Links to Curriculum Drivers

Expre**S**sive Communicators, Heal**t**hy Champions, Lifelong le**a**rners, Wo**r**ld citizens Open to Po**S**sibilities

Ridgeway Primary school

Science skills progression

Threshold Concept	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
To understand how to work scientifically	asking simple questions and recognising that they can be answered in different ways observing closely, using simple equipment performing simple tests identifying and classifying using their observations and ideas to suggest answers to questions gathering and recording data to help in answering questions	asking simple questions and recognising that they can be answered in different ways observing closely, using simple equipment performing simple tests identifying and classifying using their observations and ideas to suggest answers to questions gathering and recording data to help in answering questions	asking relevant questions and using different types of scientific enquiries to answer them Draw simple conclusions and use scientific language to explain ideas before moving on to writing about what they have found setting up simple practical enquiries, comparative and fair tests making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including	asking relevant questions and using different types of scientific enquiries to answer them setting up simple practical enquiries, comparative and fair tests making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers gathering, recording, classifying and presenting data in a variety of ways to help in answering questions recording findings using simple scientific	planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs using test results to make predictions to set up further	planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs using test results to make predictions to set up further comparative and fair tests

			thermometers and data loggers gathering, recording, classifying and presenting data in a variety of ways to help in answering questions recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions identifying differences, similarities or changes related to simple	language, drawings, labelled diagrams, keys, bar charts, and tables reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions identifying differences, similarities or changes related to simple scientific ideas and processes using straightforward scientific evidence to answer questions or to support their findings.	comparative and fair tests reporting and presenting 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 identifying scientific evidence that has been used to support or refute ideas or arguments	reporting and presenting 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 identifying scientific evidence that has been used to support or refute ideas or arguments

			scientific ideas and processes using straightforward scientific evidence to answer questions or to support their findings			
To understand seasonal change	I know that there are four seasons, Autumn, Winter, Spring and Summer. I can describe how the seasons are different to each other. I can observe changes outside in the different seasons. I can describe what weather you would expect in each season. I know that the days are longer in Summer and shorter in Winter. season, Summer, Winter, Spring, Autumn, day, week, month, cold, hot, dark, light, weather, rain, sunshine, snow, wind, leaves, hail,					

	rain showers, temperature					
To understand everyday materials	That objects are made from materials, and different, everyday objects can be made from the same materials I know that there are many types of materials and these can be named and described. I know that every material has many properties which can be recognised using our senses and described using	I know that materials are chosen for specific purposes on the basis of their properties I know that materials can be used in a variety of ways or for different purposes				

	appropriate vocabulary I know that there is a range of materials with different characteristics. I can use appropriate vocabulary to describe materials I can group materials together and make a record of groupings. I know that materials can be sorted in a variety of ways according to their properties I can discuss and share my ideas about why materials are chosen for a specific purpose	I can group materials together and make a record of groupings. I know that materials can be sorted in a variety of ways according to their properties I know that some materials occur naturally, and some do not I can name some naturally occurring materials I know that some naturally occurring materials are treated (shaped, polished) before they are used				

	hard, harder, soft, stretchy, stiff, shiny, dull, rough, rougher, smooth, bendy, not bendy, plastic, metal, paper, clay, rock, glass, fabric	I can suggest how to test an idea about whether a fabric or paper is suitable for a particular purpose I can suggest how to test whether materials are waterproof absorbent, not absorbent, opaque, transparent, waterproof, not waterproof rigid, flexible, magnetic, non-magnetic, ceramic				
To understand plants	I can recognise and name a common house plant. I can recognise and name a wild plant. I can recognise and name a garden plant. I can name an evergreen tree. I can name a deciduous tree. I know that artificial plants are not living.					

	I know that some plants are grown for us to eat.	I know that plants grow. I know that plants need light to grow. I know that plants need water to grow. I can treat growing plants with care. I can observe where plants grow. I can observe a plant and record changes day-by-day.	I know that different plants require different environments to grow in. I know that a plant needs a suitable amount of light for healthy growth. I know that plants need water for healthy growth. I know that nutrients are taken from the soil through the roots. I know that there are different types of soil and that different plants grow better in certain soils. I can ask questions about plants growth. I can identify that a plant needs certain requirements to grow and to be healthy. I know that plant growth is affected by temperature. I can make careful observations and			

	I can label leaves, stems, flowers and roots on a common flowering plant.	I can use drawings to show my observations of plants growing. I know that roots grow down into the ground and stems grow up and out of the ground. I know that seeds produce new plants.	measurements of plants growing. I can use simple apparatus to measure the height of plants in standard measures. I can use simple apparatus to measure the volume of water correctly. I can use results to draw conclusions that plants need leaves, roots and stems in order to grow well. I can label the roots, stem, trunk, leaves and flowers on a wider variety of flowering plants. I can describe that water is transported to different parts of the plant by the stem. I can describe that roots take water from the soil. I can describe that roots anchor the plant to the ground.			

