

Year 5 and 6 - Living Things and Their Habitats

Prior Learning

- I can identify what is alive, dead or never lived.
- I can name different animals groups: fish, amphibians, reptiles, birds and mammals; carnivores, herbivores and omnivores and vertebrates and invertebrates.
- I know animal environments can change such as through pollution.
- I know animals have offspring that grow into adults.

Concepts

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| Characteristic | something that makes a person or thing different from others. |
| System | a group of related things or parts that work together as a whole. |

Vocabulary

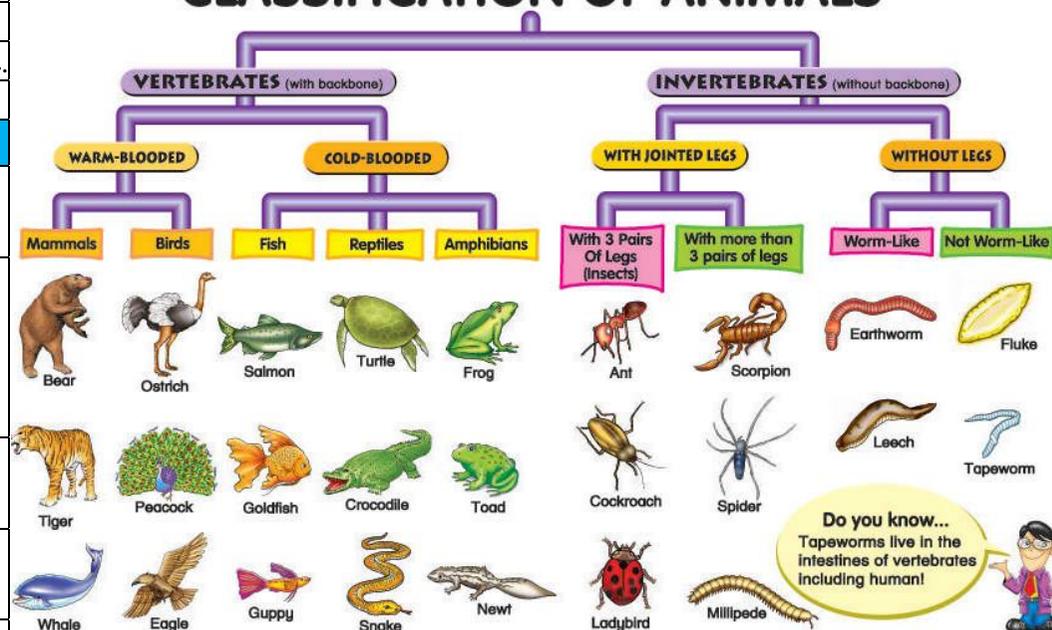
Animal	one of a large group of living things that can move around by themselves to find food.
Classification	in biology, the placing of plants and animals in groups.
Environment	the things and conditions that are all around one.
Invertebrate	without a backbone.
Microorganism	any life form so small that it can only be seen with a microscope.
Vertebrate	with a backbone.

Diagram

Key Facts

1. Living things can be separated into plant, animal and microorganism.
2. Animals can be grouped into vertebrates (backbone) and invertebrates (no backbone). Then further grouped into mammal, amphibian, bird, reptile, fish, insect, crustacean, arachnid, mollusc.
3. Carl Linnaeus created a system to group living things according to their characteristics
4. Classification is based on the similarities and differences of living things.
5. Microorganisms (often called microbes) are living things which are too small to be seen with the naked eye.
6. Microorganisms can be classified in different ways and include bacteria, fungi and protists or protozoa.

