Applecroft School Curriculum Map

Science

	Living Things & their Habitats	Animals Including Humans	Everyday Materials	Plants / Evolution and Inheritance	Forces	Light/ Sound/ Earth & Space/ Seasonal Change	Electricity	Working Scientifically
	Biology		Chemistry	Biology	Physics			
Nursery	**Key Knowledge & Skills** Begin to understand the need to respect and care for the natural environment and all living things. Help children to care for animals and take part in first hand scientific exploration of animal life-cycles such as butterfly.	**Key Knowledge & Skills** Understand the key features of the life cycle of an animal (butterfly).	**Key Knowledge & Skills** Use all their senses in hands-on exploration of natural materials including leaves, seeds, shells, rocks & pebbles. Explore collections of materials with similar and/or different properties using a range of equipment including magnifying glasses and torches. Talk about the differences between materials and changes they notice including through cooking and melting. Talk about what they see, using a wide vocabulary.	**Key Knowledge & Skills** Plant seeds and care for growing plants including sunflowers, daffodils and runner beans, so that children observe growth, change and decay over time. Understand the key features of the life cycle of a plant including sunflowers and daffodils.	**Key Knowledge & Skills** Explore how things work providing opportunities for children to investigate equipment such as ramps with cars and balls, wind up tools and gears. Explore and talk about different forces they can feel such as stretching elastic, snapping a twig and magnetic attraction and repulsion.	**Key Knowledge & Skills** Explore sound and light through torches, colour paddles, simple percussion instruments and simple technology. Observe and discuss change across the 4 seasons.		
	Key Vocabulary Animal, home, nest, egg, lifecycle, habitat.	**Key Vocabulary** Caterpillar, butterfly, chrysalis, mini-beast, food, change.	**Key Vocabulary** Leaf, seed, shell, rock, pebble, hard/soft, rough/smooth, hot, cold, melt, cool, heat, change, mix.	**Key Vocabulary** Leaf, flower, seed, bulb, grow, water, light.	**Key Vocabulary** Ramp, push, pull, fast, slow, faster, slower, bend, stretch, snap, together, apart.	**Key Vocabulary** Light, dark, bright, colour, loud, soft, fast, slow, sound, hear, see, spring, summer, autumn, winter, sunny, rainy, cloudy, hot, cold, snowy, windy.		

	End Points Understands the need to respect and care for the natural environment and all living things	**End Points** Understands the key features of the life cycle of an animal (butterfly)	**End Points** Can talk about the differences between materials and changes they notice including through cooking & melting	**End Points** Can plant seeds and care for growing plants including sunflowers, daffodils and runner beans	**End Points** Can explore and talk about different forces they have felt such as stretching elastic, snapping a twig and magnetic attraction and repulsion	**End Points** Can explore and talk about different sounds and lights they have seen through torches, colour paddles, simple percussion instruments and simple technology. Can observe and discuss change across the 4 seasons		
Reception	**Living Things & Their Habitats** **Key Knowledge & Skills** Explore the natural world around them. Create opportunities to care for the natural world around us: planting, care for our outside space, litter picking, tidying garden, planting/growing/ composting, caring for animals. Children to name and describe plants and animals and recognise familiar plants and animals whilst outside.	**Animals Including Humans** **Key Knowledge & Skills** Understand the key features of the life cycle of an animal (frog). Describe what they see, hear and feel whilst outside including naming and describing animals they are likely to see including birds, frogs, butterflies, and squirrels. Understand the effect of changing seasons on the natural world around them including how animals behave differently as the seasons change e.g., hibernation, migration.	**Everyday Materials** **Key Knowledge & Skills** Use all their senses in hands-on exploration of natural materials including leaves, seeds, shells, rocks, pebbles, wood & metal. Explore the natural world around them, through hands-on interaction, discussing the difference between materials and changes they notice using a range of equipment including magnifying glasses, torches, magnets and microscopes. Talk about and compare the differences between materials and changes they notice including through cooking and different weather conditions. Talk about what they see, using a wide vocabulary.	**Plants** **Key Knowledge & Skills** Plant seeds and care for growing plants including tomatoes and strawberries, so that children observe growth, change and decay over time. Understand the key features of the life cycle of a plant. Apply the knowledge from above to describe what they see, hear and feel whilst outside including naming and describing plants they are likely to see in the wider environment.	**Forces** **Key Knowledge & Skills** Explore the natural world around them observing and interacting with natural processes such as ice melting, a magnet attracting an object and a boat floating on water.	**Seasonal Change** **Key Knowledge & Skills** Explore the natural world around them observing and interacting with natural processes such as a sound making a vibration. Explore the natural world around them observing and interacting with natural processes such as light travelling through transparent material or an object casting a shadow. Understand the effect of changing seasons on the natural world around them including the weather and seasonal features including providing opportunities for children to discuss and record the weather detailing different conditions.		**Working Scientifically** **Key Knowledge & Skills** Asks simple questions showing curiosity

