


















Knowledge Organiser – Art ‘Forest Runners’ Year 5

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Key Knowledge and Skills	Key vocabulary	Cultural Heritage
<p>UNDERSTANDING THE ART OF HENRI ROUSSEAU To use art vocabulary and sentence stems to discuss composition. How to use sketchbooks to compare and discuss ideas with others.</p> 	<p>composition how a picture is made up (background and foreground, complex/simple)</p> <p>visual and tactile qualities creating depth in a piece of art (3D), pleasing to the eye</p> <p>line a mark that joins different points</p>  <p>tone light and darkness in a sketch</p>  <p>depicted drawn, painted etc.</p> <p>shading darkening</p>  <p>texture how it might feel, making it seem real</p> 	<p>Somalian Jungle</p>  <p>Bangladeshi Rainforest</p>  <p>The Indus River Pakistan</p>   <p>Danube River Romania</p>  



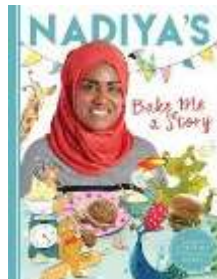









Knowledge Organiser – Year 5 Computing: We are VR Designers (5.6)

Article 17 I have the right to get information in lots of ways as long as it is safe

Key Knowledge	Key vocabulary		Cultural Heritage
<p>Unit 5.1: We are game developers Developing an interactive game</p> <p>During this sequence of learning, pupils use Google Street View and CoSpaces to explore and create virtual reality (VR) and augmented reality (AR) content of their own.</p> <p>Let's learn Virtual reality works by showing each eye two slightly different images to create the illusion of depth (This is known as a stereographic image). An accelerometer (built into smartphones and tablets) tracks how the headset turns, so that the view keeps changing as the headset is moved. A button on the headset allows the wearer to click on virtual hyperlinks in order to move around the 'world' they see.</p> <p>Google Cardboard</p>   <p>Session 2: Taking 360 degree images</p>  <p>Session 4: Exploring CoSpaces</p> 	Accelerometer	hardware component providing data on changes in motion, typically in three directions.	<p>Virtual reality in Healthcare</p>  <p>From developing new life-saving techniques to training the doctors of the future,</p>
	Augmented reality (AR)	digital layer superimposed on a view of the real world.	
	Global positioning system (GPS)	this system allows a user to determine their exact location using a network of satellites.	<p>Virtual reality in Education</p>  <p>Vr provides the opportunity to bring the outside world into the classroom.</p>
	Google Cardboard	low-cost VR headset, typically made from cardboard and plastic lenses, which repurposes a smartphone as a VR display.	
	Photosphere	spherical collection of photographs so that the image displayed matches the direction viewed.	
	QR code	2-D array of light and dark squares used to encode text in a way that can be read using a smartphone or tablet camera.	
	Share code	CoSpaces shortcut to allow those with the software to view a scene created by another user.	
	Stereographic	a pair of slightly different images created with a slight offset, and shown to left and right eyes to create the illusion of depth.	
	Virtual reality (VR)	simulated, immersive 3-D representation of a real or imagined scene.	

Knowledge Organiser – Cooking: 'Rainforest delights' Year 5

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Key Knowledge and Skills	Key vocabulary		Cultural Heritage
<p><u>What food come for the rainforest.</u></p> <div></div>	<p>bridge hold</p> <div></div>	<p>cutting technique whereby one hand is used to make a bridge over the vegetable or fruit with fingers on one side and thumb on the other.</p>	<p>Nadiya Hussain – British Muslim chef, presenter, author and winner of ‘The Great British Bake-off’.</p> <div></div>
<p><u>Use both the bridge hold and claw grip to cut the same food using a serrated vegetable knife.</u></p> <p>To chop using the ‘bridge hold’— Using one hand, make a bridge over the vegetable or fruit with fingers on one side and thumb on the other, cut down under the ‘bridge’.</p> <p>To chop safely— using the claw - tucking in thumb or fork hold techniques.</p> <div></div>	<p>dice</p> <p>tsp</p> <p>cilantro</p> <p>seasoning</p> <p>cup</p> <p>shred</p> <p>combine</p> <p>boil</p>	<p>cut into small cubes</p> <p>teaspoon</p> <p>Spanish for coriander</p> <p>salt and pepper</p> <p>128g</p> <p>to cut into long thin strips</p> <p>to join together as a whole</p> <p>heat the water until it bubbles</p>	<p>Great renown Romanian chef Alex Dimitru.</p> <div></div>
<p>To dice foods and cut them into evenly sized, fine pieces.</p> <p>To use a lemon squeezer.</p> <div></div>			
<p><u>To grate safely using a grater—</u> grate away from self, grater positioned downwards against chopping board.</p> <div></div>	<p>grater</p> <div></div>	<div></div> <p>To fold a burrito.</p>	<p>The renowned Birmingham Balti triangle.</p> <div></div>