CLASSIFICATION OF ANIMALS



Year 5 and 6 - Animals Including Humans

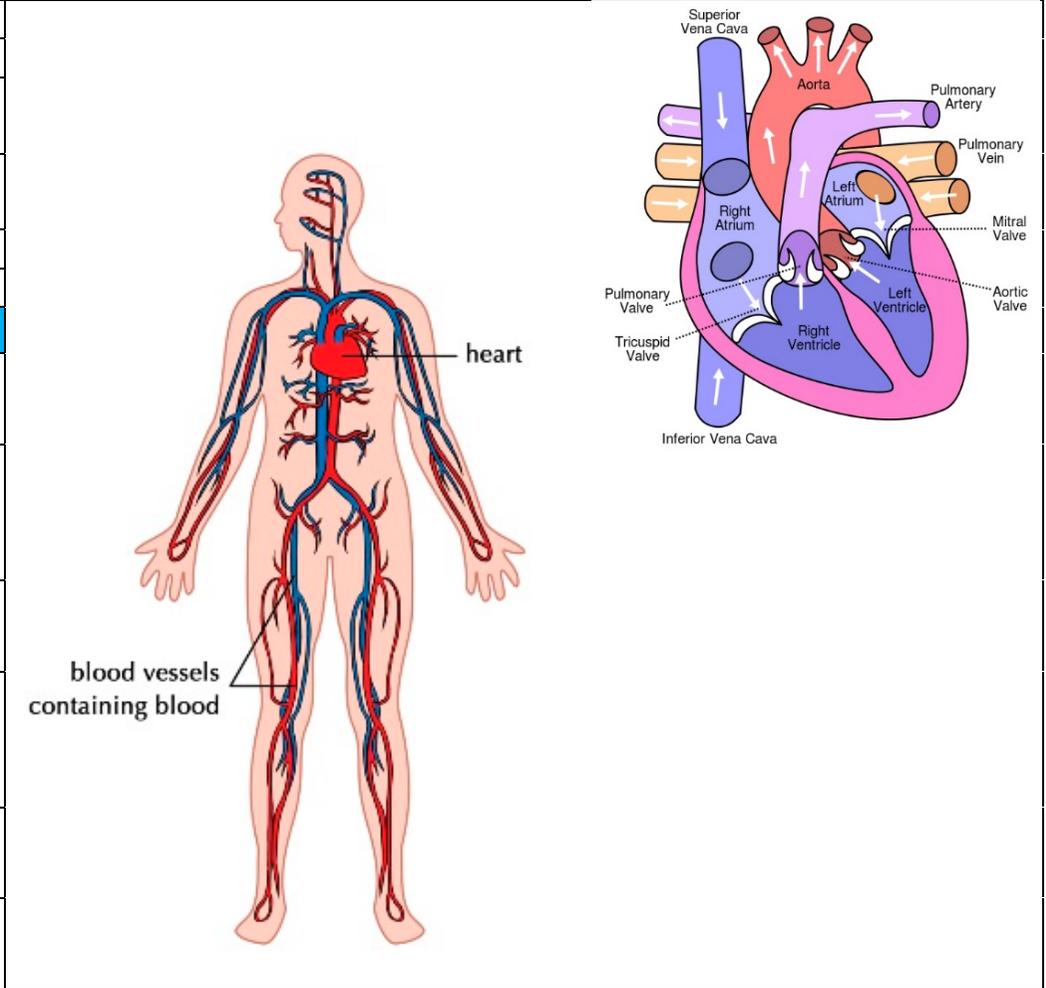
Prior Learning -	Concepts	
<ul style="list-style-type: none"> • I know the organs involved in the digestive system are mouth, tongue, oesophagus, stomach, liver, pancreas, small intestine, large intestine and anus. • I know animals often hunt to obtain food and some animals eat other animals. • I know it is good to exercise regularly, eat a balanced diet, sleep around 10-12 hours per night and be hygienic. 	Function	the purpose or role that an object or a person fulfils or is suited for.
	System	a group of related things or parts that work together as a whole.