	Key Vocabulary Plant, grow, decay, compost, squirrel, fox, hedgehog, red kite.	**Key Vocabulary** Frogspawn, tadpole, froglet, frog, pond, food, insect, amphibian.	**Key Vocabulary** Wood, metal, rock, shell, leaf, seed, cardboard, paper, hard/soft, shiny/dull, rough/smooth, bendy/not bendy, heat source, warm, cold, solid, liquid, combine.	**Key Vocabulary** Root, stem, growth, soil.	**Key Vocabulary** Attract, repeal, flexible, not-flexible, magnetic, not-magnetic, melt, hot, cold, warm, liquid, solid, ice, water, float, sink, light, heavy.	**Key Vocabulary** Dull, shadow, transparent, light source, sun, clouds, vibration, quiet, season, cycle, foggy, stormy, frost, icicle, icy, slippery, freezing.		
	End Points Can recognise, name & describe familiar plants and animals whilst outside	**End Points** Understands the key features of the life cycle of an animal (frog). Can describe what they see, hear and feel whilst outside including naming and describing animals they are likely to see including birds, frogs, butterflies, and squirrels. Understands the effect of changing seasons on the natural world around them including how animals behave differently as the seasons change e.g., hibernation, migration.	**End Points** Explores the natural world around them, through hands-on interaction, discussing the difference between materials and changes they notice using a range of equipment including magnifying glasses, torches, magnets and microscopes. Can talk about and compare the differences between materials and changes they notice including through cooking and different weather conditions. Can talk about what they see, using a wide vocabulary.	**End Points** Understands the key points in the life cycle of a plant Can identity and name the basic parts of a plant including root, stem, leaf, flower, petal	**End Points** Is beginning to use the vocabulary associated with forces correctly including attract, repel, flexible, magnetic, melt, cold, warm, liquid, float, sink, light, heavy	**End Points** Is beginning to use the vocabulary associated with light correctly including shadow, light, sun, quiet, source, dull		**End Points** Asks simple questions showing curiosity
		Applecroft Adventure Experience the wonder of new life (frog life cycle)	**Applecroft Adventure** Make a mud pie	**Applecroft Adventure** Visit the local park		**Applecroft Adventure** Kick autumn leaves & make a leaf pile		