Key Knowledge

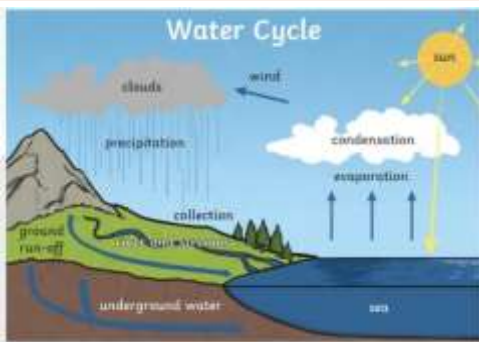
Major UK Rivers



Many cities of the world are situated by a river eg London is by the River Thames

The longest river in England is the River Severn at 220 miles (354 km). The longest river in the world is the Nile at 4,132 miles (6,650 km)

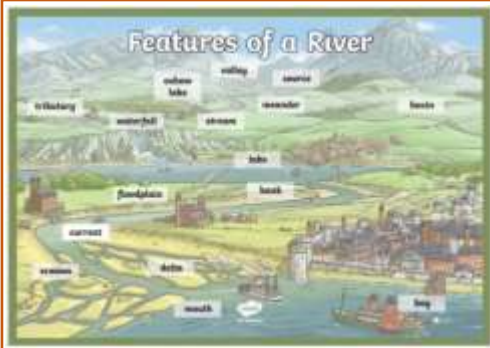
The River Cole is a 25 miles (40 km) river in the English midlands. The River Cole flows into the River Blythe near Coleshill. The Blythe then meets the River Tame which then joins the Trent whose water reaches the North Sea via the Humber Estuary.



Flooding

There are 4 main types of flooding: Pluvial flooding happens when very heavy rainfall cannot drain away quickly enough. Fluvial flooding happens when a lot of rain water falls over a period of time causing rivers to burst their banks.

Coastal flooding is caused by high tides and storms. Other flooding is caused by broken water pipes. Building dams and flood barriers such as the Thames Barrier, London can prevent flooding in some areas. However blocking a river at one location such as Telford Flood Defences can cause flooding further up or down stream.



Key vocabulary

drought	A drought is when there is a lack of precipitation over an extended period of time. A drought affects plants, animals and people.
estuary	When a river reaches the ocean and the river and ocean mix. Estuaries are normally wide and flat
meander	A river that follows a winding course
mouth	The end of a river where it flows into the sea, another river or lake
source	The start of a river is its source. This could be a spring on a hillside, a lake, a bog or marsh. A river may have more than one source.
tributary	A smaller river or stream that joins a big river.

Cultural Heritage

What is a Matki (Matka)?



A matki (matka) is a Hindustani word used for an earthen pot. It is used all over the Indian subcontinent as a home "water storage cooler"



In some Pakistan, Somali and Romanian villages, villagers do not have individual tap water that comes directly into their home. Villagers must collect any water they require from the local well.



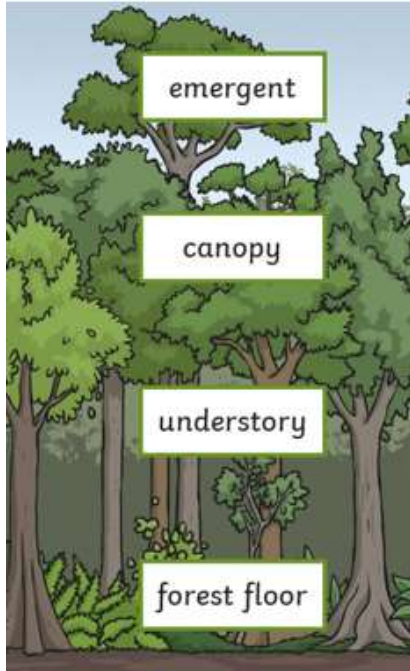
Prince Dimitrie Ghica-Comanesti, explored the interior of Somalia and Abyssinia. He made botanical discoveries and brought back zoological specimens for the Natural History Museum in Bucharest.