	I can label the basic structure of a tree.	I know that bulbs produce new plants. I know that a bulb grows differently to a seed. I know that flowering plants produce seeds. I can explain that green plants need light to grow well. I can use my own ideas about whether plants need water, light and a suitable temperature to grow into an investigation. I can observe what happens to plants in an investigation about water, light and temperature.	I can describe that the leaves use light from the sun to make food for the plant. *Photosynthesis* I can describe that the job of a flower is to attract insects to pollinate the plant.			

			I can name and describe the parts of the flower and their functions- stigma, stamen, style, petal and sepal. I know that flowers attract insects to pollinate plants and are where the reproductive organs are placed. I know that plants reproduce. I know that plants grow into adult plants and then produce young. I know that if plants didn't reproduce, they would die out. I know that plants produce flowers which have male and female organs which create seeds. I know that seeds disperse and then germinate. I know that seeds need water and warmth (not light) to germinate.			

	flower, leaf, root, stem, garden plant, wildflowers, weeds, plants, seeds, deciduous, evergreen, trees, Branch, trunk, crown, living	grow, light, temperature, water, green plant, seeds, observe, investigate, healthy, living, seedlings, tall, taller, tallest, like, similar to, different from, small, smaller, smallest, observe, change, fair, compare	I know that seeds can be dispersed in a variety of ways. I know that insects, wind, water and other animals can disperse seeds. I can make observations about fruits and seeds to compare them and draw conclusions pollination, life cycle, seed dispersal, flowering plant, growth, healthy, seeds, germinate, conditions, nutrients, soils, stigma, stamen, style, petal, sepal, ovule, ovary, anther, filament, pollen, functions, comparison, fair test, observation, photosynthesis			
To understand animals, including humans	I can name common animals. I can begin to sort common animals into fish, amphibians, birds, reptiles and mammals.					

	I can describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets). I can identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.		I	I can name and label the mouth, tongue, teeth, oesophagus, stomach, small and large intestine. I can describe the functions of the mouth, tongue, teeth, oesophagus, stomach, small and large intestine. I know that humans have teeth- molars for chewing, canines for tearing and incisors for cutting. I know that teeth help us eat. I know that animals have different types of teeth depending on what they eat. I know that the shape of teeth makes them useful for different purposes.		I know that dental care is important.

			I know that skeletons are internal and grow as humans grow. I know that the skeleton supports the body. I know that muscles help skeletons move. I know that some bones (e.g. ribs, skull, pelvis) are for protection. I know that skeletons help animals and humans move. I know that muscles act in pairs. I know that when someone is exercising or moving fast, the muscles work hard.	I know that a varied diet helps to keep teeth healthy. I know that we have two sets of teeth, and that adult teeth have to last. I know that we need healthy gums. I know that some foods are damaging to teeth. I can describe the importance of dental care.		I can describe that when humans exercise, muscles move parts of the skeleton and this activity requires an increased blood supply, this is why the heartbeat increases and the pulse is faster.

	I know that a carnivore eats meat. I know that a herbivore eats plants. I know that an omnivore eats plants and meat. I can name common herbivore, carnivore and omnivores. I can sort common animals by what they eat.	I know that we need to eat and drink to stay alive. I know that all animals, including humans, need food and water to stay alive. I know that there are many different foods. I know that we eat different types of foods. I know that sometimes we eat lots of one food type and not very much of others. I know that we need to eat the right amounts of a range of foods to stay healthy. I know that all animals, including humans grow and change as they become older.	I know that animals get nutrition from what they eat. I know that animals need to eat to grow and be active. I know that different animals have different diets. I know that an adequate and varied diet is needed to keep healthy. I know that animals need to eat a balanced diet. I can ask questions about the diets of pets.		I can describe the life cycle of a human, I can compare the different stages of a human's life cycle with that of other animals. I can begin to understand changes	I know that it is important to have a healthy balanced diet.

