Year 1		
Autumn	**Spring**	**Summer**
Autumn 1 Everyday Materials (Chemistry)	Spring 1 Child Led (Chemistry)	Summer 1 Plants (Biology)
<u>Working Scientifically Objectives</u> Ask simple questions. Observe closely, using simple equipment. Perform simple tests. Can use test evidence to answer simple questions. Classify objects by their material or properties.	<u>Working Scientifically Objectives</u> Ask simple questions. Observe closely, using simple equipment. Perform simple tests.	<u>Working Scientifically Objectives</u> Ask simple questions. Observe closely, using simple equipment. Perform simple tests. Make comparisons – compare how plants have grown, compare leaves. Identify plants by matching them to images. Classify plants and trees – wild/garden, deciduous/evergreen.
<u>National Curriculum Objectives</u> Distinguish between an object and the material from which it is made. Identify and 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.	<u>National Curriculum Objectives</u>	<u>National Curriculum Objectives</u> Identify and name a variety of common plants, including garden plants, wild plants and trees and those classified as deciduous and evergreen. Identify and describe the basic structure of a variety of common flowering plants, including roots, stem/trunk, leaves and flowers.
<u>Vocabulary</u> Object, material, wood, plastic, glass, metal, water, rock, brick, paper, fabric, elastic, foil, card/cardboard, rubber, wool, clay, hard, soft, stretchy, stiff, bendy, floppy, waterproof, absorbent, breaks/tears, rough, smooth, shiny, dull, see-through, not see-through	<u>Vocabulary</u> Solid, liquid, gas, change, reversible, non-reversible, sieve, mix, stir, cooling, heating, dissolve, fizz, bubble, reaction.	<u>Vocabulary</u> Leaf, flower, blossom, petal, fruit, berry, root, seed, trunk, branch, stem, bark, stalk, bud Names of trees in the local area Names of garden and wild flowering plants in the local area

Concepts 1).Structure and Function Structure: how something is composed of parts or arranged together in some way. Function: a specific job or procedure.	**Concepts** 1).Cause, Effect and Change Cause is why something happens. Effect is what event has happened as a result of this. Changing from one material/state to another.	**Concepts** 1).Energy and Growth Energy is the ability to do work. Energy is evidenced by heat, light, movement, sound, growth, and electricity. Living things need energy to survive. Living things get energy from the food they eat. 2).Variation, Adaptation and Evolution Variation is the presence of differences between living things of the same species. Adaptation is the process by which animals, plants and other living things have changed so that they better suit their habitat. Evolution is the way that living things change over time.
Autumn 2 Animals including Humans -human focus- (Biology)	Spring 2 Animals including Humans -animal focus- (Biology)	Summer 2 Seasonal Changes (Physics)
Working Scientifically Objectives Ask simple questions. Observe closely, using simple equipment. Perform simple tests. Make comparisons between people. Record data in tables and pictograms.	Working Scientifically Objectives Ask simple questions. Observe closely, using simple equipment. Perform simple tests. Compare animals. Classify animals using a range of features. Use secondary resources to find out about animals. (Research)	Working Scientifically Objectives Ask simple questions. Observe closely, using simple equipment. Perform simple tests. Gather data about day length regularly throughout the year and present this to compare the seasons.
National Curriculum Objectives	National Curriculum Objectives	National Curriculum Objectives Observe and describe weather associated with the seasons and how day length varies.

