

Subject: Science – Naming and grouping animals		Year Group: 1			Term: Autumn		
							
Vocabulary		Knowledge What children will know			Understanding What children will understand		
Define the word and include etymology if useful		Learning	Teaching	Assessment	Learning	Teaching	Assessment
		Remembering	Telling	Testing	Practising	Coaching	Observing
- Animal – a living thing that can usually move, sense its surroundings and needs food to survive. - Mammal – an animal that has hair or fur and whose young are usually fed milk. - Bird – an animal with feathers, wings and a beak that lays eggs. - Fish – an animal that lives in water and usually breathes through gills. - Reptile – an animal with dry, scaly skin that usually lays eggs. - Amphibian – an animal that spends part of its life in water and part on land. - Insect – a small animal with six legs and three main body parts. - Vertebrate – an animal with a backbone. - Invertebrate – an animal without a backbone. - Classify – to sort things into groups according to their similarities and differences. - Characteristics – features that describe something.		- There are many different types of animals. - Animals can be grouped according to their characteristics. - The five main vertebrate groups are mammals, birds, fish, reptiles and amphibians. - Insects have six legs. - Different animals have different body coverings, ways of moving and habitats. - Humans are animals and are mammals.			- Animals can be grouped scientifically because they share particular characteristics. - Animals within the same group can look very different but still share important characteristics. - An animal's body structure is related to how it lives and moves.		
					- Observe animals closely. - Identify and name common animals. - Sort animals using observable characteristics. - Explain why an animal belongs in a particular group. - Use simple classification diagrams or tables. - Ask and answer simple questions about animals.		

Lidlington Primary School - Curriculum Plan



Subject: Science – Seasonal changes – autumn/winter			Year Group: 1			Term: Autumn		
								
Vocabulary			Knowledge What children will know			Understanding What children will understand		
Define the word and include etymology if useful			Learning	Teaching	Assessment	Learning	Teaching	Assessment
			Remembering	Telling	Testing	Practising	Coaching	Observing
- Body – the physical structure of a person or animal. - Head – the upper part of the body containing the brain, eyes, ears, nose and mouth. - Torso – the central part of the body between the neck and hips. - Limb – an arm or leg. - Joint – a place where two or more bones meet, allowing movement. - Skeleton – the framework of bones inside the body. - Muscle – body tissue that contracts to help produce movement. - Sense – a way of receiving information about the world. - Sight – the sense that allows us to see. - Hearing – the sense that allows us to detect sounds. - Touch – the sense that allows us to detect physical contact.			- The main external parts of the human body. - Humans have a head, neck, torso, arms, hands, legs and feet. - Humans have five senses. - The eyes are used for sight, ears for hearing, the nose for smell, the tongue for taste and the skin for touch.			- Different body parts have different functions. - Our senses provide information about our surroundings. - We use several senses together to understand the world around us.		
						- Identify and name body parts. - Identify which body part is associated with each sense. - Label a simple human body diagram. - Use their senses to make observations. - Describe observations using appropriate scientific vocabulary.		

Subject: Science – Human body parts		Year Group: 1			Term: Spring		
							
Vocabulary		Knowledge What children will know			Understanding What children will understand		
Define the word and include etymology if useful		Learning	Teaching	Assessment	Learning	Teaching	Assessment
		Remembering	Telling	Testing	Practising	Coaching	Observing
- Body – the physical structure of a person or animal. - Head – the upper part of the body containing the brain, eyes, ears, nose and mouth. - Torso – the central part of the body between the neck and hips. - Limb – an arm or leg. - Joint – a place where two or more bones meet, allowing movement. - Skeleton – the framework of bones inside the body. - Muscle – body tissue that contracts to help produce movement. - Sense – a way of receiving information about the world. - Sight – the sense that allows us to see. - Hearing – the sense that allows us to detect sounds. - Touch – the sense that allows us to detect physical contact.		- The main external parts of the human body. - Humans have a head, neck, torso, arms, hands, legs and feet. - Humans have five senses. - The eyes are used for sight, ears for hearing, the nose for smell, the tongue for taste and the skin for touch.			- Different body parts have different functions. - Our senses provide information about our surroundings. - We use several senses together to understand the world around us.		
					- Identify and name body parts. - Identify which body part is associated with each sense. - Label a simple human body diagram. - Use their senses to make observations. - Describe observations using appropriate scientific vocabulary.		

