



What? (key knowledge)	
Is it alive?	
Things can be split into three groups:	Things that are alive Things that were alive but are now dead Things that have never lived
Things that are alive	Are made from cells and show signs of life (see below)
Things that are dead	Are made from cells A wooden table used to be alive as a tree
Things that never lived	These are not made from cells. For example a drain cover is made from particles of metal.
How to tell if it is alive. Living things can:	
Move	For example, animals can run, birds can fly and flowers can turn towards the light.
reproduce	This is when living things have offspring. For example animals have babies and plants have seeds which turn into new plants.
Nutrition	This is where food is used to provide energy. For example, humans get energy from food, animals eat plants or other animals. Green plants make their own food.
Growth	This is when you get bigger/ older. For example, babies grow into adults, seedlings grow into bigger plants.
Habitats	
What is a habitat?	Most living things live in an environment they are suited to. This is their habitat.
Types of habitat	Habitats can be very different. They can be; Hot or cold, wet or dry, on the ground or high up.
Choosing the right habitat.	Animals live in habitats that suit them. For example, a fish can breathe in water well so it lives in water, a worm has brown skin, bristles on it's underside to grip and a pointed head. All of this means that soil is a good place for it to live.
Example of animals and plants in their habitats	
Cold habitat	Polar bear—thick fur to keep warm and camouflaged in the snow
Hot habitat	The desert rat—Large ears to help lose excess body heat. Good hearing and sight in the dark so it can hunt at night when it is cooler.
Dry habitat	The cactus—long roots find water that is deep in the ground. Thin needle leaves don't loose water
Wet habitat	The otter—eyes and nostrils can close underwater. Feet are webbed to help move in the water.

What? (key vocabulary)	
Cells	The basic part of living things
Habitat	Where something lives
Environment	The conditions around something

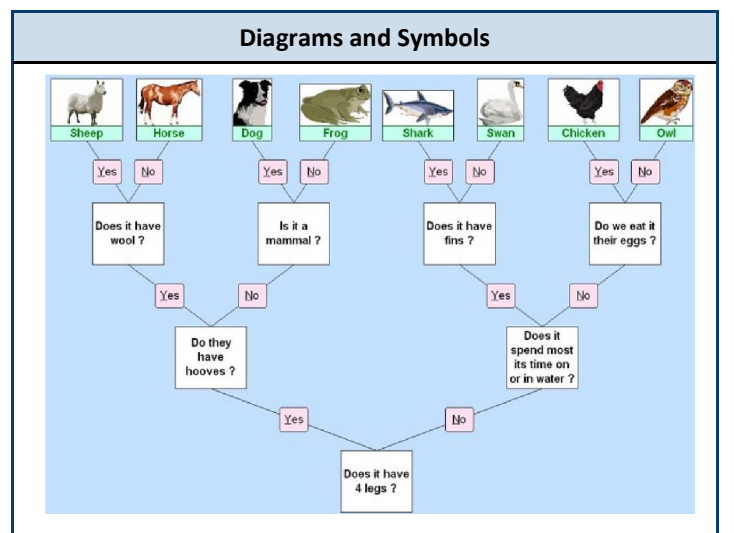
Diagrams and Symbols
<p>Animals get their food from plants and other animals. A food chain shows how energy from food is passed along. Only green plants make their own food, so every food chain starts with a green plant.</p> <div style="text-align: center;"> <pre> graph LR Grass --> Grasshopper Grasshopper --> Mouse Mouse --> Owl </pre> <p>Grass → Grasshopper → Mouse → Owl</p> </div> <p>Here the Grass has made its own food. The Grasshopper gets energy by eating the grass. The Mouse get energy by eating the Grasshopper and the Owl gets its energy by eating the Mouse.</p> <p><u>The arrow on a food chain means 'is food for'</u></p> <p>If one element of the food chain changes, this can impact on the rest of the chain.</p> <p>For example: If a disease killed all of the grasshoppers...</p> <ul style="list-style-type: none"> • The grass might grow a lot more as grasshoppers wouldn't be eating it. • Mice would have to find something else to eat (like corn) which would reduce the amount of corn in fields. • Pigeons may suffer as there is less corn available to eat.



What? (key knowledge)	
Grouping living things	
Animals can be put into one of two groups	Vertebrates or Invertebrates
Vertebrates	
Vertebrates	Are animals with a backbone
There are 5 ways Vertebrates can be grouped	Fish, Amphibians, Reptiles, Birds Mammals
How to spot a Fish	Breathes with gills/lays eggs in water/ has fins and scales/its body temperature changes
How to spot an Amphibian	Born with gills then develops lungs/ lays eggs in water/damp skin/body temperature changes
How to spot a Reptile	Breathes with lungs/lays eggs on land/ dry scaly skin/body temperature changes
How to spot a Bird	Breathes with lungs/lays eggs with hard shells/ has feathers/steady body temperature
How to spot a Mammal	Breathes with lungs/babies are born live/body hair or fur/steady body temperature/feeds babies milk
Invertebrates	
Invertebrates	Invertebrates are animals with no backbones.
There are 3 ways Invertebrates can be grouped	Insects Arachnids Molluscs
How to spot an Insect	3 body sections/6 legs
How to spot an Arachnid	2 body sections/8 legs
How to spot a Mollusc	Slimy foot/Often have a shell
Plant groups	
Plants can be put into one of two groups	Flowering plants or Non-Flowering plants
Flowering plants	
Flowering plants are made of four groups	Grasses/Cereals/Garden Shrubs/ Deciduous Trees (Lose their leaves)

Non flowering plants	
Non-Flowering plants are made of three groups	Algae/Coniferous (Evergreen) Trees/ Ferns
Changing habitats	
What is a habitat?	Where a plant or animals lives.
How can habitats change?	The seasons can change habitats with the weather and plant life in the habitat changing. Humans can change habitats, for example by dropping litter or chopping down trees.
Classifying animals and plants	
What is classifying?	Grouping things that are similar.
How can we group?	We can create branched diagrams to help us. Have a look at the diagram.