Identify name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.	Identify and name a variety of common animals that are birds, fish, amphibians, reptiles, mammals and invertebrates. Identify and name a variety of common animals that are carnivores, herbivores and omnivores. Describe and compare the structure of a variety of common animals (birds, fish, amphibians, reptiles, mammals and invertebrates, including pets).	Observe the apparent movement of the Sun during the day.
Vocabulary head, body, eyes, ears, mouth, teeth, leg, tail, parts of the body including those within the school's RSE policy, senses, touch, see, smell, taste, hear, fingers, skin, eyes, nose, ear, tongue	<u>Vocabulary</u> Omnivore, herbivore, mammal, reptile, fish, bird, amphibian, wing, claw, fin, scales, feathers, fur, beak, paws, hooves, names of animals experienced first-hand from each vertebrate group.	<u>Vocabulary</u> weather, sunny, rainy, raining, shower, windy, snowy, cloudy, hot, warm, cold, storm, thunder, lightning, hail, sleet, snow, icy, frost, puddles, rainbow, seasons, winter, summer, spring, autumn, Sun, sunrise, sunset, day length
Concepts <u>1).Variation, Adaptation and Evolution</u> Variation is the presence of differences between living things of the same species. Adaptation is the process by which animals, plants and other living things have changed so that they better suit their habitat. Evolution is the way that living things change over time.	**Concepts** <u>1).Variation, Adaptation and Evolution</u> Variation is the presence of differences between living things of the same species. Adaptation is the process by which animals, plants and other living things have changed so that they better suit their habitat. Evolution is the way that living things change over time.	**Concepts** <u>1).Cause, Effect and Change</u> Cause is why something happens. Effect is what event has happened as a result of this. Changing from one material/state to another.

Year 2		
Autumn	**Spring**	**Summer**
Autumn 1 Living things and their Habitats (Biology)	Spring 1 Animals including Humans (Biology)	Summer 1 Plants (Biology)
<u>Working Scientifically Objectives</u> Use observations and ideas to suggest answers to questions. Identify and classify. Gather and record data to help in answering questions. Make comparisons.	<u>Working Scientifically Objectives</u> Use observations and ideas to suggest answers to questions. Identify and classify. Gather and record data to help in answering questions. Use secondary resources to find out about animals.	<u>Working Scientifically Objectives</u> Ask questions. Use observations and ideas to suggest answers to questions. Identify and classify. Gather and record data to help in answering questions. Make comparisons.
<u>National Curriculum Objectives</u> Explore and compare the differences between things that are living, that are dead and that have never been alive. 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 micro-habitats. 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. Identify how humans resemble their parents in many features.	<u>National Curriculum Objectives</u> Notice that animals, including humans, have offspring which grow into adults. Investigate 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.	<u>National Curriculum Objectives</u> 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.

Vocabulary living, dead, never been alive, suited, suitable, basic needs, food, food chain, shelter, move, feed, water, air, survive, survival, names of local habitats (e.g. pond, woodland etc.), names of micro-habitats (e.g. under logs, in bushes etc.), conditions, light, dark, shady, sunny, wet, damp, dry, hot, cold, names of living things in the habitats and micro-habitats studied	Vocabulary offspring, reproduction, growth, baby, toddler, child, teenager, adult, old person, names of animals and their babies (e.g. chick/hen, kitten/cat, caterpillar/butterfly), survive, survival, water food, air, exercise, heartbeat, breathing, hygiene, germs, disease, food types (e.g. meat, fish, vegetables, bread, rice, pasta, dairy)	Vocabulary light, shade, Sun, warm, cool, water, space, grow, healthy, bulb, germinate, shoot, seedling
Concepts 1).Energy and Growth Energy is the ability to do work. Energy is evidenced by heat, light, movement, sound, growth, and electricity. Living things need energy to survive. Living things get energy from the food they eat. 2).Variation, Adaptation and Evolution Variation is the presence of differences between living things of the same species. Adaptation is the process by which animals, plants and other living things have changed so that they better suit their habitat. Evolution is the way that living things change over time.	**Concepts** 1).Energy and Growth Energy is the ability to do work. Energy is evidenced by heat, light, movement, sound, growth, and electricity. Living things need energy to survive. Living things get energy from the food they eat. 2).Variation, Adaptation and Evolution Variation is the presence of differences between living things of the same species. Adaptation is the process by which animals, plants and other living things have changed so that they better suit their habitat. Evolution is the way that living things change over time.	**Concepts** 1).Energy and Growth Energy is the ability to do work. Energy is evidenced by heat, light, movement, sound, growth, and electricity. Living things need energy to survive. Living things get energy from the food they eat. 2).Variation, Adaptation and Evolution Variation is the presence of differences between living things of the same species. Adaptation is the process by which animals, plants and other living things have changed so that they better suit their habitat. Evolution is the way that living things change over time.
Autumn 2 Uses of Everyday Materials (Chemistry)	Spring 2 Child Led (Physics)	Summer 2 Child Led (Physics)
Working Scientifically Objectives	Working Scientifically Objectives	Working Scientifically Objectives