Subject: Science – Plant parts			Year Group: 1			Term: Spring		
								
Vocabulary			Knowledge What children will know			Understanding What children will understand		
Define the word and include etymology if useful			Learning	Teaching	Assessment	Learning	Teaching	Assessment
			Remembering	Telling	Testing	Practising	Coaching	Observing
Leaves - The part of the plant in which photosynthesis takes place. Flowers The organ of a plant responsible for reproduction. The main structures of a flower are the petals, stamens, carpels and sepals. Fruit - the sweet and fleshy product of a tree or other plant that contains seed and can be eaten as food. Roots - The part of the plant that anchors it in the ground, and absorbs water and nutrients Seed - the unit of reproduction of a flowering plant, capable of developing into another such plant. Trunk - the main woody stem of a tree as distinct from its branches and roots Branches - a part of a tree which grows out from the trunk or from a bough. Stem - the main above-ground structure of a plant. The stem's main functions are to keep the plant upright, support its main organs, orient the plant towards light, and transport water and minerals from the roots to the leaves and flowers. The stem also acts as a store for water and minerals. Deciduous - a tree that sheds its leaves annually Evergreen - a plant that retains green leaves throughout the year.			Know the different parts of a plant • Roots • Stem • Leaves • Flowers • Fruits • Seeds Know the purpose of each part of the plant.			Understand and compare how different plants change over time – for example leaves falling off trees, and buds opening.		
						Observe closely, perhaps using magnifying glasses, and compare and contrast familiar plants. Draw diagrams showing the parts of different plants including trees. Keep records of how plants have changed over time. Working Scientifically Use their observations and ideas to suggest answers to questions 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, including trees		

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Subject: Science – Seasonal changes – spring/summer			Year Group: 1			Term: Summer		
								
Vocabulary			Knowledge What children will know			Understanding What children will understand		
Define the word and include etymology if useful			Learning	Teaching	Assessment	Learning	Teaching	Assessment
			Remembering	Telling	Testing	Practising	Coaching	Observing
- Spring – the season following winter and before summer. - Summer – the warmest season of the year. - Germinate – when a seed begins to grow. - Blossom – a flower produced by a plant, particularly a tree or shrub. - Temperature – how hot or cold something is. - Daylight – natural light during the day. - Weather – the conditions in the atmosphere. - Growth – an increase in size or development. - Observe – to look closely and notice.			- Spring and summer are two seasons. - Spring generally becomes warmer and has increasing daylight. - Summer generally has the highest temperatures and longest periods of daylight. - Many plants grow, flower and produce seeds during spring and summer. - Some animals have young during spring and summer.			- Seasonal changes form a predictable yearly cycle. - Increasing temperature and daylight affect plants and animals. - Plants and animals change throughout the year in response to seasonal conditions.		
						- Observe and describe seasonal changes. - Compare spring and summer with autumn and winter. - Record weather observations. - Identify changes in plants and animals over time. - Recognise patterns in seasonal change.		

Subject: Science – Everyday materials			Year Group: 1			Term: Summer		
								
Vocabulary			Knowledge What children will know			Understanding What children will understand		
Define the word and include etymology if useful			Learning	Teaching	Assessment	Learning	Teaching	Assessment
			Remembering	Telling	Testing	Practising	Coaching	Observing
Hard - solid, firm, and rigid; not easily broken, bent, or pierced. Soft - easy to mould, cut, compress, or fold; not hard or firm to the touch. Stretchy - able to stretch or be stretched easily. Stiff - not easily bent or changed in shape; rigid. Dull - lacking brightness, vividness, or sheen. Shiny - reflecting light, typically because very clean or polished. Rough - having an uneven or irregular surface; not smooth or level. Smooth - having an even and regular surface; free from perceptible projections, lumps, or indentations. Bendy - capable of bending; soft and flexible. Waterproof - impervious to water. Absorbent – able to soak up liquid easily. Opaque - not able to be seen through; not transparent. Transparent - allowing light to pass through so that objects behind can be distinctly seen.			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 Know that different materials have a variety of uses.			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. Understand that different materials can be recycled and reused for different purposes.		
						Perform simple tests to explore questions – for example What is the best material for an umbrella? For lining a dog basket? For curtains? For a bookshelf? For a gymnast's leotard? Working Scientifically Ask simple questions and recognise that they can be answered in different ways. Gather and record data to help in answering questions. Sort and classify different materials.		