		I know that animals, including humans, reproduce as they get older. I know that animals produce young and these grow into adults. I can match the young and adults of the same animal. I know that babies and children need to be looked after. I know that medicines can be used to help people. I know that medicines can help us feel better when we are ill. I know that medicines are not foods and can be dangerous. I know that we need to exercise to stay healthy. I know that it is important to stay clean.	I know that we need to stay healthy to maintain our muscles.		which come about in puberty. I can make observations about babies as they grow (length, mass).	I know that medicines can be harmful if they are not taken according to instructions. I know that medicines are drugs which effect the body functions but are beneficial although there can be side effects. I know that it is important to exercise to stay healthy.

		I know how to stay clean.		I know that the energy for all living things comes from the Sun. I know that most food chains begin with a green plant (after the Sun). I can identify the food chain structure in a range of habitats. I can recognise ways in which living things and the environment need protection. I know that food chains represent feeding relationships in habitats. I can identify the producer in a food chain. I can identify the predators and prey in a food chain. I can give ideas about what will happen if a producer or prey is removed from a food chain.		I know that the muscles in the walls of the heart contract regularly to pump blood around the body. I know that blood vessels carry blood around the body. I know that the pulse rate is the measure of push from the heart.

	fish, amphibian, reptile, mammal, human, bird, animal, insect, eat, herbivore, carnivore, omnivore, meat, plants, senses, head, neck, face, shoulders, arms, elbows, hands, fingers, legs, knees, feet, skin, ears, nose, eyes, mouth, tongue, hearing, touch, taste, smell, vision	babies, young, old, reproduce, offspring, needs, food, water, survival, medicines, healthy, unhealthy, exercise, hygiene, wash, clean	nutrition, eat, grow, active, balanced diet, skeleton, muscles, pairs, contract, expand, move, internal, control, support, protect	mouth, tongue, teeth, oesophagus, stomach, small and large intestine, digestive system, acid, teeth, chewing, molar, canine, incisor, dental hygiene, gums, bacteria, food chain, producer, prey,	life cycle, age, birth, young, toddler, adolescence, teenager, young adult, adult, mature, elderly, death, puberty, changes, menstruation	I know how to measure my pulse rate and relate to heart beat. I can describe what a resting heart rate is. I can suggest factors which affect pulse rate. I know that tobacco can affect the way in which the body functions and can be harmful. I know that alcohol and other drugs affect the way the body functions and the effects can be harmful. circulatory system, heart, lungs, breathing, blood, blood vessel, arteries, pump, pulse, heart rate, beats per minutes, exercise, increased, drugs, harmful, toxic, beneficial

				predator, energy, food web, consumer		
To understand living things and habitats		I can explore and compare the differences between things that are living, dead, and things that have never been alive I know that animals, including humans are living. I know that humans belong to the group 'animals'. I know that humans are like each other and are like other animals. I can sort between things that are living, dead and not living. I know that animals move. I can find differences and similarities between humans. I can measure how I am different to other humans. I can measure hand span.		I can recognise that living things can be grouped in a variety of ways I know how to group animals according to observable features. I know that it is important to identify and assign groups to plants and animals because of the wide variety. I can explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment I know that different plants and animals are found in different habitats. I know how to classify a wide range of flowering and non-flowering plants. I know how to sort vertebrates and invertebrates.	I can describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird I can describe the life cycle changes in a variety of living things. I know the differences between mammals, amphibians, insects and birds. I can describe the life cycle of mammals, amphibians, insects and birds. I can make observations and compare the life cycles between animals which give birth to live young and those that lay eggs. I can make observations of different growth cycles (chicks, frogs, butterflies). I can describe the life process of reproduction in some plants and animals.	I can describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals I know that the classifications micro-organism, plants and animals can be subdivided. I can classify a range of animals into invertebrates and vertebrates (building on prior knowledge from Year 4). I can classify a range of living things from a broad range of environments using my understanding of classification. I know that micro-organisms are too small to be seen. I know that micro-organisms need food to grow.