Use observations and ideas to suggest answers to questions. Identify and classify. Gather and record data to help in answering questions.	Use observations and ideas to suggest answers to questions. Identify and classify. Gather and record data to help in answering questions.	Use observations and ideas to suggest answers to questions. Identify and classify. Gather and record data to help in answering questions.
<u>National Curriculum Objectives</u> Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick/rock, and paper/cardboard for particular uses.	<u>National Curriculum Objectives</u>	<u>National Curriculum Objectives</u> Building knowledge ready for Year 4 topic.
<u>Vocabulary</u> Names of materials – wood, metal, plastic, glass, brick, rock, paper, cardboard Properties of materials – as for Year 1 plus opaque, transparent and translucent, reflective, non-reflective, flexible, rigid Shape, push/pushing, pull/pulling, twist/twisting, squash/squashing, bend/bending, stretch/stretching	<u>Vocabulary</u> Mercury Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune, Pluto, Moon, Sun, Galaxy, Space shuttle, Asteroids, Comet, Satellite, Rocket, Stars, vacuum	<u>Vocabulary</u> Electricity, safe, generated, source, turbine, hydro, solar, electrical, non-electrical appliances, dangers, hazards, electrocuted, wire, battery, bulb, circuit
Concepts <u>1).Structure and Function</u> Structure: how something is composed of parts or arranged together in some way. Function: a specific job or procedure. <u>2.Cause, Effect and Change</u> Cause is why something happens. Effect is what event has happened as a result of this. Changing from one material/state to another.	**Concepts** <u>1).Structure and Function</u> Structure: how something is composed of parts or arranged together in some way. Function: a specific job or procedure.	**Concepts** <u>1).Cause, Effect and Change</u> Cause is why something happens. Effect is what event has happened as a result of this. Changing from one material/state to another.

Year 3		
Autumn	**Spring**	**Summer**
Autumn 1 Rocks (Chemistry)	Spring 1 Child Led (Chemistry)	Summer 1 Plants (Biology)
<u>Working Scientifically Objectives</u> Ask relevant questions. Explore setting up simple, practical enquiries and comparative and fair tests. Explore making accurate measurements using standard units, using a range of equipment, e.g. thermometers and data loggers. Explore gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. Explore recording findings using simple scientific language, drawings, labelled diagrams, bar charts and tables.	<u>Working Scientifically Objectives</u> Ask relevant questions. Explore setting up simple, practical enquiries and comparative and fair tests. Explore making accurate measurements using standard units, using a range of equipment, e.g. thermometers and data loggers. Explore gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. Explore recording findings using simple scientific language, drawings, labelled diagrams, bar charts and tables. Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Identify differences, similarities or changes related to simple scientific ideas and processes using straightforward scientific evidence to answer questions or to support their findings.	<u>Working Scientifically Objectives</u> Ask relevant questions. Explore setting up simple, practical enquiries and comparative and fair tests. Explore making accurate measurements using standard units, using a range of equipment, e.g. thermometers and data loggers. Explore gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. Explore recording findings using simple scientific language, drawings, labelled diagrams, bar charts and tables.
<u>National Curriculum Objectives</u> Compare and group together different kinds of rocks on the basis of their simple, physical properties.	<u>National Curriculum Objectives</u>	<u>National Curriculum Objectives</u> Identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers. Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and