Sir Malcolm Walker is the founder of Iceland Foods. In 1986 Iceland was the first supermarket to remove artificial colouring and flavouring from its products. In 1998 their fridges and freezers are endorsed by Greenpeace. In 2018 Iceland removed palm oil from their products, which highlighted this issue to the world.



Ladybower Reservoir was built between 1935 and 1943, to supply water for the East Midlands. To create the reservoir the people who lived in the villages of Ashopton and Derwent were evacuated and the valley was allowed to be flooded.



Rainforest Layers

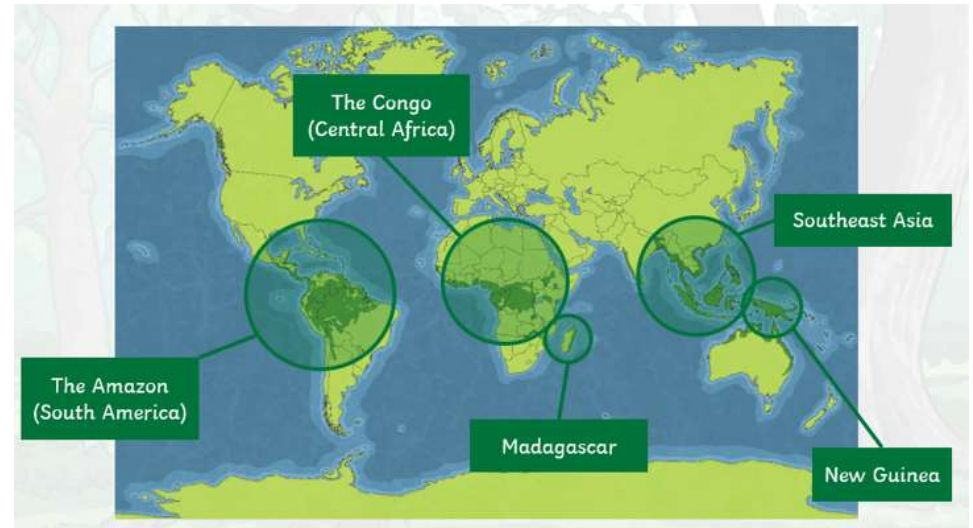
Emergent Layer: This is the top layer of the rainforest. Only a few animals live in this layer. It is hot, wet and windy in the emergent layer.

Canopy Layer: The canopy layer is located under the emergent layer. The canopy is home to most of the animals and plants of the rainforest. There is plenty of food and shelter in this layer.

Understory Layer: This layer is located beneath the canopy. The understory does not get much sunlight. It is dark and humid here. The understory is home to smaller animals. Insects and snakes.

Forest Floor: The last layer of the rainforest is the forest floor layer. This layer is dark, humid and hot. Only 5% of the sunlight makes it to the forest floor.

Rainforests of the World



Rainforests get their name from the heavy rains that fall almost everyday. Rainforests are often known as the "lungs of the Earth". The trees absorb harmful carbon dioxide and produce 20% of the Oxygen in Earth's atmosphere.



Why are Rainforests important?



Rainforests cover only 6% of the Earth, but they home 50% of all plant and animal species.
25% of medicines comes from plants found in the rainforest.

Deforestation

Deforestation occurs when trees are cut down across a wide area which is permanently cleared for another use. Every 20 minutes, an area of the rainforest the size of 20 football pitches is cut down. If this rate continues there will be no rainforests in 100 years time.