Year 1		**Key Knowledge & Skills** **Animals Including Humans** Describe and compare the structure of a variety of common animals e.g., fish, amphibians, reptiles, birds, mammals including pets. Identify, name, draw and label the basic parts of the human body. Say which part of the body is associated with each sense.	**Key Knowledge & Skills** **Everyday Materials** Distinguish between an object & the material from which it is made. Identify & name a variety of everyday materials including wood, plastic, glass, metal, water and rock. Describe the simple physical properties of a variety of everyday materials. Compare and group together a variety of everyday materials on the basis of their simple physical properties.	**Key Knowledge & Skills** **Plants** Identify and name a variety of common wild and garden plants including deciduous and evergreen trees. Identify and describe the basic structure of a variety of common flowering plants, trees and root vegetables.		**Key Knowledge & Skills** **Seasonal Change** Observe change across the four seasons. Observe & describe weather associated with the seasons. Observe & describe how the day length varies associated with the four seasons.		**Key Knowledge & Skills** **Working Scientifically** *During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:* Asking Questions Ask simple questions and recognise that they can be answered in different ways. Observe closely, using simple equipment. Perform simple tests. Identify and classify. Use observations and ideas to suggest answers to questions. Gather and record data to help in answering questions.
		Key Vocabulary Tier 2 Blood Senses Young Feathers Fur Scales Tier 3 Mammal Amphibian Reptile Herbivore Carnivore omnivore	**Key Vocabulary** Tier 2 Absorb Rough Smooth Waterproof Metal Plastic Tier 3 Materials Properties Flexible Transparent Opaque Physical	**Key Vocabulary** Tier 2 Bud Trunk Branch Bark Seed Wild Tier 3 Nutrients Stem Deciduous Evergreen		**Key Vocabulary** Tier 2 Dawn Dusk Mild Rotate Soaked Weather Tier 3 Month Season Spring Summer Autumn winter		**Key Vocabulary** Experience observe changes patterns grouping sorting classifying compare identify (name) data measure record equipment questions test investigate explore magnifying glass / hand lens same different.

		End Points Can identify, name, draw and label the basic parts of the human body Can say which part of the body is associated with each sense.	**End Points** Can distinguish between an object and the material from which it is made Can identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock Can describe the simple physical properties of a variety of everyday materials Can compare and group together a variety of everyday materials on the basis of their simple physical properties.	**End Points** Can identify and name a variety of common wild and garden plants, including deciduous and evergreen tree Can identify and describe the basic structure of a variety of common flowering plants, including trees and root vegetables.		**End Points** Can observe and describe weather associated with the seasons and how day length varies		**End Points** Can observe closely, using simple equipment. Can identify and classify. Can gather and record data to help in answering questions.
		Applecroft Adventure Visit a farm Bring up a butterfly Build a home for an animal		**Applecroft Adventure** Kick Autumn leaves & make a leaf pile Plant and smell a flower.				

Year 2								
	Key Knowledge & Skills **Living Things & their Habitats** Explore and compare, living, dead and things that have never been alive. Living things live in a habitat to which they are suited. Habitats provide basic needs. Identify and name plant & animal habitats plus microhabitats. Simple food chains.	**Key Knowledge & Skills** **Animals Including Humans** Notice that animals, including humans, have offspring which grow into adults. Find out about and describe the basic needs of animals, including humans, for survival (water, food and air). Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.	**Key Knowledge & Skills** **Uses of Everyday Materials** 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.	**Key Knowledge & Skills** **Plants** Observe & 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.				**Key Knowledge & Skills** **Working Scientifically** *During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:* Ask simple questions and recognise that they can be answered in different ways. Observe closely, using simple equipment. Perform simple tests. Identify and classify. Use observations and ideas to suggest answers to questions. Gather and record data to help in answering questions.
	Key Vocabulary Tier 2 Thrive Depend Producer Consume Prey Predator Tier3 Oxygen Nutrition Respiration Sensitivity Reproduction Excretion	**Key Vocabulary** Tier 2 Healthy Survive Exercise heart Lungs Muscles Tier 3 Hygiene Larva Pupa Vertebrate Invertebrate Metamorphosis	**Key Vocabulary** Tier 2 Artificial Brittle Extracted Fabric Manufactured Natural Tier 3 Ceramic Durable Inflexible Reflective Rigid translucent	**Key Vocabulary** Tier 2 Wither Dormant Mature Bulb Anchor Sustain Tier. 3 Germination Perennial Carbon dioxide Glucose Clone				**Key Vocabulary** Experience observe changes patterns grouping sorting classifying compare identify (name) data measure record equipment questions test investigate explore magnifying glass hand lens same different.