Relate the simple physical properties of some rocks to their formation (igneous or sedimentary). Describe in simple terms how fossils are formed when things that have lived are trapped within sedimentary rock.		room to grow) and how they vary from plant to plant. Investigate the way in which water is transported within plants. Explore the role of flowers in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.
Vocabulary rock, stone, pebble, boulder, grain, crystals, layers, hard, soft, texture, absorb water, fossil, bone, flesh, minerals, marble, chalk, granite, sandstone, slate, soil, types of soil (e.g. peaty, sandy, chalk, clay)	Vocabulary solid liquid gas state change saturate solution sediment dissolve chemical physical saturate solution sediment dissolve acid alkali	Vocabulary photosynthesis, pollen, insect/wind pollination, male, female, seed formation, seed dispersal (wind dispersal, animal dispersal, water dispersal), air, nutrients, minerals, soil, absorb, transport
Concepts 1).Structure and Function Structure: how something is composed of parts or arranged together in some way. Function: a specific job or procedure. 2).Cause, Effect and Change Cause is why something happens. Effect is what event has happened as a result of this. Changing from one material/state to another.	**Concepts** 1).Cause, Effect and Change Cause is why something happens. Effect is what event has happened as a result of this. Changing from one material/state to another.	**Concepts** 1).Energy and Growth Energy is the ability to do work. Energy is evidenced by heat, light, movement, sound, growth, and electricity. Living things need energy to survive. Living things get energy from the food they eat. 2).Cause, Effect and Change Cause is why something happens. Effect is what event has happened as a result of this. Changing from one material/state to another.
Autumn 2 Animals including Humans	Spring 2 Forces and Magnets	Summer 2 Light

(Biology)	(Physics)	(Physics)
Working Scientifically Objectives Ask relevant questions. Explore setting up simple, practical enquiries and comparative and fair tests. Explore making accurate measurements using standard units, using a range of equipment, e.g. thermometers and data loggers. Explore gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. Explore recording findings using simple scientific language, drawings, labelled diagrams, bar charts and tables.	Working Scientifically Objectives Ask relevant questions. Explore setting up simple, practical enquiries and comparative and fair tests. Explore making accurate measurements using standard units, using a range of equipment, e.g. thermometers and data loggers. Explore gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. Explore recording findings using simple scientific language, drawings, labelled diagrams, bar charts and tables.	Working Scientifically Objectives Ask relevant questions. Explore setting up simple, practical enquiries and comparative and fair tests. Explore making accurate measurements using standard units, using a range of equipment, e.g. thermometers and data loggers. Explore gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. Explore recording findings using simple scientific language, drawings, labelled diagrams, bar charts and tables.
National Curriculum Objectives Identify that animals, including humans, need the right types and amounts of nutrition,that they cannot make their own food and they get nutrition from what they eat. Construct and interpret a variety of food chains, identifying producers, predators and prey. Identify that humans and some animals have skeletons and muscles for support, protection and movement.	National Curriculum Objectives Compare how things move on different surfaces. Notice that some forces need contact between two objects, but magnetic forces can act at a distance. Observe how magnets attract or repel each other and attract some materials and not others. 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. Describe magnets as having two poles. Predict whether two magnets will attract or repel each other, depending on which poles are facing.	National Curriculum Objectives Recognise that they 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 their eyes. Recognise that shadows are formed when the light from a light source is blocked by a solid object. Find patterns in the way that the size of shadows change.
Vocabulary Nutrition, nutrients, carbohydrates, sugars, protein, vitamins, minerals, fibre, fat, water, skeleton, bones, muscles, joints, support, protect, move, skull, ribs, spine	Vocabulary Force, push, pull, twist, contact force, non-contact force, magnetic force, magnet, strength, bar magnet, ring magnet, button magnet, horseshoe magnet, attract, repel, magnetic material, metal, iron, steel, poles, north pole, south pole	Vocabulary light, light source, Sun, sunlight, dangerous, reflect, shadow, light ray, surface, block

Concepts 1).Energy and Growth Energy is the ability to do work. Energy is evidenced by heat, light, movement, sound, growth, and electricity. Living things need energy to survive. Living things get energy from the food they eat. 2).Variation, Adaptation and Evolution Variation is the presence of differences between living things of the same species. Adaptation is the process by which animals, plants and other living things have changed so that they better suit their habitat. Evolution is the way that living things change over time.	**Concepts** 1).Energy and Growth Energy is the ability to do work. Energy is evidenced by heat, light, movement, sound, growth, and electricity. Living things need energy to survive. Living things get energy from the food they eat.	**Concepts** 1).Energy and Growth Energy is the ability to do work. Energy is evidenced by heat, light, movement, sound, growth, and electricity. Living things need energy to survive. Living things get energy from the food they eat. 2).Structure and Function Structure: how something is composed of parts or arranged together in some way. Function: a specific job or procedure.

