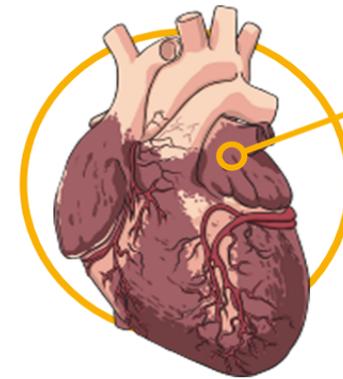


# Year 6, Term 1, Staying Alive

## Vocabulary

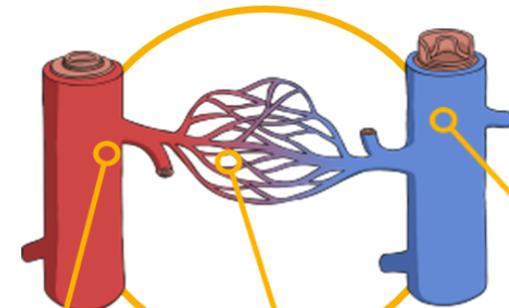
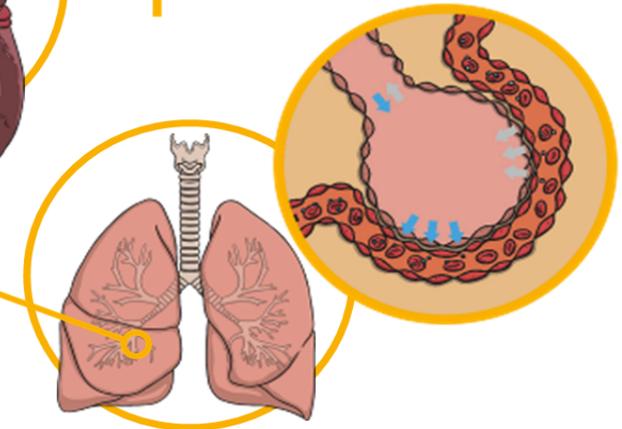
<i>circulatory system</i>	A system which includes the heart, veins, arteries and blood transporting substances around the body.
<i>heart</i>	An organ which constantly pumps blood around the circulatory system.
<i>pulmonary</i>	This means 'relating to the lungs'.
<i>alveoli</i>	Tiny air sacs in the lungs where gas exchange takes place.
<i>gas exchange</i>	The process by which oxygen enters the blood stream from the lungs and the lungs receive carbon dioxide from the blood to breath out.
<i>vein</i>	A blood vessel carrying blood back to the heart.
<i>artery</i>	A blood vessel carrying blood away from the heart.
<i>addiction</i>	When you feel an uncontrollable urge to do something as it makes you feel good.
<i>nicotine</i>	The addictive substance in cigarettes.

## Key Knowledge



The **heart** pumps blood to the lungs to get oxygen.  
It then pumps this oxygenated blood around the body.

Gas exchange takes place in the **alveoli** in the lungs.



Veins carry de-oxygenated blood toward the **heart**.

Arteries carry oxygenated blood away from the **heart**.

Capillaries are the smallest blood vessels in the body and it is here that the exchange of water, nutrients, oxygen and carbon dioxide takes place.

A **healthy** diet involves eating the right types of **nutrients** in the right amounts.



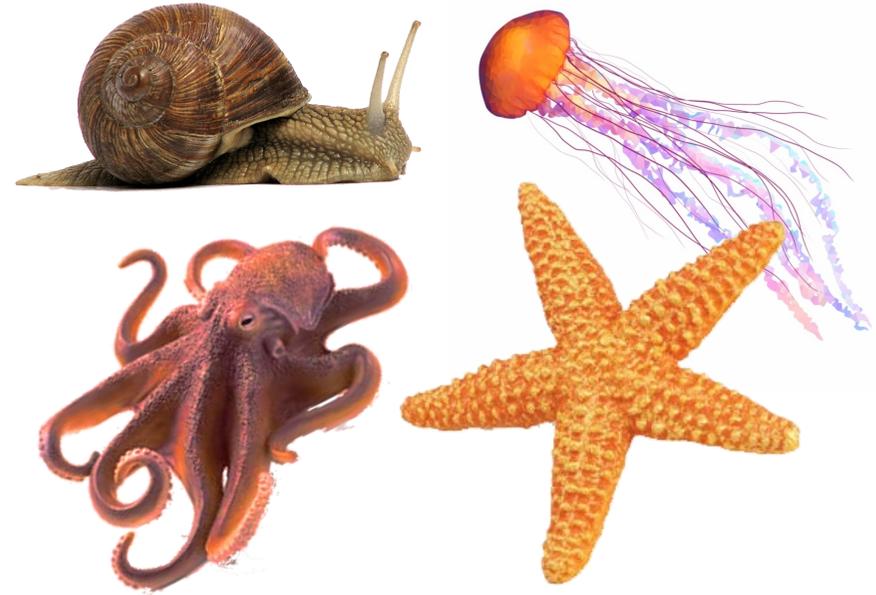
**Drugs, alcohol and smoking** have negative effects on the body.