Lidlington Primary School - Curriculum Plan



Subject: Science – Animal survival			Year Group: 2			Term: Autumn		
								
Vocabulary			Knowledge What children will know			Understanding What children will understand		
Define the word and include etymology if useful			Learning	Teaching	Assessment	Learning	Teaching	Assessment
			Remembering	Telling	Testing	Practising	Coaching	Observing
Exercise - activity requiring physical effort, carried out to sustain or improve health and fitness. Offspring the young born of living organisms, produced either by a single organism or, in the case of sexual reproduction Adult a fully developed animal. Nutrition the process of providing or obtaining the food necessary for health and growth.			Know that animals, including humans, have offspring that grow into adults, just like their parents. Know that animals, including humans, have basic needs for survival, which include water, food, and air. Know that animals, including humans, need water to drink and stay hydrated, and that it is essential for their bodies to function properly. Know that animals, including humans, need food for energy and to grow, and that different types of food provide different nutrients for their bodies. Know that animals, including humans, need air to breathe, and that oxygen is necessary for their bodies to work. Know that humans need to eat the right amounts of different types of food, including fruits, vegetables, grains, proteins, and dairy, to get all the nutrients they need.			Understand that exercise is important for humans to keep their bodies strong, healthy, and fit. Understand the importance of hygiene, such as washing hands regularly, brushing teeth, and keeping their bodies clean, to stay healthy and prevent the spread of germs. Understand that maintaining a healthy lifestyle, including proper nutrition, exercise, and hygiene, is essential for their well-being and overall health.		
						Working Scientifically Ask simple questions and recognising that they can be answered in different ways Gather and record data to help in answering questions. Find out about and describe the basic needs of animals, including humans, for survival (water, food and air) Make connections between their own behaviours and choices and their impact on their health and well-being, as well as the importance of taking care of their bodies.		

Lidlington Primary School - Curriculum Plan



Subject: Science – Living things and their habitats			Year Group: 2			Term: Autumn		
								
Vocabulary			Knowledge What children will know			Understanding What children will understand		
Define the word and include etymology if useful			Learning	Teaching	Assessment	Learning	Teaching	Assessment
			Remembering	Telling	Testing	Practising	Coaching	Observing
- Living – something that is alive and carries out life processes. - Dead – something that was once alive but is no longer living. - Habitat – the natural home or environment of a living thing. - Microhabitat – a very small habitat within a larger habitat. - Survive – to continue to live. - Depend – to need something or someone for survival. - Food chain – a sequence showing how living things obtain food from one another. - Producer – a living thing, usually a plant, that makes its own food. - Consumer – a living thing that gets energy by eating other living things. - Classify – to organise things into groups according to their characteristics.			- Living things have characteristics that distinguish them from things that have never been alive. - Most living things live in habitats to which they are suited. - Habitats provide living things with what they need to survive. - Different plants and animals live in different habitats. - Microhabitats include places such as under logs, stones and leaf litter. - Animals obtain food from plants and/or other animals. - Food chains show the direction in which food energy is transferred.			- A habitat provides the conditions and resources living things need. - Living things are suited to particular habitats. - Plants and animals in a habitat are interconnected and depend on one another. - Changes to a habitat can affect the organisms living there.		
						- Identify living, dead and never-alive things. - Observe and describe habitats. - Identify organisms within a habitat. - Classify living things. - Construct simple food chains. - Use observations to explain how a habitat supports living things.		

Lidlington Primary School - Curriculum Plan



Subject: Science – Use of everyday materials			Year Group: 2			Term: Spring			
									
Vocabulary	Knowledge What children will know			Understanding What children will understand			Skills What children will be able to do		
Define the word and include etymology if useful	Learning	Teaching	Assessment	Learning	Teaching	Assessment	Learning	Teaching	Assessment
	Remembering	Telling	Testing	Practising	Coaching	Observing	Reflecting	Facilitating	Evaluating
Material - the matter from which a thing is or can be made. From the Latin Materia which means matter. Squashing - crush or squeeze (something) with force so that it becomes flat, soft, or out of shape. Bending - shape or force (something straight) into a curve or angle. Twisting - form into a bent, curling, or distorted shape. Stretching - be made or be capable of being made longer or wider without tearing or breaking. Sustainability – taking care of our planet wisely and making choices that help both people and the environment for a long, long time.	Know a variety of everyday materials • Wood • Metal • Plastic • Glass • Brick • Rock • Paper • Cardboard Know materials have different properties: • Hardness • Flexibility • Transparency • Durability Know some solid objects can change shape as a result of different actions. Know the best uses of some 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 Understand how recycling can help the environment. Understand the concept of sustainability.			Compare the uses of everyday materials in and around school and compare these with materials found in other places (at home, the journey to school, on visits, in stories); observing closely identifying and classifying the uses of different materials. Working Scientifically - Perform simple tests - Observe closely, using simple Equipment Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. Find out about some people who have developed useful new materials for example John Dunlop, Charles MacIntosh or John McAdam. Sort materials into man made and natural materials.		