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Key Knowledge		Key Vocabulary		Cultural Heritage																	
<p>1. The value of friendships / managing peer pressure</p> <ul style="list-style-type: none">○ Friendships may look different, but it is the equality within the friendship that is important rather than who with or the number of people.○ Some friendships can have an unequal balance – these can become difficult to maintain as there is often a demand and response relationship– as one party can feel pressurised into doing things they feel are wrong or uncomfortable <p><i>What action could a person take if they feel pressured? (walk away, talk to someone, say no)</i></p> <p>2. Conflict resolution including consent</p> <ul style="list-style-type: none">○ Although conflicts are seen negatively it is often the way in which people choose to respond to them.○ The constructive approach is likely to lead to learning, problem solving and better relationships.○ Destructive ways will lead to escalation and negative outcomes <p>3. Unhealthy relationships</p> <ul style="list-style-type: none">○ All families have problems sometimes and it’s normal for family members to fall out or have different opinions, especially as you grow up.○ Sometimes there may be more serious issues in families and these are never okay.	<p>There are different types of abuse: physical abuse, emotional abuse, sexual abuse, neglect and domestic abuse.</p> <p>It is important to speak to a trusted adult even when you:</p> <ul style="list-style-type: none">○ have been asked to keep it a secret○ someone you love is hurting you or someone else in your family or close relations/family friends○ are worried that no-one will believe you○ have already tried telling someone who didn’t listen <p>You can also speak to Childline to get help.</p> <p>4. Online safety in the wider world</p> <p>When an online relationship breaks down, cyber bullying might occur.</p> <ul style="list-style-type: none">○ Cyberbullying can include trolling, isolation from group chats, negative name-calling and online grooming (this will be looked at more in Year 6).○ It can be more damaging because the accessibility to the victim is 24 hours <p>5. Building resilience in relationships</p> <p>Resilience is the capacity to recover quickly from difficulties, toughness.</p> <ul style="list-style-type: none">○ Mental wellbeing can be defined as feeling good, feeling that life is going well, and feeling able to get on with daily life.○ It is influenced by a range of factors, including your family, you community and school environment, your physical health and you social and emotional skills.	<table><tr><th>Word:</th><th>Meaning:</th></tr><tr><td>conflict</td><td>process of resolving a disagreement between two or more parties</td></tr><tr><td>constructive</td><td>having or intended to have a useful purpose</td></tr><tr><td>destructive</td><td>negative and unhelpful</td></tr><tr><td>domestic abuse</td><td>when someone abuses someone in a relationship. It can affect you if it’s your relationship or between people in your family</td></tr><tr><td>emotional abuse</td><td>when someone is always putting you down, shouting at you, ignoring you or making you feel bad about yourself</td></tr><tr><td>harassment</td><td>when a person annoys or upsets someone else, usually repetitively</td></tr><tr><td>hormones</td><td>chemicals that tell cells and body parts to do certain things e.g. to grow</td></tr><tr><td>neglect</td><td>when you don’t get what you need to survive and feel safe at home</td></tr></table>	Word:	Meaning:	conflict	process of resolving a disagreement between two or more parties	constructive	having or intended to have a useful purpose	destructive	negative and unhelpful	domestic abuse	when someone abuses someone in a relationship. It can affect you if it’s your relationship or between people in your family	emotional abuse	when someone is always putting you down, shouting at you, ignoring you or making you feel bad about yourself	harassment	when a person annoys or upsets someone else, usually repetitively	hormones	chemicals that tell cells and body parts to do certain things e.g. to grow	neglect	when you don’t get what you need to survive and feel safe at home	<p>Spiritual Health</p> <p>Spiritual wellness refers to finding meaning and purpose in life and living in accordance to your values, morals and beliefs</p> <p><i>How do you and your family take care of your spiritual health?</i></p> <ul style="list-style-type: none">• Praying• Reflecting• Sitting in silence• Listening to oneself• Questioning, searching for meaning• Empathy for others as feeling, thinking people
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Building resilience in relationships (continued)



6. Growing up and puberty

- During puberty, your body will grow faster than at any other time in your life.
- Puberty can happen from the age of 8 years -16 years; it starts and ends at different times for individuals.

Puberty is different for boys and girls.

Girls

- You may have highs and lows and feel a bit more emotional
- You may begin to sweat more. Personal hygiene (washing) is important and you may want to start using deodorant/antiperspirant when this happens.
- You may grow more hair around your body.
- You may grow taller and your hips may become wider

Boys

- Your voice will gradually deepen but until this settles down you could sound croaky and produce some interesting sounds! This is your voice breaking.
- Hormones can make you sweaty and spotty – good personal hygiene (washing and deodorising) is all important
- Parts of your body may become more hairy
- Your body keeps growing until you reach a height that you will stay at. You may become more muscular too.
- The extra hormones may also cause you to have mood swings.
- Remember, puberty is not a secret! Every adult or older teenager has already experienced it, so if there's anything you feel worried about, they will probably understand.