Vocabulary	Diagram
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Circulate	to move or flow along a closed path or system.
Diet	the food and drink usually eaten and drunk by a person or animal.
Drug	a substance used to cure or heal, medicine. a substance that causes a chemical change in the body and may cause addiction;
Exercise	activity done to keep the body or mind strong or to make them stronger.
Lifestyle	the general way of life of a person or group.
Nutrients	something in food that helps people, animals, and plants live and grow.

Key Facts

1. **The circulatory system, where blood is transported around the body, includes the heart, veins and arteries.**
2. **Nutrients and water pass through the villi inside the small intestine and are absorbed into the blood vessels to travel around the body.**
3. **The blood transports gases, nutrients and waste products around the body.**
4. **Exercise has many benefits for the body including: strengthening muscles and bones; improving circulation; releasing feel good chemicals in the brain and helping you to sleep better.**
5. **A healthy diet involves eating a balance of the different types of nutritious foods.**
6. **Alcohol, smoking and some drugs have negative effects on the body.**

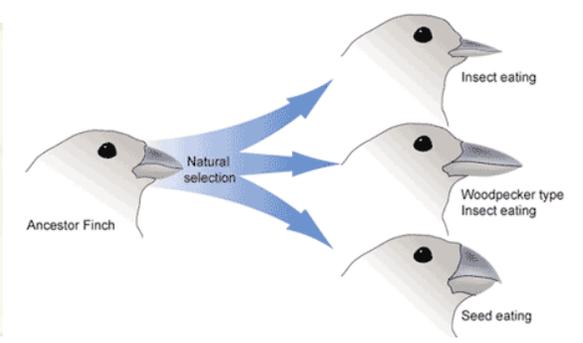
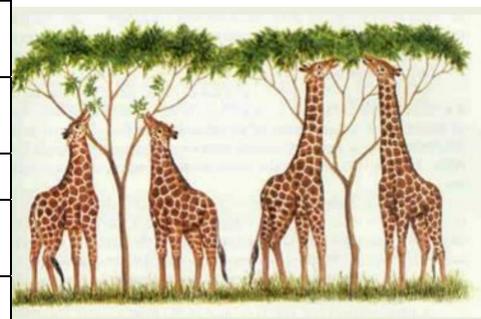


Year 5 and 6 - Evolution and Inheritance

Prior Learning -	Concepts	
<ul style="list-style-type: none"> I know that animals, plants and environments change over time. I understand basic human and animal needs for survival such as breathing, eating, drinking and sleeping. I know that fossils are created from the remains of plants and animals and they with the surrounding soil, tell us about the past. I can identify the similarities and differences I have with my family members. 	Characteristics	something that makes a person or thing different from others.
	Variation	a slightly different form or version of something.

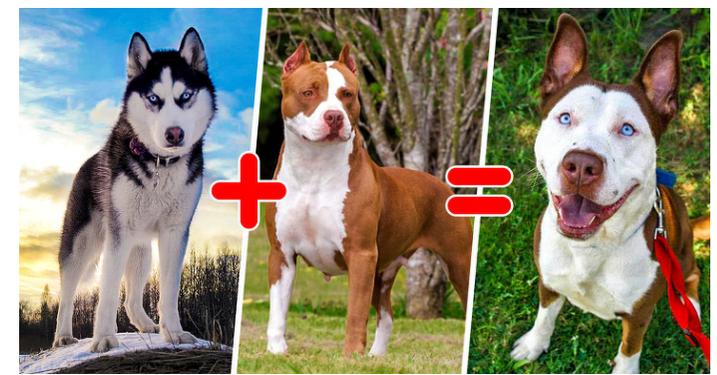
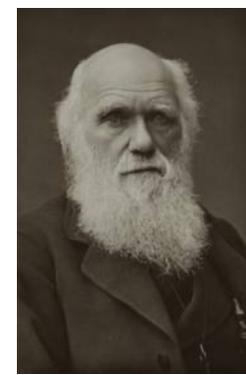
Vocabulary	Diagram
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Breed	to give birth to or produce offspring.
Evolution	the process of changing and adapting to an environment over time.
Fossil	the remains or trace of a living animal or plant from a long time ago.
Identical	alike in almost every aspect; very similar.
Inheritance	the process of passing characteristics to later generations by genes or the characteristics passed in this way.
Offspring	the child or young of a particular human, animal, or plant.