	End Points Can compare the differences between things that are living, dead, and things that have never been alive Can identify that most living things live in habitats to which they are suited Can describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other Can identify and name a variety of plants and animals in their habitats, including microhabitats Can 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.	**End Points** Can describe the basic needs of animals, including humans, for survival (water, food, and air) Can describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.	**End Points** Can identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses	**End Points** Can observe and describe how seeds and bulbs grow into mature plants Can describe how plants need water, light and a suitable temperature to grow and stay healthy.				**End Points** Can ask simple questions and recognise that they can be answered in different ways. Can observe closely, using simple equipment. Can perform simple tests. Can identify and classify. Can use observations and ideas to suggest answers to questions. Can gather and record data to help in answering questions.
	Applecroft Adventure Follow animal tracks Hunt for bugs	**Applecroft Adventure** Visit a zoo		**Applecroft Adventure** Plant it, grow it, eat it Make a daisy chain and a grass trumpet Pick fruit Smell a flower				

Year 3		**Key Knowledge & Skills** **Animals Including Humans** Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat. Identify that humans and some other animals have skeletons and muscles for support, protection and movement.	**Key Knowledge & Skills** **Rocks** Compare & group together different kinds of rocks on the basis of their appearance & simple physical properties. Describe in simple terms how fossils are formed when things that have lived are trapped within rock. Recognise that soils are made from rocks and organic matter.	**Key Knowledge & Skills** **Plants** Identify and describe the functions of different parts of flowering plants. Explore the requirements of plants for life and growth. Investigate the way in which water is transported within plants. Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.	**Key Knowledge & Skills** **Forces and Magnets** Compare how things move on different surfaces. Notice that some forces need contact between 2 objects, but magnetic forces can act at a distance. Observe how magnets attract or repel each other & attract some materials & not others. Compare & group together a variety of everyday materials on the basis of whether they are attracted to a magnet, & identify some magnetic materials. Describe magnets as having 2 poles. Predict whether 2 magnets will attract or repel each other.	**Key Knowledge & Skills** **Light** Recognise that we need light in order to see things and that dark is the absence of light. Notice that light is reflected from surfaces. Recognise that light from the sun can be dangerous and that there are ways to protect our eyes. Recognise that shadows are formed when light from a light source is blocked by an opaque object. Be able to find patterns in the way that the size of shadows change.		**Key Knowledge & Skills** **Working Scientifically** *During years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:* Ask relevant questions and use different types of scientific enquiries to answer them. Set up simple practical enquiries, comparative and fair tests. Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. Gather, record, classify and present data in a variety of ways to help in answering questions. Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions Identify differences, similarities or changes related to simple scientific ideas and processes. Use straightforward scientific evidence to answer questions or to support findings.

		Key Vocabulary Tier 2 Minerals Skeleton Skull Voluntary Involuntary Nerves Tier 3 Biceps Triceps Vertebrae Vitamins Proteins Carbohydrates	**Key Vocabulary** Tier 2 Cemented Compacted Decay Prehistoric Soil Transform Tier 3 Fossil Igneous Magma Metamorphic Minerals Sedimentary	**Key Vocabulary** Tier 2 Adapt Essential Glucose Transport Variety Vital Tier 3 Transpiration Stoma Pollination Stamen Pistil Photosynthesis	**Key Vocabulary** Tier 2 Consequence Contact Force Attract North South Tier 3 Magnet Resistance Friction Repel Pole Magnetic field	**Key Vocabulary** Tier 2 Absence Cast (shadow) Impenetrable Reflect Shadow Source (light) Tier 3 Constant Dependent Independent Illuminate Translucent variable		**Key Vocabulary** Develop enquiry practical enquiry fair test comparative test relationships conclusion accurate thermometer data logger estimate data diagram key (identifying) table chart bar chart results predictions explanation reason similarity difference question evidence information findings criteria values properties characteristics.

		End Points Can identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat Can identify that humans and some other animals have skeletons and muscles for support, protection and movement	**End Points** Can compare and group together different kinds of rocks on the basis of their appearance and simple physical properties Can describe in simple terms how fossils are formed when things that have lived are trapped within rock Recognises that soils are made from rocks and organic matter.	**End Points** Can identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers Can explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant Can explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.	**End Points** Notices that some forces need contact between two objects, but magnetic forces can act at a distance Can observe how magnets attract or repel each other and attract some materials and not others Can compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials Can predict whether two magnets will attract or repel each other, depending on which poles are facing.	**End Points** Recognises that they need light in order to see things and that dark is the absence of light Notices that light is reflected from surfaces Recognises that shadows are formed when the light from a light source is blocked by an opaque object		**End Points** Asks relevant questions and use different types of scientific enquiries to answer them. Can set up simple practical enquiries, comparative and fair tests. Can gather, record, classify and present data in a variety of ways to help in answering questions. Can record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. Can report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Can use results to draw simple conclusions, make predictions for new values, suggest improvements, and raise further questions
		Applecroft Adventure Discover what is in a pond Catch a fish with a net Look after an animal	**Applecroft Adventure** Paddle in the sea, jump a wave, skim a stone Build a sand castle					