What? (key vocabulary)	
Gills	Slits on the side of a fish to help it breathe.
Fins	Part of a fish that helps it move and balance.
Scales	Thin plates protecting the skin of fish or reptiles.
Lungs	Spongy bags in the chest used when breathing.
Body Temperature	How hot or cold the inside of an animals body is.
Section	A part of something.
Deciduous (revisit)	A tree that loses its leaves in Autumn and grows new ones in Spring
Coniferous (Evergreen)	A plant or tree that keeps its leaves all year.
Algae	A small plant that is found in water. It has no stems, roots or leaves.

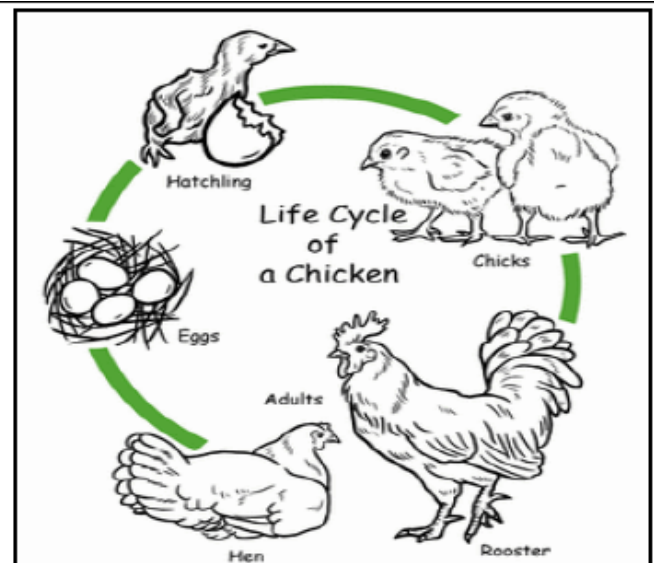
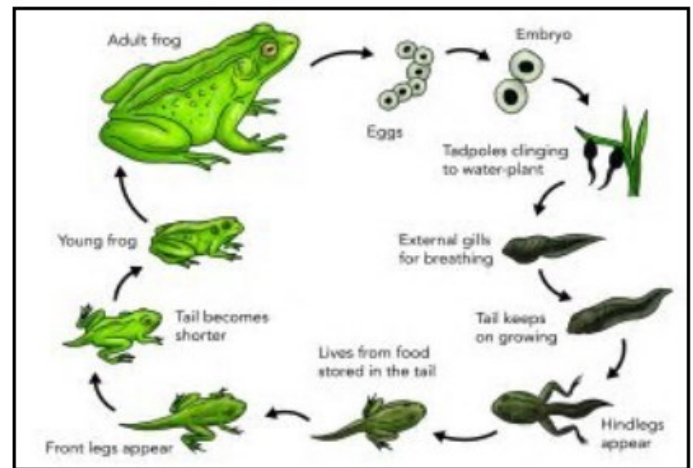




What? (key knowledge)	
Life cycles	
Life cycle	A life cycle shows how things are born, how they grow and how they reproduce.
Vertebrates	
Life cycle of a mammal	Live young born, grow from babies to adults, reproduce , live young born.
Life cycle of an insect	Egg, growth to adult or transform to adult, reproduce, egg.
Life cycle of a bird	Egg, growth to adult, reproduce, egg.
Life cycle of an amphibian	Egg in water, growth to adult, reproduce, egg in water.
Reproduction	
What is reproduction?	Living things creating other living things. Animals have babies Plants have seeds which turn into new plants.
Reproduction in plants	
Two parent reproduction	When the pollen from one flower joins the egg of the new flower and a seed or many seeds are formed.
One parent reproduction	This is when a small part of the plant breaks off and starts to grow until it is the same size as the plant it came from and this is repeated (flowers are not needed).
Reproduction in animals	
Animals	Reproduction in animals most commonly involves two parents.
Scientists we need to know about	
5 facts about David Attenborough	Born on 8th May British Famous wildlife film maker Knighted in 1985 He is the only person to have won BAFTAs fro programmes in each of black and white, colour , HD and 3D
5 facts about Jane Goodall	Born 3rd April 1934 British Considered to be the world’s most foremost expert on chimpanzees Has studied chimpanzees for 45 years in Gombe Stream national Park, Tanzania Is the author of number of books that have earned he fame globally.

What? (key vocabulary)	
Transformation	Changing in clear ways
Chimpanzee	A small African monkey
Reproduce	To produce a copy of something

Diagrams and Symbols





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Scientists we need to know about	
3 facts about Carl Linnaeus	Born in Sweden on 23rd May 1707 A leading light in the field of Taxonomy Famous for developing the first system to classify animals effectively.
Deciding which animal or plant is which	
Key Features to distinguish between animals	Invertebrate or Vertebrate, Mammal/ Reptile/Fish/Amphibian/Bird, colour, length, number of legs, number of body segments, distinguishing features, habitat

Key Features to distinguish Between plants	Flowering or Non-Flowering, grass/cereal/ garden shrub/deciduous/ algae/ coniferous/fern, colour, height, number of flowers, fruit bearing or not, distinguishing features, usual location
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What? (key vocabulary)	
Taxonomy	The part of science focussed on classification
Classification	Grouping something using it's features
Distinguish	Recognise the difference