Lidlington Primary School - Curriculum Plan



Subject: Science – Plant survival			Year Group: 2			Term: Summer		
								
Vocabulary			Knowledge What children will know			Understanding What children will understand		
Define the word and include etymology if useful			Learning	Teaching	Assessment	Learning	Teaching	Assessment
			Remembering	Telling	Testing	Practising	Coaching	Observing
Seed - the unit of reproduction of a flowering plant, capable of developing into another such plant. Bulb - a rounded underground storage organ present in some plants, notably those of the lily family, consisting of a short stem surrounded by fleshy scale leaves or leaf bases, lying dormant over winter. Plant - a living organism typified by growing in a permanent site, that absorbs water and inorganic matter through its roots and uses photosynthesis through its leaves. Temperature - the degree or intensity of heat Environment - the surroundings or conditions in which a person, plant or animal lives or operates. Germination - the phase of plant growth when the seed begins to sprout.			Know plants grow from seeds and bulbs. Know that plants need water to survive and grow. Know that water is absorbed by the roots and transported to different parts of the plant. Know that leaves capture sunlight and turn it into energy in a process called photosynthesis. Know plants need a suitable temperature for optimal growth. Know that plants produce oxygen and remove carbon dioxide from the air.			Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. Understand the conditions required for germination, growth and survival in some different plants. Understand that plants reproduce through pollination. Understand how to care for plants.		
						Observe, and record with some accuracy, the growth of a variety of plants as they change over time from a seed or bulb. Observe similar plants at different stages of growth. Set up a comparative test to show plants need light and water to stay healthy. Working Scientifically Identify and classify Use their observations and ideas to suggest answers to questions. Observe and describe how seeds and bulbs grow into mature plants. Identify the parts of a plant.		

Lidlington Primary School - Curriculum Plan



Subject: Science – Rocks			Year Group: 3			Term: Autumn					
											
Vocabulary			Knowledge What children will know			Understanding What children will understand			Skills What children will be able to do		
Define the word and include etymology if useful			Learning	Teaching	Assessment	Learning	Teaching	Assessment	Learning	Teaching	Assessment
			Remembering	Telling	Testing	Practising	Coaching	Observing	Reflecting	Facilitating	Evaluating
Rocks - the solid mineral material forming part of the surface of the earth and other similar planets, exposed on the surface or underlying the soil. Soil - the upper layer of earth in which plants grow, a black or dark brown material typically consisting of a mixture of organic remains, clay, and rock particles. Fossils - the remains or impression of a prehistoric plant or animal embedded in rock and preserved in petrified form. A Latin word meaning dug up. Grains - Rocks are solid at room temperature. They are made of grains that fit together. Each grain in a piece of rock is made from a mineral, which is a chemical compound. The grains in a rock can have different colours, shapes and sizes. Crystals - a special kind of solid material where the molecules fit together in a repeating pattern. This pattern causes the material to form all sorts of unique shapes. From Greek <i>krustallos meaning</i> ‘ice or a mineral resembling it. Absorbent – how well a substance can soak up water. From the Latin verb Absorbere – which means swallow up.			Know how to compare and group rocks based on their appearance and simple physical properties like colour, texture, and hardness. Know that soils are made up of a combination of weathered rocks, minerals, organic matter (such as decomposed plants and animals), water, and air. Know that soil plays a crucial role in ecosystems by supporting various organisms and providing a habitat for insects, worms, and other small creatures. Know that Earth's surface is constantly changing due to geological processes like weathering, erosion, and deposition.			Understand that fossils are formed when the remains of plants and animals are trapped and preserved within layers of rock over long periods of time. Understand that soils are essential for plant growth and provide nutrients, support, and water for plants. Understand the importance of soil conservation and how human activities can affect soil quality, such as erosion through deforestation or improper land management.			Be able to describe, in simple terms, the process of fossil formation and how fossils provide evidence of past life on Earth. Be able to identify and describe different types of soil, such as sandy, loamy, or clayey, based on their texture and composition. Be able to recognize the connection between rocks, soil, and the formation of landforms like mountains, valleys, and canyons. Working Scientifically 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 Use straightforward scientific evidence to answer questions or to support their findings.		