# Year 6, Term 2, Classifying Critters

## Vocabulary

flora	Living things that are plants.
fauna	Living things that are animals.
vertebrate	An animal with a backbone.
invertebrate	An animals without a backbone.
fungi	Taxonomic kingdom comprising all the fungus groups and sometimes the slime moulds.
fermentation	A change brought about by ferment (e.g. yeast into alcohol).

## Examples of Invertebrates



Vertebrates are split up in to 5 categories...

fish



mammals



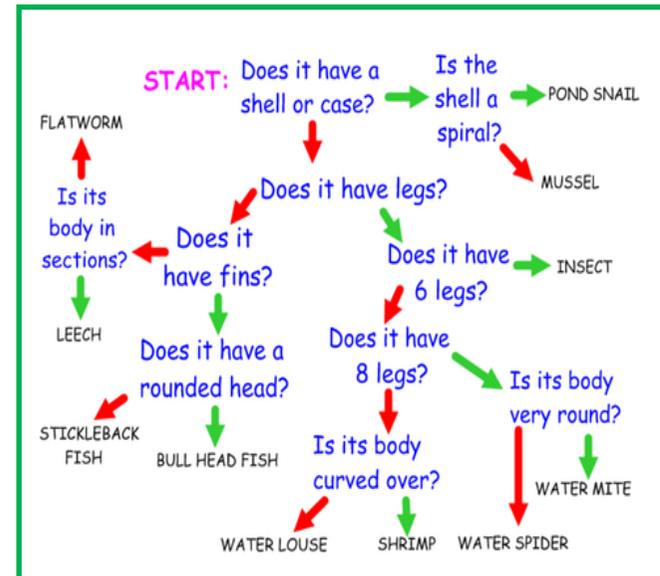
reptiles



amphibians



birds



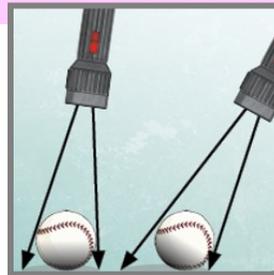
We can use a classification key to show how we classify something.

# Year 6, Term 3, Let It Shine

## Vocabulary

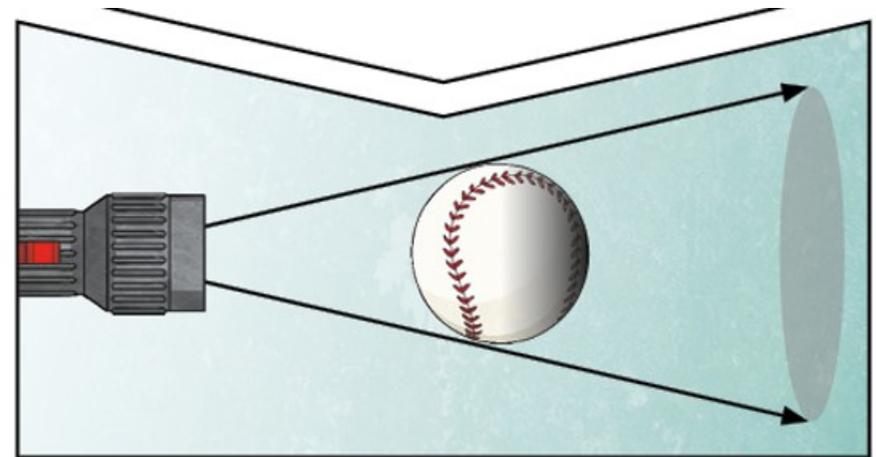
light	A form of energy that travels in a wave from a source.
light source	An object that makes its own light.
reflection	Reflection is when light bounces off a surface, changing the direction of a ray of light.
incident ray	A ray of light that hits a surface.
reflected ray	A ray of light that has bounced back after hitting a surface.
refraction	This is when light bends as it passes from one medium to another e.g. light bends when it moves from air to water.
transparent	Describes objects that let light travel through them easily, meaning you can see through the object.
translucent	Describes objects that let some light through, but scatters the light so we can't see through them properly.
opaque	Describes objects that do not let any light pass through them.

Shadows can be elongated or shortened depending on the angle of the light source. A shadow is also larger when the object is closer to the light source. This is because it blocks more of the light.

