
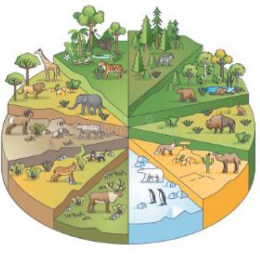



Science Unit of Work
Year 2

Unit	Prior learning (Retrieval)	Future learning	Common Misconceptions
Animals including Humans 	Know animals can be grouped as mammals, fish, reptiles, amphibians, birds. Know vertebrates have a backbone Know that animals give birth to live young or lay eggs.	<ul style="list-style-type: none"> Know animals need the right types and amounts of nutrition and they cannot make their own food. Know that humans and some other animals have skeletons and muscles. Know the simple functions of basic parts of the digestive system Know how to construct and interpret food chains. Know how humans change and develop to old age. Know and name the main parts of the human circulatory system. Know the impact of diet, exercise, drugs and lifestyle on the way bodies function. Know how nutrients and water are transported within animals. 	<ul style="list-style-type: none"> All animals that live in the sea are fish An animals offspring is just a smaller version of the parent A habitat is like its home
National Curriculum Subject Content:	<ul style="list-style-type: none"> Notice that animals, including humans, have offspring which grow into adults Fund out about and describe the basic needs of animals, including humans, for survival (water, food and air) Describe the important for humans of exercise, eating the right about of different types of food, and hygiene 		
Knowledge:			Key Vocabulary
Intended Knowledge Substantive	1) Know animals have offspring which grow into adults 2) Know the basic needs animals need to survive (water, food and air). 3) Know the importance of exercise for humans 4) Know the importance of eating a balanced diet (carbohydrates, fruit and veg, protein, fats and dairy). 5) Know and name a variety of animals including a fish, amphibian (frog), reptile (snake), bird and mammal (dog, cat, human).		air, basic needs, breathing, drugs, exercise, food types, healthy, hygiene, medicine, offspring, survival,
Working Scientifically:	Enquiry	Working Scientifically Objectives	Working Scientifically Vocabulary
Disciplinary Knowledge:	<ul style="list-style-type: none"> Grouping and classifying: Classify animals into groups based on features. Observation over time: Reptile eggs https://explorify.uk/en/activities/whats-going-on/unexpected-eggs 	<ul style="list-style-type: none"> Ask simple questions (yes/no) Classify animals into groups (reptile, mammal, amphibian, fish, bird) Use simple equipment to make observations. 	Classify, observation, predict, conclude
Assessment Outcomes	<p style="text-align: center;">Substantive</p> I know animals have offspring which grow into adults. I know the basic needs animals need to survive. I know the importance of exercise for humans I know the importance of a balanced diet I know and can name a variety of animals.		<p style="text-align: center;">Disciplinary</p> <ul style="list-style-type: none"> I can classify animals into groups I can use simple equipment to make observations. I can ask simple questions I can use results to make further predictions I can present findings and explain results.
Significant people/places	Sir David Attenborough		