Year 4		
Autumn	**Spring**	**Summer**
Autumn 1 Animals including Humans (Biology)	Spring 1 Child Led (Chemistry)	Summer 1 Electricity (Physics)
Working Scientifically Objectives Ask relevant questions Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.	Working Scientifically Objectives Ask relevant questions Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.	Working Scientifically Objectives Ask relevant questions Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.

Use results to draw simple conclusions and suggest improvements, new questions and predictions for setting up further tests. Identify differences, similarities or changes related to simple, scientific ideas and processes. Use straightforward, scientific evidence to answer questions or to support their finding	Use results to draw simple conclusions and suggest improvements, new questions and predictions for setting up further tests. Identify differences, similarities or changes related to simple, scientific ideas and processes. Use straightforward, scientific evidence to answer questions or to support their finding	Use results to draw simple conclusions and suggest improvements, new questions and predictions for setting up further tests. Identify differences, similarities or changes related to simple, scientific ideas and processes. Use straightforward, scientific evidence to answer questions or to support their finding
National Curriculum Objectives 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.	National Curriculum Objectives	National Curriculum Objectives Identify common appliances that run on electricity. Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. 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 and associate this with whether or not a lamp lights in a simple series circuit. Recognise some common conductors and insulators, and associate metals with being good conductors.
Vocabulary Digestive system, digestion, mouth, teeth, saliva, oesophagus, stomach, small intestine, nutrients, large intestine, rectum, anus, teeth, incisor, canine, molar, premolars, herbivore, carnivore, omnivore, producer, predator, prey, food chain	Vocabulary solid liquid gas state change saturate solution sediment dissolve chemical physical reaction acid alkaline saturate solution sediment dissolve	Vocabulary Electricity, electrical appliance/device, mains, plug, electrical circuit, complete circuit, component, cell, battery, positive, negative, connect/connections, loose connection, short circuit, crocodile clip, bulb, switch, buzzer, motor, conductor, insulator, metal, non-metal, symbol
Concepts 1).Variation, Adaptation and Evolution Variation is the presence of differences between living things of the same species.	**Concepts** 1).Cause, Effect and Change Cause is why something happens.	**Concepts** 1).Energy and Growth

Adaptation is the process by which animals, plants and other living things have changed so that they better suit their habitat. Evolution is the way that living things change over time.	Effect is what event has happened as a result of this. Changing from one material/state to another.	Energy is the ability to do work. Energy is evidenced by heat, light, movement, sound, growth, and electricity. Living things need energy to survive. Living things get energy from the food they eat. <u>2).Structure and Function</u> Structure: how something is composed of parts or arranged together in some way. Function: a specific job or procedure. <u>3).Cause, Effect and Change</u> Cause is why something happens. Effect is what event has happened as a result of this. Changing from one material/state to another.
Autumn 2 States of Matter (Chemistry)	Spring 2 Sound (Physics)	Summer 2 Living things and their Habitats (Biology)
<u>Working Scientifically Objectives</u> Ask relevant questions Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Use results to draw simple conclusions and suggest improvements, new questions and predictions for setting up further tests. Identify differences, similarities or changes related to simple, scientific ideas and processes.	<u>Working Scientifically Objectives</u> Ask relevant questions Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Use results to draw simple conclusions and suggest improvements, new questions and predictions for setting up further tests. Identify differences, similarities or changes related to simple, scientific ideas and processes.	<u>Working Scientifically Objectives</u> Ask relevant questions Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Use results to draw simple conclusions and suggest improvements, new questions and predictions for setting up further tests. Identify differences, similarities or changes related to simple, scientific ideas and processes.