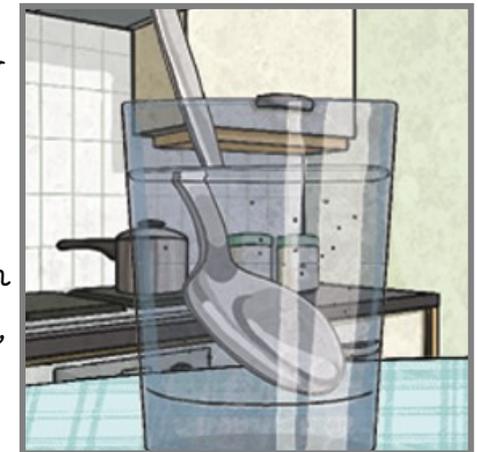


## Key Knowledge on Shadows

A shadow is always the same shape as the object that casts it. This is because when an opaque object is in the path of light travelling from a light source, it will block the light rays that hit it, while the rest of the light can continue travelling.



The spoon in this water looks as if it is bent. This is because light bends when it moves from air to water. When light bends in this way, it is called refraction.



# Year 6, Term 4, We're Evolving

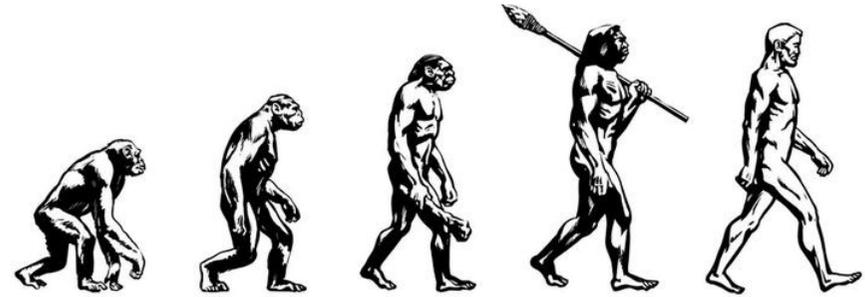
## Vocabulary

<i>offspring</i>	The young animal or plant that is produced by the reproduction of that species.
<i>inheritance</i>	This is when characteristics are passed on to offspring from their parents.
<i>variations</i>	The differences between individuals within a species.
<i>characteristics</i>	The distinguishing features or qualities that are specific to a species.
<i>adaptation</i>	An adaptation is a trait (or characteristic) changing to increase a living thing's chances of surviving and reproducing.
<i>habitat</i>	Refers to a specific area or place in which particular animals and plants can live.
<i>evolution</i>	Adaptation over a very long time.
<i>natural selection</i>	The process where organisms that are better adapted to their environment tend to survive to produce more offspring.
<i>fossil</i>	The remains or imprint of a prehistoric plant or animal, embedded in rock and preserved.

Natural Selection has been shown in fossils of giraffes from millions of years ago. They used to have shorter necks but have gradually evolved through natural selection to have long necks so they can reach the top leaves on taller trees!



## We never stop evolving!



In the same way that there is variation between parents and the offspring, you can see variation with any species, even plants. Little Bear and Watson are the same species but have big variations in their characteristics!

**Mary Anning** (1799-1847) was a famous English fossil hunter. The cliffs near where she lived in Dorset, England, are rich in fossils from the Jurassic Period. Anning spent months uncovering the body of her first fossil, a marine reptile that swam in the time of the dinosaurs.