Subject: Science – Human skeletons and muscles			Year Group: 3			Term: Autumn		
								
Vocabulary			Knowledge What children will know			Understanding What children will understand		
Define the word and include etymology if useful			Learning	Teaching	Assessment	Learning	Teaching	Assessment
			Remembering	Telling	Testing	Practising	Coaching	Observing
- Skeleton – the framework of bones supporting the body. - Bone – a hard structure forming part of the skeleton. - Skull – the bones forming the head and protecting the brain. - Ribcage – the group of bones protecting the heart and lungs. - Spine – the column of bones running down the back. - Joint – a place where bones meet. - Muscle – tissue that contracts to produce movement. - Contract – to shorten or tighten. - Relax – to become less tense. - Support – to hold something up or keep it stable. - Protect – to keep something safe from harm. - Movement – a change in position.			- Humans have a skeleton made up of many bones. - The skeleton supports and protects the body. - The skull protects the brain. - The ribcage protects the heart and lungs. - Muscles are attached to bones. - Muscles work by contracting and relaxing. - Joints allow parts of the skeleton to move.			- The skeleton and muscles work together to produce movement. - Different bones have different structures and functions. - Muscles cannot push; they contract to pull bones and create movement. - The structure of the skeleton is related to its functions of support, protection and movement.		
						- Identify major bones and joints. - Locate major muscle groups. - Construct and interpret labelled diagrams. - Observe and investigate movement. - Use models to demonstrate how muscles and bones work together. - Record and explain observations.		

Lidlington Primary School - Curriculum Plan



Subject: Science – Forces and magnets			Year Group: 3			Term: Spring		
								
Vocabulary			Knowledge What children will know			Understanding What children will understand		
Define the word and include etymology if useful			Learning	Teaching	Assessment	Learning	Teaching	Assessment
			Remembering	Telling	Testing	Practising	Coaching	Observing
Attract - to pull to or draw toward oneself or itself Repel - to push away or force back. Magnet A magnet is an object that is made of materials that create a magnetic field. Magnets have at least one north pole and one south pole Force - A force is a push or pull that causes a change in speed, direction or shape. All forces come in pairs, no force exists by itself.			Know that different surfaces affect how objects move, and some surfaces provide more or less friction. Know that some everyday materials are attracted to magnets, while others are not, and be able to group materials based on their magnetic properties. Know that magnets can be used to pick up certain objects or hold things together. Know that magnets can be used in compasses to help determine directions.			Understand that certain forces require physical contact between two objects, while magnetic forces can act from a distance. Understand that magnets have a magnetic field that influences objects within its range. Understand that magnets have two poles, a north pole and a south pole, which have opposite magnetic properties.		
						Be able to observe and recognise how magnets attract or repel each other and can attract specific materials. Be able to predict whether two magnets will attract or repel each other based on the orientation of their poles. Be able to explain simple applications of magnets in everyday life, such as using them for holding notes on a refrigerator. Working Scientifically Set up simple practical enquiries, comparative and fair tests 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		

Lidlington Primary School – Curriculum Plan



Subject: Science – Healthy eating and nutrition			Year Group: 3			Term: Spring		
								
Vocabulary			Knowledge What children will know			Understanding What children will understand		
Define the word and include etymology if useful			Learning	Teaching	Assessment	Learning	Teaching	Assessment
			Remembering	Telling	Testing	Practising	Coaching	Observing
- Nutrition – the process of obtaining and using nutrients from food. - Nutrient – a substance in food needed by the body. - Carbohydrate – a nutrient that provides the body with energy. - Protein – a nutrient needed for growth and repair. - Fat – a nutrient that provides energy and helps with body functions. - Vitamin – a nutrient needed in small amounts to keep the body healthy. - Mineral – a naturally occurring nutrient needed by the body. - Fibre – part of plant foods that helps the digestive system. - Balanced diet – eating a variety of foods in appropriate amounts to provide needed nutrients. - Energy – the capacity to make things happen or do work.			- Humans need food to survive and grow. - Different foods contain different nutrients. - Carbohydrates provide energy. - Protein is important for growth and repair. - Vitamins and minerals help maintain health. - Fibre supports a healthy digestive system. - Water is essential for the body. - A balanced diet contains a variety of foods in appropriate proportions.			- No single food provides everything the body needs. - Different nutrients have different functions. - Health is influenced by the balance and variety of food consumed. - The body's needs change according to factors such as activity and growth.		
						- Identify nutrients in different foods. - Group foods according to their nutritional content. - Interpret simple nutritional information. - Compare different diets. - Plan a balanced meal. - Explain reasons for food choices using scientific vocabulary.		