Use straightforward, scientific evidence to answer questions or to support their finding	Use straightforward, scientific evidence to answer questions or to support their finding	Use straightforward, scientific evidence to answer questions or to support their finding
National Curriculum Objectives Compare and group materials together, according to whether they are solids, liquids or gases. Observe that some materials change state when they are heated or cooled, and measure the temperature at which this happens in degrees Celsius (°C), building on their teaching in mathematics. Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.	National Curriculum Objectives 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 and features of the object that produced it. Find patterns between the volume of a sound and the strength of the vibrations that produced it. Recognise that sounds get fainter as the distance from the sound source increases.	National Curriculum Objectives This concept involves becoming familiar with a wider range of living things, including insects and understanding life processes. Recognise that living things can be grouped in a variety of ways. Explore and use classification keys. Recognise that environments can change and that this can sometimes pose dangers to specific habitats.
Vocabulary solid, liquid, gas, heating, cooling, state change, melting, freezing, melting point, boiling, boiling point, evaporation, condensation, temperature, water cycle	Vocabulary Sound, source, vibrate, vibration, travel, pitch (high, low), volume, faint, loud, insulation	Vocabulary Classification, classification keys, environment, habitat, human impact, positive, negative, migrate, hibernate
Concepts 1).Structure and Function Structure: how something is composed of parts or arranged together in some way. Function: a specific job or procedure. 2).Cause, Effect and Change Cause is why something happens. Effect is what event has happened as a result of this. Changing from one material/state to another.	**Concepts** 1).Energy and Growth Energy is the ability to do work. Energy is evidenced by heat, light, movement, sound, growth, and electricity. Living things need energy to survive. Living things get energy from the food they eat. 2).Structure and Function Structure: how something is composed of parts or arranged together in some way. Function: a specific job or procedure.	**Concepts** 1).Variation, Adaptation and Evolution Variation is the presence of differences between living things of the same species. Adaptation is the process by which animals, plants and other living things have changed so that they better suit their habitat. Evolution is the way that living things change over time.

Year 5		
Autumn	**Spring**	**Summer**
Autumn 1 Earth and Space (Physics)	Spring 1 Properties and Changes of Materials (Chemistry)	Summer 1 Forces (Physics)
<u>Working Scientifically Objectives</u> Plan enquiries, including recognising and controlling variables where necessary. Use appropriate techniques, apparatus, and materials during fieldwork and laboratory work. Take measurements, using a range of scientific equipment, with increasing accuracy and precision. Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar and line graphs, and models.	<u>Working Scientifically Objectives</u> Plan enquiries, including recognising and controlling variables where necessary. Use appropriate techniques, apparatus, and materials during fieldwork and laboratory work. Take measurements, using a range of scientific equipment, with increasing accuracy and precision. Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar and line graphs, and models.	<u>Working Scientifically Objectives</u> Plan enquiries, including recognising and controlling variables where necessary. Use appropriate techniques, apparatus, and materials during fieldwork and laboratory work. Take measurements, using a range of scientific equipment, with increasing accuracy and precision. Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar and line graphs, and models.
<u>National Curriculum Objectives</u> Describe the movement of the Earth, and other planets, relative to the Sun in the solar system. Describe the movement of the Moon relative to the Earth. Describe the Sun, Earth and 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.	<u>National Curriculum Objectives</u> Compare and group together everyday materials based on evidence from comparative and fair tests, including their hardness, solubility, conductivity (electrical and thermal), and response to magnets. Understand how some materials will dissolve in liquid to form a solution and describe how to recover a substance from a solution. Use knowledge of solids, liquids and gases to decide how mixtures might be separated,	<u>National Curriculum Objectives</u> Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. Identify the effect of drag forces, such as air resistance, water resistance and friction that act between moving surfaces. Understand that some mechanisms including levers, pulleys and gears, allow a smaller force to have a greater effect.

	including through filtering, sieving and evaporating. Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. Demonstrate that dissolving, mixing and changes of state are reversible changes. 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, oxidisation and the action of acid on bicarbonate of soda.	
<u>Vocabulary</u> Sun, Moon, Earth, planets (Mercury, Jupiter, Saturn, Venus, Mars, Uranus, Neptune), spherical, Solar System, rotate, star, orbit	<u>Vocabulary</u> Thermal/electrical insulator/conductor, change of state, mixture, dissolve, solution, soluble, insoluble, filter, sieve, reversible/non-reversible change, burning, rusting, new material	<u>Vocabulary</u> Force, gravity, Earth, air resistance, water resistance, friction, mechanisms, simple machines, levers, pulleys, gears
Concepts . <u>1).Energy and Growth</u> Energy is the ability to do work. Energy is evidenced by heat, light, movement, sound, growth, and electricity. Living things need energy to survive. Living things get energy from the food they eat. <u>2).Structure and Function</u> Structure: how something is composed of parts or arranged together in some way.	**Concepts** <u>1).Cause, Effect and Change</u> Cause is why something happens. Effect is what event has happened as a result of this. Changing from one material/state to another.	**Concepts** <u>1).Energy and Growth</u> Energy is the ability to do work. Energy is evidenced by heat, light, movement, sound, growth, and electricity. Living things need energy to survive. Living things get energy from the food they eat. <u>2).Cause, Effect and Change</u> Cause is why something happens.