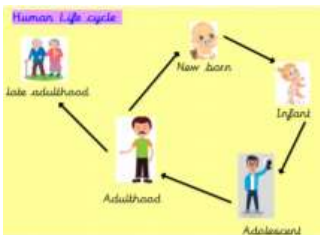
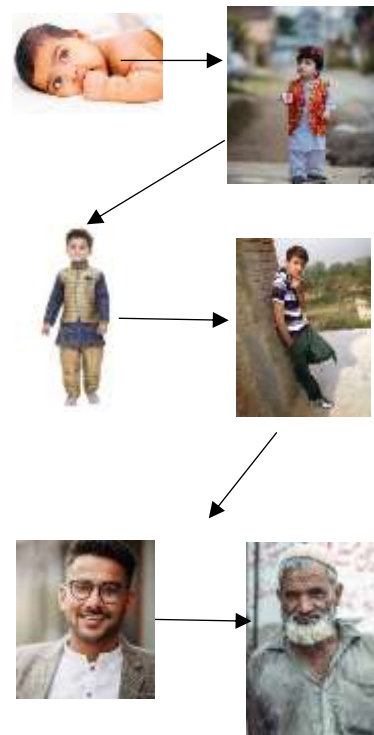
physical abuse	when someone does something to physically injure you on purpose
puberty	the name for the time when your body begins to develop and change as you move from being a child to an adult
sexual abuse	when someone forces, pressures or tricks you into doing something sexual (remember the PANTS rule)
trolling	the act of leaving an insulting message on the internet in order to annoy someone

Types of health:

MENTAL	EMOTIONAL
Knowing our interests Learning new things Taking responsibility Making good decisions Setting & achieving goals	Expressing feelings positively Dealing with stress, anger & other emotions healthily Respecting yourself
SPIRITUAL	PHYSICAL
Connected w/self & world Sense of peace Awareness of purpose Unconditional Love Making a difference	Eating healthily Exercising Getting enough sleep Caring for our bodies Avoiding "risky" behaviors
SOCIAL	
Respecting others Accepting differences Giving & asking for support Listening & bettering communication	




Knowledge Organiser Science: 'Forest Runners': Animals including Humans - Year 5

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Key Knowledge	Key Vocabulary		Cultural Heritage																					
<div>Describe the changes as humans develop to old age -</div> <div>Human Life Cycle -</div> <div>There are 6 main stages to the human life cycle.</div> <div><ul style="list-style-type: none">Foetus - All people start off life as a foetus in their mother's belly. A foetus grows in the womb. Doctors can take a photo of a foetus using an ultrasound scanner.Baby - After around nine months (sometimes a bit longer; sometimes a bit less) the mother gives birth. Babies cannot do much for themselves and need to be fed (with milk at first, then later with food).Child - Children are more independent than babies, and they continue to become more independent as they get older; for example, they can eat food that is given to them and dress themselves.Adolescent - There is even more brain development during this time. Adolescents are more independent than children. This is when the body starts to change and prepare itself for adulthood. Hormonal changes take place over a few years.Adulthood - The human body is at its peak of fitness and strength between 18/19 and 39. Adults usually live independently.Elderly - This is the final stage of the human life cycle. There is a decline in fitness and strength during this stage.</div> <div></div> <div>7 life processes: MRS GREN- Movement, reproduction, sensitivity, growth respiration, excretion and nutrition.</div>	<table><tr><th>Word</th><th>Definition</th></tr><tr><td>Adolescence</td><td>the period of your life in which you develop from being a child into being an adult.</td></tr><tr><td>Adulthood</td><td>the state of being an adult.</td></tr><tr><td>Development</td><td>the gradual growth or formation of something.</td></tr><tr><td>Foetus</td><td>an animal or human being in its later stages of development before it is born.</td></tr><tr><td>Gestation</td><td>the process in which babies grow inside their mother's body before they are born.</td></tr><tr><td>Growth</td><td>an increase in something.</td></tr><tr><td>Hormones</td><td>a chemical, usually occurring naturally in your body, that makes an organ of your body do something.</td></tr><tr><td>Infancy</td><td>the period of your life when you are a very young child.</td></tr><tr><td>Life cycle</td><td>the series of changes that an animal or plant passes through from the beginning of its life until its death.</td></tr><tr><td>Life processes</td><td>There are seven processes that tell us that living things are alive.</td></tr></table>	Word	Definition	Adolescence	the period of your life in which you develop from being a child into being an adult.	Adulthood	the state of being an adult.	Development	the gradual growth or formation of something.	Foetus	an animal or human being in its later stages of development before it is born.	Gestation	the process in which babies grow inside their mother's body before they are born.	Growth	an increase in something.	Hormones	a chemical, usually occurring naturally in your body, that makes an organ of your body do something.	Infancy	the period of your life when you are a very young child.	Life cycle	the series of changes that an animal or plant passes through from the beginning of its life until its death.	Life processes	There are seven processes that tell us that living things are alive.	<div>Life cycle of a Pakistani boy -</div> <div></div>
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Knowledge Organiser Science: 'Forest Runners' Living things and their habitats Year 5