Key Facts

1. Fossils are preserved (full or partial) remains or traces of animals and plants. These allow scientists to learn about the past.
2. Fossils provide proof that living things evolve over time.
3. Charles Darwin introduced the theory of evolution and discovered that humans and apes shared ancestors
4. Evolution is a gradual process that happens over many years.
5. Evolution happens through inheritance, when minor changes happen between each generation.
6. Animals and plants make adaptions to survive or survive better in certain situations



Year 5 and 6 - Light

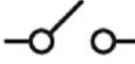
Prior Learning -		Concepts	
<ul style="list-style-type: none"> • I know that we need light to see and we can see because of our eyes. • I know light is reflected from some surfaces better than others such as mirrors or shiny surfaces. • I know it is dangerous to directly look at the sun. • I know shadows are formed when light is blocked and can change. 		Source	the start or cause of something.
		Travel	to journey from place to place.
Vocabulary		Diagram	
Eye	the organ of the body that gives animals sight, and the area close around it.		
Light	the form of energy that makes it possible for the eye to see.		
Mirror	a smooth surface that reflects an image of whatever is in front of it.		
Rainbow	a curved arc of light of many colours across the sky. The colours of the rainbow are generally said to be red, orange, yellow, green, blue, indigo, and violet.		
Reflect	to throw back from a surface.		
Shadow	the dark image cast on some surface by a person or thing blocking the light of the sun or another source of light.		
Key Facts			
1. Light travels in <u>straight lines</u> from a source and <u>reflects</u> off an object into the <u>eye</u> .			
2. <u>Reflection</u> is when light bounces off a surface and changes <u>direction</u> .			
3. <u>Shadows</u> are created when an <u>opaque</u> object blocks the ray of <u>light</u> .			
4. <u>Shadows</u> are always the same <u>shape</u> as the object that is blocking the path of light.			
5. <u>Shadows</u> can change <u>size</u> when the position of the light source or the object changes.			
6. Light <u>bends</u> when it moves from air to <u>water</u> .			

Year 5 and 6 - Electricity

Prior Learning -
<ul style="list-style-type: none"> I can identify appliances that use electricity and whether this is mains or battery powered, such as televisions or mobile phones. I know electricity flows around a circuit in one direction, when all components are connected and it would not work without this. I can identify conductors (some metals) and insulators (wood or plastic). I know electricity is dangerous, especially near water.

Concepts	
Material	anything used for building or making something else.
Measure	the exact size, weight, or amount of something that is found by using equipment.

Vocabulary	
Battery	a device that makes electricity by using chemical reactions.
Circuit	the closed path followed by an electric current.
Component	a part of something.
Conductor	anything that carries or allows passage of heat, electricity, or sound.
Insulator	a material or device that does not conduct electricity.
Symbol	a sign or figure that represents a particular number, quality, object or process.

Diagram			
 Battery	 Wire	 Bulb	 Buzzer
 Motor	 Switch (off)	 Switch (on)	

Key Facts
1. <u>Electricity</u> can only flow in one direction around a <u>complete circuit</u> .
2. <u>Switches</u> can be used to open or close a <u>circuit</u> , affecting the flow of <u>electrons</u> .
3. When more <u>bulbs</u> or <u>buzzers</u> are added to a circuit, the power has to be <u>shared</u> , so they will be dimmer or quieter.
4. The <u>voltage</u> and number of cells or batteries will affect the <u>brightness</u> of a bulb.
5. <u>Static electricity</u> and <u>lightning</u> are natural forms of electricity.
6. <u>Electrical components</u> are represented by <u>recognised symbols</u> .

