surface.		<h3>More Sticky Knowledge</h3>	
Tectonic plates	the fifteen pieces of the Earth's crust that can move	Scientists use the different speeds of seismic waves to locate the epicentre (the point on the surface directly above where the earthquake originated) of earthquakes .			
Epicentre	the point on the surface of the earth directly above the earthquake	The most powerful earthquake ever recorded on Earth was in Valdivia, Chile . Occuring in 1960 , it had a magnitude of 9.5			
Vibration	waves of movement which travel along and through the Earth's surface	Destroying Pompeii and Herculanium , Mount Vesuvius in Italy is one of the world's most famous volcanoes.		Pumice is a unique volcanic rock that can float in water.	

Year 3 What makes the Earth angry?