		I can 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 I can find similarities and differences with animals living in the same habitat. I can group plants and animals using similarities and differences. I can predict which plants and animals might be found in local habitats and investigate. I know that there are different habitats in the local area. I can begin to describe why animals are suited to their habitat. I can begin to describe how plants and animals need		I know that animals are suited to their environment in which they are found. I know how to identify food sources of different animals in different habitats. I can recognise that environments can change and that this can sometimes pose dangers to living things I know how to identify how humans can affect habitats. I can predict what type of organism can be found in a habitat. I know that plants and animals can be found in the same habitat. I know that some plants and animals can be found in different habitats. Observable feature, classify group, classification key, sort, vertebrates, invertebrates, habitats, flowering, non-	I can begin to describe the process of reproduction in animals (sexual reproduction). I can describe the process of reproduction in plants (asexual and sexual). I can describe the life cycle of a flowering plant including pollination, fertilisation, seed production, seed dispersal and germination. I can correctly order the life cycles of a plant. I can describe similarities and differences in the life cycles of humans and plants. I know that seeds need water and warmth (but not light) for germination. I can name and describe the parts of a flower and their functions- stigma,	I can describe the effects of micro-organisms in yeast and suggest investigations. I know that micro-organisms are useful in a number of products. I know that micro-organisms can cause food to decay and are living organisms. I know that micro-organisms break down sugars in acid which causes decay. I know that some mirco-organisms can be harmful and cause illnesses. I can give reasons for classifying plants and animals based on specific characteristics. I can explain why living things are placed into these subdivisions. I can give reasons to describe why living things should be placed into certain categories. Observable characteristics, group, classify, broad range,

		each other in their habitat. I can identify and name a variety of plants and animals in their habitats, including micro-habitats I know that there are different plants in the immediate environment. I can observe and compare local plants. I can recognise simple characteristics of plants and animals in the local environment. I can name animals in the local environment. I can name animals in a different environment. I can name plants in the local environment. I can name an animal found in a micro-habitat.		flowering, organism, food source, micro-organism	stamen, style, petal and sepal. I know that plants produce flowers which have male and female organs and seeds are formed when pollen from the male organ fertilises the ovum (female organ). Mammal, amphibian, insect, bird, reptile, life cycle, reproduction, sexual reproduction, asexual reproduction, organs, male, female, pollinate, germinate, fertiliser, observing behaviour	subdivisions, categories, micro-organisms, habitats

		I can observe animals in a micro-habitat and make comparisons. I 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 I know that animals need food and water to stay alive. I know that there are different types of food and can name some. I know that animals can get food from plants and other animals. I can begin to use a simple food chain to show how plants are sources of foods for animals. I know that animals eat different types of foods and not very much of others.				

		Living, dead, not living, alive, animals, human, differences, similarities, habitat, micro-habitat, water, food, warmth, shelter, mini-beast, observe, grow, eat, food chain, plant				
To understand rocks			I can observe and compare rocks. I know that rocks can be classified based on characteristics such as colour, arrangement of particles, texture and shape. I can begin to look for differences in rocks and ask questions to test these. I know that rocks are used for a variety of purposes. I know that rocks are chosen for purposes because of their characteristics. I know that beneath all surfaces there are rocks.			

			I know that fossils are formed by the skeletons of living things being crushed by rocks over millions of years. I can recognise a fossil in a rock. I know the difference between rocks and soil. I know that soils are made up of rocks and other organic matter such as dead plants rock, fossil, soil, pressure, sedimentary, igneous, metamorphic, purposes, sandstone, chalk, limestone, granite, waterproof, strong, crystals, grains, layers, heat, cold, brick, chemicals, organic			
To understand light			I know that light is essential to see things. I know that when there is no light, it is dark.			I know that we see because light from the source enters our eyes.

			I know that objects cannot be seen in the dark. I know that light travels in straight lines. I know that there are many sources of lights. I know that the Sun is a source of light. I know that light sources vary in brightness.			I know that the direction of a beam or ray of light travelling from a light source can be indicated by a straight line with an arrow. I can draw diagrams to show how light from a light source enters our eyes. I know that when light is reflected from a surface its direction changes. I know that objects can be reflected when light from the source is reflected by a mirror and that light is reflected into our eyes, causing us to see the object.

			I know that lights show up best at night times. I know that shiny objects need a light source to shine. I know that shiny objects are not light sources. I know that it is dangerous to look at the sun because it is so bright and can cause blindness. I can test that light travels in straight lines by blocking a light source with an object and observing what happens. I can observe shadows when objects are placed in front of light sources. I know that opaque materials do not let light through. I know that transparent materials do let a lot of light through.			I know that shiny surfaces reflect light better than dull surfaces. I can recognise the difference between a reflection and a shadow. I can use the terms transparent and opaque to compare and describe materials and objects. I can identify factors which may affect the size and shape of a shadow. I can investigate and observe how changing