Science Unit of Work
Year 2


Unit	Prior learning (Retrieval)	Future learning	Common Misconceptions
<p>Living things and their habitats</p> 	<ul style="list-style-type: none"> Know the name of some animals and their habitats. Know the food which some animals eat. Know the names of things which are classed as living. 	<ul style="list-style-type: none"> Know that living things can be grouped in a variety of ways Know how to use classification keys to help group, identify and name a variety of living things in their local and wider environment Know that environments can change and that this can sometimes pose dangers to living things 	<ul style="list-style-type: none"> Arrow on a food chain means 'eats' An animal's habitat is like its home. Plants and seeds are not alive because they do not move. All deserts are hot.
National Curriculum Subject Content:	<ul style="list-style-type: none"> Explore and compare the differences between things that are living (plants & animals), dead, and things that have never been alive (rocks, paper, plastic). Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other. Identify and name a variety of plants and animals in their habitats, including microhabitats Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food. 		
Knowledge:			Key Vocabulary
Intended Knowledge Substantive	<ol style="list-style-type: none"> Know the differences between things that are living (plants & animals), dead, and things that have never been alive (rocks, paper, plastic). Know the name of a variety of plants and their habitats (cacti, seaweed, palm oil tree, bamboo, maple, oak) Know the name of a variety of animals and their habitats (arctic fox, walrus, scorpion, meerkat, jaguar, poison dart frog, turtle, octopus) including microhabitats (woodlice, worms) Know that most living things live in habitats (desert, rainforest, Ocean, microhabitats, Arctic) to which they are suited. Know how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other. (desert, rainforest, Ocean, microhabitats, Arctic). Know how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food. Woodland and Ocean. 		<p>dead, depend, food chain, grow, offspring/young/babies, living, habitats, micro-habitats, shelter, suited/suitable.</p>
Working Scientifically:	Enquiry	Working Scientifically Objectives	Working Scientifically Vocabulary
Disciplinary Knowledge:	<p>Classifying</p> <p>Explore the school grounds. Find and classify a variety of living things and explain my findings.</p>	<ul style="list-style-type: none"> I can identify and classify things. I can explain to others what I have found out. 	<p>Classifying, findings</p>
Assessment Outcomes	<p style="text-align: center;">Substantive</p> <ul style="list-style-type: none"> I know how a specific habitat provides for the basic needs of things living there (plants and animals) I know and name plants and animals in a range of habitats. I know how animals find their food. I know things that are living, dead and never lived. I know some different sources of food for animals. I know which habitats are matched to living things. I know and can explain a simple food chain 		<p style="text-align: center;">Disciplinary</p> <ul style="list-style-type: none"> I can identify and classify things. I can explain to others what I have found out.
Significant people/places	Sir David Attenborough – biologist		

**Science Unit of Work
Year 2**

Unit	Prior learning (Retrieval)	Future learning	Common Misconceptions
Materials 	<ul style="list-style-type: none"> Know the difference between an object and the material it is made from. Know and name a variety of everyday materials including wood, plastic, glass, metal, water and rock. Know simple physical properties of everyday materials (listed above) 	<ul style="list-style-type: none"> Compare and group rocks based on their appearance and physical properties. Know how soil is made Know how fossils are formed Know about and explain the difference between sedimentary, metamorphic and igneous rock. Group materials based on if they are solid, liquid or gas. Compare and group materials based on their properties Know and demonstrate how some materials can be separated. 	<ul style="list-style-type: none"> Only fabric is a material Solid is another word for hard Rock describes an object not a material
National Curriculum Subject Content:	<ul style="list-style-type: none"> Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching 		
Knowledge:			Key Vocabulary
Intended Knowledge Substantive	1) Know how materials can be changed by squashing, bending, twisting and stretching. 2) Know how the property of a material 3) Know why a material might or might not be used for a specific job.		Absorbent, material, non-reflective, opaque, reflective, rigid, rough, squash/squashing, strong/weak, suitable/unsuitable, translucent, transparent, waterproof
Working Scientifically:	Enquiry	Working Scientifically Objectives	Working Scientifically Vocabulary
Disciplinary Knowledge:	<ul style="list-style-type: none"> Compare the uses of everyday materials. Compare materials based on their properties. Explore the properties of different materials. Label a diagram/object made from different materials. 	<ul style="list-style-type: none"> Ask simple questions and recognise that they can be answered in different ways. Gather and record data to help in answering questions. Perform simple tests Use observations to suggest answers to questions. 	<ul style="list-style-type: none"> Diagram, compare, data, observation, conclusion.
Assessment Outcomes	<p style="text-align: center;">Substantive</p> <p>I know how materials can be changed by squashing, bending, twisting and stretching.</p> <p>I know the properties of different materials.</p> <p>I know why a material might or might not be used for a specific job.</p>		<p>Disciplinary</p> <p>I can compare the uses of everyday materials.</p> <p>I can compare materials based on their properties.</p> <p>I can explore the properties of different materials.</p> <p>I can label diagrams/objects made from different materials.</p>
Significant people/places	Charles Macintosh		