Function: a specific job or procedure. <u>3).Cause, Effect and Change</u> Cause is why something happens. Effect is what event has happened as a result of this. Changing from one material/state to another.		Effect is what event has happened as a result of this. Changing from one material/state to another.
Autumn 2 Animals including Humans (Biology)	Spring 2 Child Led (Chemistry)	Summer 2 Living things and their Habitats (Biology)
<u>Working Scientifically Objectives</u> Plan enquiries, including recognising and controlling variables where necessary. Use appropriate techniques, apparatus, and materials during fieldwork and laboratory work. Take measurements, using a range of scientific equipment, with increasing accuracy and precision. Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar and line graphs, and models.	<u>Working Scientifically Objectives</u> Plan enquiries, including recognising and controlling variables where necessary. Use appropriate techniques, apparatus, and materials during fieldwork and laboratory work. Take measurements, using a range of scientific equipment, with increasing accuracy and precision. Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar and line graphs, and models.	<u>Working Scientifically Objectives</u> Plan enquiries, including recognising and controlling variables where necessary. Use appropriate techniques, apparatus, and materials during fieldwork and laboratory work. Take measurements, using a range of scientific equipment, with increasing accuracy and precision. Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar and line graphs, and models.
<u>National Curriculum Objectives</u> Describe the changes as humans develop to old age.	<u>National Curriculum Objectives</u>	<u>National Curriculum Objectives</u> 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.
<u>Vocabulary</u> Puberty – the vocabulary to describe sexual characteristics	<u>Vocabulary</u> change of state, mixture, solution, dissolve, soluble, insoluble, reversible, irreversible	<u>Vocabulary</u> life cycle, reproduce, sexual, fertilises, asexual, plantlets, runners, tubers, bulbs, cuttings

Concepts	Concepts	Concepts
1).Variation, Adaptation and Evolution Variation is the presence of differences between living things of the same species. Adaptation is the process by which animals, plants and other living things have changed so that they better suit their habitat. Evolution is the way that living things change over time. 2).Cause, Effect and Change Cause is why something happens. Effect is what event has happened as a result of this. Changing from one material/state to another.	1).Cause, Effect and Change Cause is why something happens. Effect is what event has happened as a result of this. Changing from one material/state to another.	1).Energy and Growth Energy is the ability to do work. Energy is evidenced by heat, light, movement, sound, growth, and electricity. Living things need energy to survive. Living things get energy from the food they eat. 2).Variation, Adaptation and Evolution Variation is the presence of differences between living things of the same species. Adaptation is the process by which animals, plants and other living things have changed so that they better suit their habitat. Evolution is the way that living things change over time.

Year 6		
Autumn	**Spring**	**Summer**
Autumn 1 Living things and their Habitats (Biology)	Spring 1 Child Led (Chemistry)	Summer 1 Electricity (Physics)
Working Scientifically Objectives Report findings from enquiries, including oral and written explanations of results, explanations involving causal relationships, and conclusions. Present findings in written form, displays and other presentations.	Working Scientifically Objectives Report findings from enquiries, including oral and written explanations of results, explanations involving causal relationships, and conclusions. Present findings in written form, displays and other presentations.	Working Scientifically Objectives Report findings from enquiries, including oral and written explanations of results, explanations involving causal relationships, and conclusions. Present findings in written form, displays and other presentations.