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Key Knowledge	Key Vocabulary		Cultural Heritage
<div>Life cycles -</div> <div>Mammals-</div> <p>The lifecycle of a mammal involves 3 stages -</p> <ul style="list-style-type: none">Gestation: Embryo growing inside the mother, where it is completely reliant upon the mother.Young: Main period of growth and developing independence from the parents.Independent adult usually seeks company from the opposite gender. Adult female nurses their young. <div>Amphibians -</div> <ul style="list-style-type: none">The female lays mass of eggs which are fertilised by the male.After 2-25 days the tadpole hatches from the egg. It swims and eats plants. It breathes through gills.The tadpole grows front legs and tail shortens. Uses nutrients in tail as food. It jumps out of water onto land.The tail disappears and it starts to eat insects instead of plants. It takes 2-4 years to become an adult frog, when it can lay eggs. <div>Insects-</div> <ul style="list-style-type: none">Eggs are laid by the female insect.The eggs hatch into larva. The larva look nothing like the adult. This varies depending on species. Common forms are caterpillars, maggots, grubsThe pupa is formed when the larva moults for the last time. Pupa have a hard protective coating and are often camouflaged. The larva transforms completely inside the pupa.The adult breaks out of the pupa and matures. <div>Birds -</div> <ul style="list-style-type: none">Eggs are laid by the mother and the mother and father care for the egg until it hatches.Mother and father feed the young bird until it is old enough to fly and find its own foodIndependent adult usually seeks company from opposite gender.	<div>Word</div> <div>Behaviourist</div>	<div>Definition</div> <div>someone who studies animal behaviour: how they learn from their environment, rather than emotions or feelings</div>	<div>The Lynx from Romania lives in the Carpathian Mountains.</div> <div></div>
	<div>Naturalist</div>	<div>an expert in, or a student of, natural history</div>	<div>The Giant Panda, from China, lives in forests high in the mountains of China.</div> <div></div>
	<div>Seed dispersal</div>	<div>it is the way seeds get from the parent plant to a new place.</div>	<div>The Bengal tiger, from Bangladesh, lives in tropical forests.</div> <div></div>
	<div>Stigma</div>	<div>the stigma is the area where pollen is received.</div>	
	<div>Stamen</div>	<div>the stamen is the part of the flower that produces pollen. There are two main parts of the stamen: the filament and anther.</div>	
	<div>Life Processes</div>	<div>there are seven life processes that every living thing has in common.</div>	
	<div>Pollination</div>	<div>the transference of pollen to a flower, or plant to allow fertilisation</div>	
	<div>Life Cycles</div>	<div>the series of changes that an animal or plant goes through from the</div>	

We can compare the life cycles between the different animals -

Compare the life cycles of mammals and birds.	
Similarities	Differences
<ul style="list-style-type: none"> • 3 main stages • First stage is where embryo forms and grows • Second stage is where young is supported by parents. • Third stage is adult stage where reproduction takes place. 	<ul style="list-style-type: none"> • Mammals give birth to live young • Birds lay eggs • Mammal usually nursed by mother • Young birds usually fed by adult male and female.

Life Cycles of Common Plants - Look at the similarities and differences!

Flowering Plant Life Cycle	Non -Flowering Plant Life Cycle
 <p>A rose</p> <ul style="list-style-type: none"> • Germination: The seed starts to grow when conditions are suitable • Roots grow, usually underground. • A stem and leaves form, and the plant makes its own food (photosynthesis). • The pollen in the flowers is used to make seeds. • Seeds are spread out so they can grow where they are not fighting for space with the parent plant. 	 <p>A fern</p> <ul style="list-style-type: none"> • Germination: The seed starts to grow when conditions are suitable. • Roots grow, usually underground • A stem and leaves form, and the plant makes its own food (photosynthesis). • Seeds are produced (without flowers) • Seeds are spread out so they can grow where they are not fighting for space with the parent plant.

	beginning to the end of its life
Root	the part of a plant which attaches it to the ground. It transfers water and nutrients to the rest of the plant.
Germination	the development of a plant from a seed or spore after a period of dormancy

Study the work of -

Jane Goodall, a behaviourist, is best known for her 60 year research on social interactions of wild chimpanzees.

Sir David Attenborough, a naturalist, who has dedicated his life to the study of natural history.