**Science Unit of Work
Year 2**

Unit	Prior learning (Retrieval)	Future learning	Common Misconceptions
Plants 	<ul style="list-style-type: none"> Know that plants can die Know and name the petals, stem, leaves and roots of a plant. Know and name the roots, trunk, branches and leaves of a tree. Know the difference between deciduous and evergreen trees. Know the names of common garden plants- vegetables, daffodils, sunflower and poppy. Know the name of common wild plants- dandelion, daisy, buttercup and nettle. 	<ul style="list-style-type: none"> Know the function of different parts of flowering plants and trees Know how water is transported within plants. Know the plant life cycle, especially the importance of flowers. 	<ul style="list-style-type: none"> Plants are flowering plants grown in pots. Plants are not alive. Trees are not plants All stems are green Minerals in <i>the</i> soil, water and carbon dioxide are food for <i>plants</i> <i>All plants start as seeds.</i>
National Curriculum Subject Content:	<ul style="list-style-type: none"> Observe and describe how seeds and bulbs grow into mature plants. Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. 		
Knowledge:			Key Vocabulary
Intended Knowledge Substantive	1) Know and explain how seeds and bulbs grow into plants 2) Know what plants need in order to grow and stay healthy (water, light and suitable temperature). 3) Know the requirements for germination. 4) Know how plants can reproduce		Bulb, seed, germination, stem, root, reproduction, petal
Working Scientifically:	Enquiry	Working Scientifically Objectives	Working Scientifically Vocabulary
Disciplinary Knowledge:	<ul style="list-style-type: none"> Observe the growth of a variety of plants as they change over time from a seed. Set up a comparative test to show that plants need light and water to stay healthy. 	<ul style="list-style-type: none"> Ask simple questions and recognise that they can be answered in different ways. Observe closely, using simple equipment safely. Perform simple tests. Gather and record data to help in answering questions Begin to use simple scientific language to talk about what they have found out. 	<ul style="list-style-type: none"> Prediction, conclusion, observation, fair test, comparative.
Assessment Outcomes	<p style="text-align: center;">Substantive</p> <p style="text-align: center;">I know how seeds and bulbs grow into plants I know the requirements for germination. I know what plants need in order to grow and stay healthy. I know how plants can reproduce.</p>		<p style="text-align: center;">Disciplinary</p> <p>I can observe how plants grow and change over time from a seed to a mature plant. I can set up a comparative test to show what plants need to survive and stay healthy.</p>
Significant people/places	Jane Colden- American botanist		

Science Unit of Work Year 2			
Unit	Prior learning (Retrieval)	Future learning	Common Misconceptions
Seasons 	<ul style="list-style-type: none"> Know the name of the four seasons. Know that summer is a hot period and winter is a cold period. Know that the weather changes across the four seasons. Know what the weather is like across the four seasons. 	<ul style="list-style-type: none"> Know how the tilt of the Earth causes the seasons. 	<ul style="list-style-type: none"> It only snows in Winter. Flowers only grow in Spring and Summer. It's only sunny in Summer It rains the most in winter.
National Curriculum Subject Content:	<ul style="list-style-type: none"> Observe changes across the 4 seasons Observe and describe weather associated with the seasons and how day length varies 		
Knowledge:			Key Vocabulary
Intended Knowledge Substantive	1) Know how day length varies throughout the seasons 2) Know and describe the weather associated with each season 3) Know the names of each season		Season, weather, day length
Working Scientifically:	Enquiry	Working Scientifically Objectives	Working Scientifically Vocabulary
Disciplinary Knowledge:	<ul style="list-style-type: none"> Observation over time- record the sun rising and setting times each day across the seasons Measure and record changes in the weather (rainfall) 	<ul style="list-style-type: none"> Observe closely and use simple equipment safely Gather and record data to help in answering questions Use simple scientific language to talk about what they have found out. 	Rainfall, measure, record, observe
Assessment Outcomes	Substantive I know the names of the four seasons (Spring, Summer, Autumn, Winter) I know how day length varies throughout the seasons. I know and can describe the weather associated with each season. I know that it is not safe to look at the sun.		Disciplinary I can observe how the day length changes across the season. I can measure and record changes in the weather.
Significant people/places			