Lidlington Primary School - Curriculum Plan



Subject: Science – Plants			Year Group: 3			Term: Summer					
											
Vocabulary			Knowledge What children will know			Understanding What children will understand			Skills What children will be able to do		
Define the word and include etymology if useful			Learning	Teaching	Assessment	Learning	Teaching	Assessment	Learning	Teaching	Assessment
			Remembering	Telling	Testing	Practising	Coaching	Observing	Reflecting	Facilitating	Evaluating
Seed - the unit of reproduction of a flowering plant, capable of developing into another such plant. Bulb - a rounded underground storage organ present in some plants, notably those of the lily family, consisting of a short stem surrounded by fleshy scale leaves or leaf bases, lying dormant over winter. Plant - a living organism typified by growing in a permanent site, that absorbs water and inorganic matter through its roots and uses photosynthesis through its leaves. Temperature - the degree or intensity of heat Environment - the surroundings or conditions in which a person, plant or animal lives or operates. Nutrition - the process of providing or obtaining the food necessary for health and growth.			Know the functions of different parts of flowering plants, including roots, stem/trunk, leaves, and flowers. Know the life cycle of flowering plants, including the role of flowers in pollination, seed formation, and seed dispersal. Know the different ways in which seeds are dispersed, such as wind, water, animals, or self-dispersal. Know the significance of flowers in attracting pollinators and producing seeds for the survival and reproduction of plants.			Understand that plants require air, light, water, nutrients from the soil, and space to grow and thrive, and these requirements can vary among different plant species. Understand the process of pollination, including the transfer of pollen from the male parts of a flower to the female parts. Understand the importance of pollinators, such as bees and butterflies, in the reproduction of flowering plants.			Be able to investigate and describe how water is transported within plants, from the roots to other parts of the plant. Be able to explain how seeds are formed and describe the conditions necessary for successful seed germination. Be able to identify and describe the different types of pollinators and their interactions with flowers. Working Scientifically Ask relevant questions and using different types of scientific enquiries to answer them Identify differences, similarities or changes related to simple scientific ideas and processes Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers		

Subject: Science – Light and shadows			Year Group: 3			Term: Summer		
								
Vocabulary			Knowledge What children will know			Understanding What children will understand		
Define the word and include etymology if useful			Learning	Teaching	Assessment	Learning	Teaching	Assessment
			Remembering	Telling	Testing	Practising	Coaching	Observing
Reflect - When light from an object is reflected by a surface, it changes direction. It bounces off the surface at the same angle as it hits it. From the Latin reflex – which means bent back. Light source - Light comes from different sources called light sources; our main natural light source is the sun. Other sources include fire, stars and man-made light sources such as lightbulbs and torches Shadows a dark shape that is formed when an object blocks a source of light. Opaque - not able to be seen through; not transparent. Transparent - allowing light to pass through so that objects behind can be distinctly seen from Latin <i>transparere</i>, from <i>trans</i>- ‘through’ + <i>parere</i> ‘appear’. Translucent - allowing light, but not detailed shapes, to pass through; semitransparent. Latin <i>translucent</i>- ‘shining through’, from the verb <i>translucere</i>, from <i>trans</i>- ‘through’ + <i>lucere</i> ‘to shine’.			Know that light is essential for vision and that darkness is the absence of light. Know that sunlight can be harmful to their eyes and understand ways to protect their eyes from the sun. Know that shadows can appear larger or smaller depending on the distance between the light source, object, and surface. Know that light plays a crucial role in our daily lives, enabling us to see, providing warmth, and helping us perceive colours and shapes			Understand that light can bounce off surfaces, which is known as reflection. Understand that shadows are created when an opaque object blocks the light from a light source. Understand that the shape of a shadow corresponds to the shape of the object blocking the light. Understand that light travels in straight lines and can be blocked by opaque objects but can pass through transparent objects.		
						Skills What children will be able to do Find patterns in the way that the size of shadows changes and the ways the shadows change as the light source moves or the distance between the light source and the object changes. Working Scientifically 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 Use straightforward scientific evidence to answer questions or to support their findings. Be able to recognise and describe patterns in how the size of shadows changes based on the position and distance of the light source and object. Be able to identify different sources of light in their environment, such as the sun, lamps, or flashlights.		