			I know that shadows are formed when a light source is blocked. I know that shadows change in length and position throughout the day. I can measure the length of shadows in standard measures. I know that shadows can be used to tell the approximate time of day. light, dark, black, night, day, reflect, reflective strip, torch, warning light, Sun, candle, source, lantern, brighter, duller, darker, transparent, opaque, shadow, length, sunrise, sunset, east, west, sun dial			one variable can cause a shadow to change. reflect, straight line, light source, eye, travelling, shadows, objects, opaque, transparent, distance, length, prism, colour, ray, direction,
To understand magnets and their forces			I can test different magnets at a range of distances. I know that stronger magnets can be used from further away. I can compare using a push or pull force			

			against a magnetic attraction or repulsion. I know that there are forces between magnets; and that magnets can attract and repel each other. I can explore different materials that are attracted or not attracted to magnets. I can identify and sort magnetic and non-magnetic materials. I know that magnets have a variety of uses and can be used for different purposes. I can begin to describe different uses for magnetic and non-magnetic materials. I know that magnets have two poles. I can predict whether two magnets will attract or repel each other, depending on which poles are facing.			

			Magnets, attract, repel, poles, surface, force, friction, push, pull, direction, magnetic, non-magnetic, repulsion			
To understand forces			I know that there is force between an object and a surface which may prevent it moving. I know that the force between two moving surfaces is called friction.		I know that mass is the amount of 'stuff' in us I know that all objects attract each other and that this depends on the size of their mass I know that the greatest mass we experience is the Earth I know that the Earth and objects are pulled towards each other; this gravitational attraction causes objects to have weight I know that there is a force between an object and a surface which may prevent the object moving I know that the force between two moving surfaces in contact is called friction I know that friction is useful	

			I can describe the movement of objects on different surfaces. I can describe different surfaces in terms of roughness and smoothness.		I can explain results in terms of roughness or smoothness of surfaces I know that water resistance slows an object moving through water I know that air resistance slows moving objects I know that when an object falls, air resistance acts in the opposite direction to the weight I can interpret a line graph and use it to explain the motion of spinners falling I know that when an object is submerged in water, the water provides an upward force (up thrust) on it I know that several forces may act on one object	

			force, object, surface, friction, rough, roughness, smooth, smoothness		I can represent the direction of force by arrows I know that 'Newton' is the unit of force I know that springs are used in a variety of ways I know that when a spring is stretched or compressed upward, it exerts a downward force on whatever is compressing it I can use a force meter carefully to measure forces air resistance, force meter, newtons, water resistance, surface area, gravity, weight, up thrust, Newton, still, stationary, at rest, not moving, forwards, backwards, left, right, push, pull	
To understand electricity				I can identify the difference between appliances that use batteries and those that run on mains. I can name appliances that use batteries	I know that batteries and devices need to match in relation to voltage.	

				I can name appliances that run on mains I can ask questions about objects which have a battery but are charged using the mains (e.g. mobile phones) I can identify components in a circuit and describe what they do I know that a circuit needs a power source I know that a complete circuit is needed for a device to work I know that a switch can be used to make or break a circuit to turn things on or off (using both mains and batteries)	I can explain the change in the brightness of a bulb or the volume of a buzzer when the voltage of a cell is changed. I can make predictions based on what I know about the voltage of cells and devices in a circuit. I know that the brightness of bulbs in a circuit can be changed by changing the wires in a circuit I can explain observations made in	

					terms of knowledge of simple circuits.	
				I can draw simple circuit diagrams	I know that there are conventional symbols for components in circuits and these can be used to draw diagrams of circuits I know that circuit diagrams using these symbols can be understood by anyone who knows the symbols and can be used for constructing and interpreting circuits	
				I know that some materials are good conductors and some materials are good insulators I know that some materials are better conductors of electricity than others I can find out which materials allow electricity to pass through I know that metals are good conductors of electricity, most other materials are not		