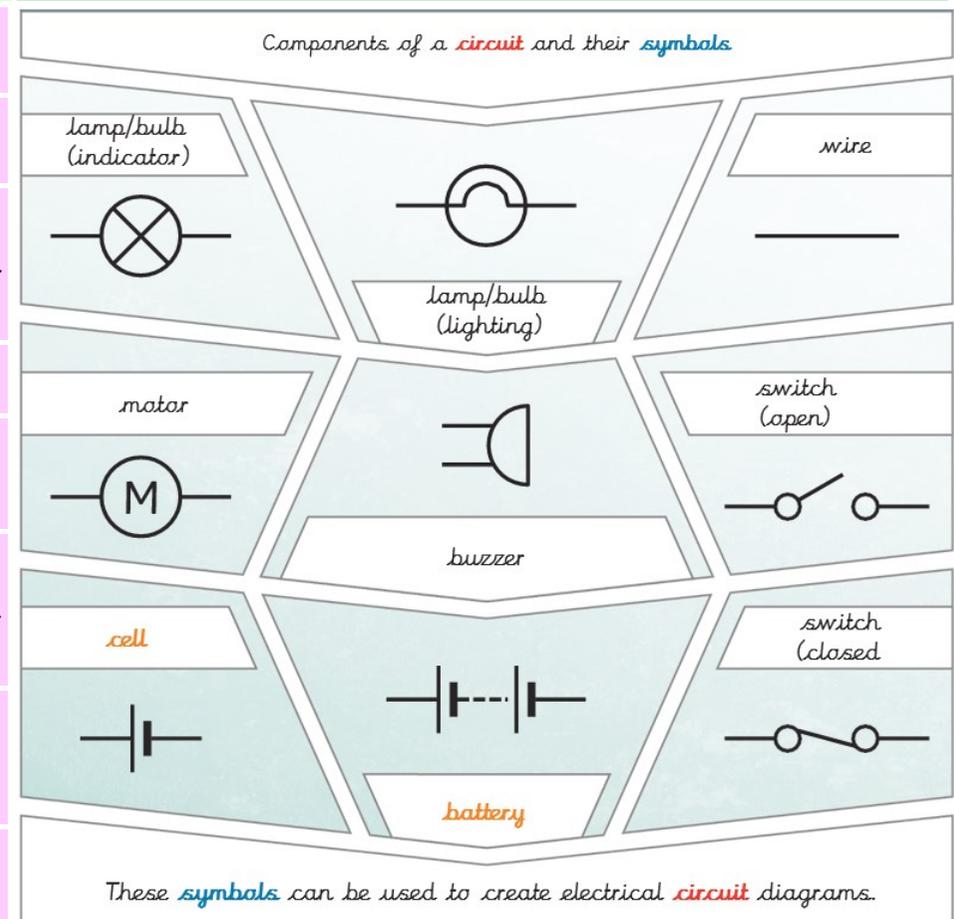


# Year 6, Term 5, Electrifying

## Vocabulary

circuit	A path that an electrical current can flow around.
symbol	A visual picture that stands for something else.
cell/battery	A device that stores energy as a chemical until it is needed. A cell is a single unit. A battery is a collection of cells.
current	The flow of electrons, measures in amps.
amps	How electric current is measured.
voltage	The force that makes the electric current move through the wires. The greater the voltage, the more current will flow.
resistance	The difficulty that the electric current has when flowing around a circuit.
electrons	Very small particles that travel around an electric circuit.

## Key Knowledge



What will make a bulb brighter or a buzzer louder?

- \* More **batteries** or a higher **voltage** create more power to flow through the **circuit**.
- \* Shortening the wires means the **electrons** have less **resistance** to flow through.

What will make a bulb dimmer or a buzzer quieter?

- \* Fewer **batteries** or a lower **voltage** give less power to the **circuit**.
- \* More buzzers or bulbs mean the power is shared by more components.
- \* Lengthening the wires means the **electrons** have to travel through

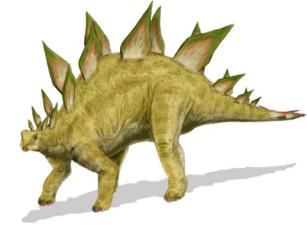
# Year 6, Term 6, We Are Dino Hunters

## Vocabulary

<i>prehistoric</i>	<i>Before history was recorded (by humans).</i>
<i>Mesozoic</i>	<i>Era of time made up of the Triassic, Jurassic and Cretaceous periods.</i>
<i>Triassic</i>	<i>Approximately 250 to 213 million years ago.</i>
<i>Jurassic</i>	<i>Approximately 213 to 144 million years ago.</i>
<i>cretaceous</i>	<i>Approximately 144 to 65 million years ago.</i>
<i>trace fossil</i>	<i>Trace left by animal when it was alive.</i>
<i>coprolite</i>	<i>Dinosaur faeces (poo). An example of a trace fossil.</i>
<i>herbivore</i>	<i>Animals that eat mostly plants.</i>
<i>carnivore</i>	<i>Animals that eat mostly other animals.</i>
<i>omnivore</i>	<i>Animals that eat a mixture of plants and animals.</i>
<i>extinction</i>	<i>When a living thing ceases to exist. Mass extinction: the extinction of a lot of animals in a short period of time.</i>

## Dinosaurs

Thyreophora are dinosaurs that had armoured bodies, such as the Stegosaurus and Ankylosaurus.



Theropods are characterised by hollow bones and three-toed limbs. Examples are the Tyrannosaurus-Rex and Velociraptors..

Sauropods grew to enormous sizes and usually had quite long necks. These include the Diplodocus and the Brachiosaurus.



## Luis Alvarez

Luis Alvarez was an American experimental physicist. He was most famous for the discovery of the iridium layer and his theory that the mass extinction of dinosaurs was caused by an asteroid or comet colliding with Earth.