Subject: Science – Human digestive system			Year Group: 4			Term: Autumn		
								
Vocabulary			Knowledge What children will know			Understanding What children will understand		
Define the word and include etymology if useful			Learning	Teaching	Assessment	Learning	Teaching	Assessment
			Remembering	Telling	Testing	Practising	Coaching	Observing
Vocabulary - Digest – to break food down into substances the body can absorb. - Digestion – the process of breaking food down. - Digestive system – the organs involved in digestion. - Mouth – where food enters the digestive system and is mechanically broken down. - Oesophagus – the tube carrying food from the mouth to the stomach. - Stomach – an organ that churns food and mixes it with digestive juices. - Small intestine – where nutrients are absorbed into the bloodstream. - Large intestine – where water is absorbed and waste is formed. - Rectum – where faeces are stored before leaving the body. - Anus – the opening through which faeces leave the body. - Absorb – to take in a substance. - Nutrient – a substance needed by the body.			- The main organs of the digestive system. - The pathway food takes through the body. - Digestion begins in the mouth. - The stomach helps break food down. - Nutrients are absorbed mainly in the small intestine. - Water is absorbed in the large intestine. - Undigested material leaves the body as faeces.			- Digestion changes food into smaller substances that the body can use. - Different organs have different roles in digestion. - The digestive system is a connected system in which each part contributes to processing food. - Digestion allows nutrients from food to become available to the body.		
						- Identify and label digestive organs. - Sequence the journey of food through the digestive system. - Use a model to represent digestion. - Explain the function of different organs. - Construct an annotated diagram.		

Subject: Science – States of Matter			Year Group: 4			Term: Autumn					
											
Vocabulary			Knowledge What children will know			Understanding What children will understand			Skills What children will be able to do		
Define the word and include etymology if useful			Learning	Teaching	Assessment	Learning	Teaching	Assessment	Learning	Teaching	Assessment
			Remembering	Telling	Testing	Practising	Coaching	Observing	Reflecting	Facilitating	Evaluating
Solid - A solid can hold its shape (for example, water in solid form is ice). Liquid - A liquid like water forms a pool: it flows or runs but it can't be stretched or squeezed. Gas - A gas can flow, expand and be squeezed; if it is in an unsealed container it escapes (water in gas form is steam). Temperature – degree or intensity of heat. Evaporation - the process of turning from liquid into vapour. Condensation - the conversion of a vapour or gas to a liquid. Melt – when a solid is heated and changes into a liquid.			Know that materials can be classified into three states: solids, liquids, and gases. Know that some materials can change from one state to another when they are heated or cooled, and this is called a change of state. Know that the temperature at which a material changes state can be measured or researched using degrees Celsius (°C). Know that evaporation is the process by which a liquid turns into a gas, usually due to heat. Know that condensation is the process by which a gas turns into a liquid, usually due to cooling. Know that the water cycle involves the continuous movement of water through evaporation, condensation, and precipitation. Know that evaporation occurs more quickly at higher temperatures. Know that the rate of evaporation can be influenced by factors such as temperature and surface area. Know that water can evaporate from various sources, including oceans, lakes, and even wet surfaces.			Understanding the water cycle helps us appreciate how water is constantly recycled in nature. Understand that materials can be classified into three states: solids, liquids, and gases, based on their properties and behaviours. Understand that heating or cooling can cause some materials to change their state, and this change is called a change of state. Understand that evaporation and condensation are important processes in the water cycle, where water changes between its liquid and gaseous states.			Be able to compare and group different materials based on their states, distinguishing between solids, liquids, and gases. Be able to measure or research the temperature at which materials undergo a change of state using degrees Celsius (°C). Be able to explain the role of evaporation and condensation in the water cycle, and understand the relationship between temperature and the rate of evaporation. Working Scientifically Set up simple practical enquiries, comparative and fair tests 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		

Subject: Science – Electricity			Year Group: 4			Term: Spring					
											
Vocabulary			Knowledge What children will know			Understanding What children will understand			Skills What children will be able to do		
Define the word and include etymology if useful			Learning	Teaching	Assessment	Learning	Teaching	Assessment	Learning	Teaching	Assessment
			Remembering	Telling	Testing	Practising	Coaching	Observing	Reflecting	Facilitating	Evaluating
Components – objects that can be added to an electrical circuit. E.g. bulb, battery, switch, buzzer, motor. Cells - An electrical cell is a device used to generate electricity, or to make chemical reactions by applying electricity. Battery - A battery is one or more cells, connected. Brightness - the quality or state of giving out or reflecting light. Volume – quantity or power of sound; degree of loudness. Switch - a device for making and breaking the connection in an electric circuit. Buzzer - an electrical device that makes a buzzing noise and is used for signalling. Bulb – an object that emits light. Motor - a machine that supplies motive power for a vehicle or for another device with moving parts.			Know that appliances like lamps, televisions, and refrigerators use electricity to work. Know that an electrical circuit consists of components such as cells/batteries, wires, bulbs, switches, and buzzers. Know that in a simple series circuit, the lamp will only light up if it is part of a complete loop that includes a battery and a closed switch. Know that a switch in an electrical circuit can open or close the circuit, controlling the flow of electricity. Know that certain materials, like metals, are good conductors that allow electricity to flow easily through them. Know that insulators are materials that do not allow electricity to flow easily and are used to prevent electrical accidents.			Understand the basic components of a simple series electrical circuit, including cells/batteries, wires, bulbs, switches, and buzzers. Understand the function of a switch in an electrical circuit and how it controls the flow of electricity. Understand the concept of a complete circuit and its role in allowing electricity to flow.			Be able to construct a simple series circuit using the given components. Be able to identify and name the parts of a simple series circuit, including cells, wires, bulbs, switches, and buzzers. Recognise common conductors, such as metals, and understand that they allow electricity to flow easily. Working Scientifically 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 Use straightforward scientific evidence to answer questions or to support their findings.		