Year 4	**Key Knowledge & Skills** **Living Things & Their Habitats** Recognise that living things can be grouped in a variety of ways. Explore and use classification keys to help group, identify and name a variety of living things in their local & wider environment. Recognise that environments can change & that this can sometimes pose dangers to living things.	**Key Knowledge & Skills** **Animals Including Humans** Describe the simple functions of the basic parts of the digestive system in humans. Identify the different types of teeth in humans & their simple functions. Construct & interpret a variety of food chains, identifying producers, predators and prey.	**Key Knowledge & Skills** **States of Matter** Compare & group materials together, according to whether they are solids, liquids or gases. Observe that some materials change state when they are heated or cooled & measure or research the temperature at which this happens in degrees Celsius (°C). Identify the part played by evaporation & condensation in the water cycle & associate the rate of evaporation with temperature.			**Key Knowledge & Skills** **Sound** Identify how sounds are made, associating some of them with something vibrating. Recognise that vibrations from sounds travel through a medium to the ear. Find patterns between the pitch of a sound & features of the object that produced it. Find patterns between the volume of a sound & the strength of the vibrations that produced it. Recognise that sounds get fainter as the distance from the sound source increases.	**Key Knowledge & Skills** **Electricity** Identify common appliances that run on electricity. Construct a simple series electrical circuit, identifying and naming its basic parts. Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery. Recognise that a switch opens and closes a circuit, associate this with whether or not a lamp lights in a simple series circuit. Recognise some common conductors and insulators, associate metals with being good conductors.	**Key Knowledge & Skills** **Working Scientifically** *During years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:* Ask relevant questions and use different types of scientific enquiries to answer them. Set up simple practical enquiries, comparative and fair tests. Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. Gather, record, classify and present data in a variety of ways to help in answering questions. Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions Identify differences, similarities or changes related to simple scientific ideas and processes. Use straightforward scientific evidence to

								answer questions or to support findings.
	Key Scientists Carl Linnaeus							
	Key Vocabulary Tier 2 Classification Environment Interdependence Interact Beneficial Hierarchy Tier 3 Vertebrate Invertebrate Biotic Ecosystem Species niche.	**Key Vocabulary** Tier 2 Expel Compact Digestion Acid Stomach Intestines Tier 3 Incisor Canine Molar Enzyme Saliva peristalsis	**Key Vocabulary** Tier 2 Permanent Particle Solid Liquid Gas Vapour Tier 3 Evaporate Condense Melt Matter State Volume			**Key Vocabulary** Tier 2 Produce Property Source Frequent Regular Affect Tier 3 Vibrate Pitch Volume Medium Vacuum Sound wave	**Key Vocabulary** Tier 2 Associate Identify Portable Effect Appliance Series Tier 3 Component Electrical insulator Electrical conductor Circuit Hypothesis Variable	**Key Vocabulary** Develop, enquiry practical enquiry, fair test, comparative test relationships, conclusion, accurate, thermometer, data logger, estimate, data, diagram, key (identifying), table, chart, bar chart, results, predictions, explanation, reason, similarity, difference, question, evidence, information, findings, criteria, values, properties, characteristics.