				I know that metals are used for cables and wires because they are conductors I know that plastics are used for wires because they are insulators battery, bulb, buzzer, motor, break, electrical conductor, electrical insulator, metal, plastic, foil, wood, rubber	electrical circuits, device, voltage, component, symbols, diagrams, battery, cell, bulb, buzzer, motor, break, switch, electrical conductor, electrical insulator, metal, plastic, wood, cotton wool, paper, card,	
To understand sound				I know that sounds are made when objects or materials vibrate I know that sounds can be made by air vibrating I know that vibrations from sound sources can travel through different materials to the ear I know that the term 'pitch' describes how high or low a sound is I know that the pitch of a drum depends on its size and the tightness of its string I know that the pitch of a stringed instrument depends on its length,		

				thickness and tightness of the string I can suggest how to change the pitch of a drum or stringed instrument and carry out these simple tests I can describe how the pitch of notes on a recorder (or other wind instrument) can be altered by changing the length of the column of vibrating air I know that high and low sounds can be loud or soft I can suggest how to change the volume of a drum or stringed instrument and carry out these simple tests I know that the further away you are from the source, the fainter the sound will be. I know that the nearer you are to the source; the sound will be louder. pitch, volume, vibration, loudness, high, low, quiet, loud, shake,		

				pluck, rattle, strike, ring, silence, soft, noise, louder, quieter, nearer, further away, medium		
To understand states of matter				I can sort into materials into solids, liquids and gases. I know that air contains water vapour and when it hits a cold surface it may condense. I know that condensation is the process of a gas turning into a liquid.	I can sort a range of materials using their properties. I can compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal) and their response to magnets. I can explain, giving reasons, based on evidence from comparative fair tests, for the particular uses of everyday materials, including metals, wood and plastic.	

				I know that condensation is the reverse of evaporation. I can explain how 'drying' occurs using evaporation. I know that evaporation is where a liquid turns into a gas. I can explain the 'disappearance' of water using the term evaporation. I know that other liquids evaporate (some at different temperatures to water). I know that the boiling point of water is 100 °C. I can create investigations designed to identify the boiling and freezing point of other liquids. I can understand the water cycle. I know that water evaporated from oceans, seas, lakes and condenses as clouds before eventually falling	I can use evaporation to separate liquids and solids. I know that some materials will dissolve in liquid to form a solution.	

				as rain and collecting again in rivers and lakes.	I can describe how to recover a substance from a solution. I know that mixing materials may cause them to change. I know that changes occur when solids are added to water and that this creates a new substance. I can select appropriate equipment in order to filter or sieve a mixture. I can separate a mixture through sieving, filtering and evaporating. I can explain when to use sieving, filtering or evaporation to separate a mixture. I know that dissolving a solid into a liquid can be reversed. I can explain how liquids, solids and gases can be reversed.	

				solid, liquid, gas, change, state, reversible, irreversible, flow, particles, movement, heated, cooled, degrees, temperature, evaporation, process, condensation, water cycle, water vapour	I know that some changes which occur when materials are mixed are not easily reversed such as those change associated with burning and the action of acid on bicarbonate of soda. separation, mixture, solution, filtering, sieving, burning, rusting, heating, chemical change, hardness, transparency, solubility, conductivity, thermal, electrical, magnetic, properties, material, dissolving	
To understand Earth and Space					I know that the sun is a star. I can name the eight planets Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune. (Pluto is a dwarf planet). I can begin to recognise that other planets have moons. I know that it takes 1 year (365	

					approximately) for the Earth to orbit the Sun. I know that the Earth takes approximately 24 hours to spin once on its axis. I know that the moon orbits the Earth. I know that it takes approximately 28 days for the moon to orbit the Earth. I can recognise that the appearance of the moon over 28 days provides evidence of a 28-day cycle. I can describe the Sun, Earth and Moon as approximately spherical bodies. I can explain the difference between day and night in relation to the sun's position. I can recognise that the sun remains in one position and it is the Earth that is moving. I know that it is daytime in the part of	

					the Earth that faces the Sun and night time in the part that faces away. I know that the Sun rises in the East and sets in the West. I can make observations and record data about sunrises and sunsets. earth, solar system, planets, stars, rotation, axis, sphere, spherical, orbit, sun, moon, lunar, sunrise, sunset, north, south, east, west, days, hours, years, seasons	
To understand evolution and inheritance						I can identify different types of rocks. I can recognise that fossils are an important way of finding out about how the Earth has changed over millions of years. I can recognise and discuss what living things some fossils may have been and where they would have lived. I can identify that some characteristics are passed

						onto children from their parents (animals and humans). I can begin to question which features are passed on to children (e.g. when dogs are cross bred). I can describe variation in animals and humans. I know that adaptation happens over different generations. I know that variation in offspring takes time but can lead to animals being more or less able to survive in environments. I can suggest ways in which animals may have adapted over different generations to become more able or less able to survive in their environments. I can begin to describe what evolution means and how it takes place. variation, adaptation, evolution, inheritance, children, parents, passed on, survival, environment, fossils, change, millions of years