Use test results to make predictions to set up further comparative and fair tests. Use simple models to describe scientific ideas, identifying scientific evidence that has been used to support or refute ideas or arguments.	Use test results to make predictions to set up further comparative and fair tests. Use simple models to describe scientific ideas, identifying scientific evidence that has been used to support or refute ideas or arguments.	Use test results to make predictions to set up further comparative and fair tests. Use simple models to describe scientific ideas, identifying scientific evidence that has been used to support or refute ideas or arguments.
National Curriculum Objectives Describe how living things are classified into broad groups according to common observable characteristics. Give reasons for classifying plants and animals based on specific characteristics.	National Curriculum Objectives	National Curriculum Objectives Associate the brightness of a lamp or the volume of a buzzer with the number and 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.
Vocabulary vertebrates, fish, amphibians, reptiles, birds, mammals, invertebrates, warm-blooded, cold-blooded, insects, spiders, snails, worms, flowering, non-flowering, mosses, ferns, conifers	Vocabulary Chemical reaction, saturated, solution, solvent, solute, Viscosity, Alkaline, acid, carbon dioxide, fluid	Vocabulary Circuit, complete circuit, circuit diagram, circuit symbol, cell, battery, bulb, buzzer, motor, switch, voltage
Concepts 1).Variation, Adaptation and Evolution Variation is the presence of differences between living things of the same species. Adaptation is the process by which animals, plants and other living things have changed so that they better suit their habitat. Evolution is the way that living things change over time.	**Concepts** 1).Cause, Effect and Change Cause is why something happens. Effect is what event has happened as a result of this. Changing from one material/state to another.	**Concepts** 1).Energy and Growth Energy is the ability to do work. Energy is evidenced by heat, light, movement, sound, growth, and electricity. Living things need energy to survive. Living things get energy from the food they eat. 2).Structure and Function Structure: how something is composed of parts or arranged together in some way. Function: a specific job or procedure.

		3).Cause, Effect and Change Cause is why something happens. Effect is what event has happened as a result of this. Changing from one material/state to another.
Autumn 2 Animals including Humans (Biology)	Spring 2 Light (Physics)	Summer 2 Evolution and Inheritance (Biology)
Working Scientifically Objectives Report findings from enquiries, including oral and written explanations of results, explanations involving causal relationships, and conclusions. Present findings in written form, displays and other presentations. Use test results to make predictions to set up further comparative and fair tests. Use simple models to describe scientific ideas, identifying scientific evidence that has been used to support or refute ideas or arguments.	Working Scientifically Objectives Report findings from enquiries, including oral and written explanations of results, explanations involving causal relationships, and conclusions. Present findings in written form, displays and other presentations. Use test results to make predictions to set up further comparative and fair tests. Use simple models to describe scientific ideas, identifying scientific evidence that has been used to support or refute ideas or arguments.	Working Scientifically Objectives Report findings from enquiries, including oral and written explanations of results, explanations involving causal relationships, and conclusions. Present findings in written form, displays and other presentations. Use test results to make predictions to set up further comparative and fair tests. Use simple models to describe scientific ideas, identifying scientific evidence that has been used to support or refute ideas or arguments.
National Curriculum Objectives Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood.	National Curriculum Objectives Understand 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 eyes. Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them, and to predict the size of shadows when the position of the light source changes. 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.	National Curriculum Objectives Recognise that living things have changed over time and 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 and are not identical to their parents. Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.

Vocabulary Heart, pulse, rate, pumps, blood, blood vessels, transported, lungs, oxygen, carbon dioxide, nutrients, water, muscles, cycle, circulatory system, diet, exercise, drugs, lifestyle	Vocabulary light, light source, Sun, sunlight, dangerous, reflect, shadow, light ray, surface, block, straight lines,	Vocabulary offspring, sexual reproduction, vary, characteristics, suited, adapted, environment, inherited, species, fossils, evolve, evolution
Concepts 1).Variation, Adaptation and Evolution Variation is the presence of differences between living things of the same species. Adaptation is the process by which animals, plants and other living things have changed so that they better suit their habitat. Evolution is the way that living things change over time.	**Concepts** 1).Energy and Growth Energy is the ability to do work. Energy is evidenced by heat, light, movement, sound, growth, and electricity. Living things need energy to survive. Living things get energy from the food they eat. 2).Structure and Function Structure: how something is composed of parts or arranged together in some way. Function: a specific job or procedure.	**Concepts** 1).Variation, Adaptation and Evolution Variation is the presence of differences between living things of the same species. Adaptation is the process by which animals, plants and other living things have changed so that they better suit their habitat. Evolution is the way that living things change over time. 2).Cause, Effect and Change Cause is why something happens. Effect is what event has happened as a result of this. Changing from one material/state to another.