	End Points Recognises that living things can be grouped in a variety of ways Can explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment Recognises that environments can change and that this can sometimes pose dangers to living things	**End Points** Describe the simple functions of the basic parts of the digestive system in humans Identify the different types of teeth in humans and their simple functions Construct and interpret a variety of food chains, identifying producers, predators and prey	**End Points** Can compare and group materials together, according to whether they are solids, liquids or gases Understands that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C) Can identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.			**End Points** Can identify how sounds are made, associating some of them with something vibrating Recognises that vibrations from sounds travel through a medium to the ear Can find patterns between the pitch of a sound and features of the object that produced it Can find patterns between the volume of a sound and the strength of the vibrations that produced it Recognises that sounds get fainter as the distance from the sound source increases	**End Points** Can identify common appliances that run on electricity Can construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers Can identify whether or not a bulb will light in a simple series circuit, based on whether or not the bulb is part of a complete circuit with a cell Recognises that a switch opens and closes a circuit and associate this with whether or not a bulb lights in a simple series circuit Recognises some common conductors and insulators, and associate metals with being good conductors	**End Points** Asks relevant questions and use different types of scientific enquiries to answer them. Can set up simple practical enquiries, comparative and fair tests. Can gather, record, classify and present data in a variety of ways to help in answering questions. Can record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. Can report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Can use results to draw simple conclusions, make predictions for new values, suggest improvements, and raise further questions
			Applecroft Adventure Toast a marshmallow					

Year 5	**Key Knowledge & Skills** **Living Things & Their Habitats** Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. Describe the life process of reproduction in some plants and animals.	**Key Knowledge & Skills** **Animals Including Humans** Describe the changes as humans develop to old age.	**Key Knowledge & Skills** **Properties & Uses of Materials** Compare & group together everyday materials on the basis of properties. Know that some materials will dissolve in liquid to form a solution, describe how to recover a substance from a solution. Use knowledge of solids, liquids & gases to decide how mixtures might be separated. Give reasons, based on evidence from comparative & fair tests, for the particular uses of everyday materials. Demonstrate that dissolving, mixing & changes of state are reversible changes. Explain that some changes result in the formation of new materials, & that this kind of change is not usually reversible.		**Key Knowledge & Skills** **Forces** Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth & the falling object. Identify the effects of air resistance, water resistance & friction that act between moving surfaces. Recognise that some mechanisms including levers, pulleys & gears allow a smaller force to have a greater effect.	**Key Knowledge & Skills** **Earth and Space** Describe the movement of the Earth & other planets relative to the sun in the solar system. Describe the movement of the moon relative to the Earth. Describe the sun, Earth & moon as approximately spherical bodies. Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.		**Key Knowledge & Skills** **Working Scientifically** *During years 5 and 6, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:* Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. Use test results to make predictions to set up further comparative and fair tests. Report and present findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations. Identify scientific evidence that has been used to support or refute ideas or arguments.
	Key Scientists Maria Merion David Attenborough				**Key Scientists** Isaac Newton Galileo			

	Key Vocabulary Tier 2 Deduce Process Re-form Transform `adolescence Contrast Tier 3 Embryo Sexual Metamorphosis Incubate Biochemical fertilisation	**Key Vocabulary** Tier 2 Development Diverse unique Generation Mature Equipped Tier 3 Adolescence Puberty Gestation Embryo Foetus Womb	**Key Vocabulary** Tier 2 Property Particle Separate Combine Recover Comparative Tier 3 Atom Molecule Chemical (changes) Physical (changes) Reversible Reaction		**Key Vocabulary** Tier 2 Opposite Reaction Advantage Displace Weight Mass Tier 3 Pulley Gear Pivot Fulcrum Lever Upthrust	**Key Vocabulary** Tier 2 Luminous Phenomenon Attraction Approximately Relative Apparent Tier 3 Orbit Axis Crescent Gravitational Waxing Waning		**Key Vocabulary** Variables evidence justify accuracy precision scatter graphs bar graphs line graphs argument (science) causal relationship.

	End Points Can describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird Can describe the life process of reproduction in some plants and animals	**End Points** Can describe the changes as humans develop to old age	**End Points** Can compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets Knows that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution Can use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating Can give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic Can demonstrate that dissolving, mixing and changes of state are reversible changes Can explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda		**End Points** Can explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object Can identify the effects of air resistance, water resistance and friction, that act between moving surfaces Recognises that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect	**End Points** Can describe the movement of the Earth, and other planets, relative to the Sun in the solar system Can describe the movement of the Moon relative to the Earth Can describe the Sun, Earth and Moon as approximately spherical bodies Can use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky		**End Points** Can plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Can take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Can record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. Can use test results to make predictions to set up further comparative and fair tests. Can report and present findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations. Can identify scientific evidence that has been used to support or refute ideas or arguments
	Applecroft Adventure Rock pooling	**Applecroft Adventure** Learn how to save a life			**Applecroft Adventure** Apple bobbing			

Year 6	**Key Knowledge & Skills** **Living Things and Their Habitats** Describe how living things are classified into broad groups according to common observable characteristics & based on similarities and differences, including micro-organisms, plants & animals. Give reasons for classifying plants & animals based on specific characteristics.	**Key Knowledge & Skills** **Animals Including Humans** Identify & name the main parts of the human circulatory system, describe the functions of the heart, blood vessels & blood. Recognise the impact of diet, exercise, drugs & lifestyle on the way their body's function. Describe the ways in which nutrients & water are transported within animals, including humans.		**Key Knowledge & Skills** **Evolution and Inheritance** Recognise that living things have changed over time & that fossils provide information about living things that inhabited the Earth millions of years ago. Recognise that living things produce offspring of the same kind, but normally offspring vary & are not identical to parents. Identify how animals & plants are adapted to suit their environment in different ways & that adaptation may lead to evolution.		**Key Knowledge & Skills** **Light** Recognise that light appears to travel in straight lines. Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye. Explain that we see things because light travels from light sources to our eyes or from light sources to objects & then to our eyes. Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.	**Key Knowledge & Skills** **Electricity** Associate the brightness of a lamp or the volume of a buzzer with the number & voltage of cells used in the circuit. Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches. Use recognised symbols when representing a simple circuit in a diagram.	**Key Knowledge & Skills** **Working Scientifically** *During years 5 and 6, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:* Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. Use test results to make predictions to set up further comparative and fair tests. Report and present findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations. Identify scientific evidence that has been used to support or refute ideas or arguments.

	Key Scientists Carl Linnaeus	**Key Scientists** Galen William Harvey		**Key Scientists** Charles Darwin Alfred Wallace		**Key Scientists** Isaac Newton		
	Key Vocabulary Tier 2 Characteristic Interdependence Specific Categorise Primitive Hierarchy Tier 3 Fungus Arthropod Taxonomy Kingdom Phylum Genus	**Key Vocabulary** Tier 2 Cell Chamber System Circulation Vessel Clot Filter Expel Substance Function Regulate transform Tier 3 Plasma Platelet Artery Capillary Vein Ventricle Kidney Bladder Urine Excretion Toxin Nutrient		**Key Vocabulary** Tier 2 Characteristic Adaptation Acquire Theory Modify Generation Tier 3 Evolve Survival Species Clone Inherit fossil		**Key Vocabulary** Tier 2 Impurity Emit Absorb Constituent Filter Artificial Tier 3 Refraction Incidence Spectrum Prism Lux Pigment	**Key Vocabulary** Tier 2 Component Consequence Systematic Represent Source Generate Tier 3 Proton Neutron Electron Terminal Series Voltage	**Key Vocabulary** Variables evidence justify accuracy precision scatter graphs bar graphs line graphs argument (science) causal relationship.

	End Points Can describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals Can give reasons for classifying plants and animals based on specific characteristics	**End Points** Can identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood Recognises the impact of diet, exercise, drugs and lifestyle on the way their body's function Can describe the ways in which nutrients and water are transported within animals, including humans		**End Points** Recognises that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago Recognises that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents Can identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution		**End Points** Recognises that light appears to travel in straight lines Can use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye Can explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes Can use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them	**End Points** Associates the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit Can compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches Can use recognised symbols when representing a simple circuit in a diagram	**End Points** Can plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Can take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Can record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. Can use test results to make predictions to set up further comparative and fair tests. Can report and present findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations. Can identify scientific evidence that has been used to support or refute ideas or arguments
				Applecroft Adventure Hunt for Fossils				