Lidlington Primary School - Curriculum Plan



Subject: Science – Sound			Year Group: 4			Term: Spring					
											
Vocabulary			Knowledge What children will know			Understanding What children will understand			Skills What children will be able to do		
Define the word and include etymology if useful			Learning	Teaching	Assessment	Learning	Teaching	Assessment	Learning	Teaching	Assessment
			Remembering	Telling	Testing	Practising	Coaching	Observing	Reflecting	Facilitating	Evaluating
Vibration - Vibration or oscillation means quick-moving back and forth (or up and down) about a point of equilibrium. Pitch - The pitch of a sound is how high or low the sound is. (A squeaky sound is a high-pitched sound; A deep sound is a low-pitched sound) Volume - quantity or power of sound; the degree of loudness			Know that sounds are created by objects that vibrate. Know that sound waves travel through a medium, such as air or water. Know that the pitch of a sound is determined by the frequency of vibrations. Know that the volume of a sound is determined by the amplitude of vibrations. Know that sounds become quieter as you move further away from the source.			Understand that sound travels through a medium, such as air or water, to reach our ears. Understand that sounds become fainter as the distance from the sound source increases. Understand the concept of sound traveling through a medium, such as air, and how it reaches our ears. Understand that the volume (loudness) of a sound is related to the strength of the vibrations that created it.			Be able to identify patterns between the pitch (high or low) of a sound and the characteristics of the object that produced it. Be able to recognize patterns between the volume of a sound and the characteristics of the vibrating object. Be able to distinguish between sounds of different pitch and volume. Be able to explain how the characteristics of an object affect the properties of the sound it produces. Working Scientifically 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 Use straightforward scientific evidence to answer questions or to support their findings.		

Subject: Science – Living things and their habitats			Year Group: 4			Term: Summer					
											
Vocabulary			Knowledge What children will know			Understanding What children will understand			Skills What children will be able to do		
Define the word and include etymology if useful			Learning	Teaching	Assessment	Learning	Teaching	Assessment	Learning	Teaching	Assessment
			Remembering	Telling	Testing	Practising	Coaching	Observing	Reflecting	Facilitating	Evaluating
Plant – a living organism typified by growing in a permanent site, that absorbs water and inorganic matter through its roots and uses photosynthesis through its leaves. Animal – living organism that feeds on organic matter, typically having specialised sense organs and nervous system and being able to respond rapidly to stimuli. Invertebrate – animals that don't have a backbone. Vertebrate – an animal of a large group distinguished by the possession of a backbone or spinal column. Classify - arrange (a group of people or things) in classes or categories according to shared qualities or characteristics. <i>From the Latin classis – which means division.</i> Characteristics a feature or quality belonging typically to a person, place, or thing and serving to identify them. Mammal – a warm-blooded vertebrate animal that has hair or fur typically gives birth to live young and includes females that secrete milk for			Know that living things can be classified and grouped in various ways based on their similarities and differences. Know that environments are not static and can undergo changes, which can sometimes pose risks or dangers to living things. Know that different living things have specific adaptations that help them survive in their respective environments. Know that habitats provide the necessary resources and conditions for the survival of living things. Know that certain human activities can have both positive and negative impacts on the environment and living things. Know that different living things have specific life cycles and reproductive processes. Know that living things have basic needs such as food, water, shelter, and air for survival. Know that plants and animals interact with each other and with their environment in various ways. Know that diversity exists in the natural world, with a wide variety of living things found in different ecosystems.			Understand the concept of classification and how it helps in organizing and studying living things. Understand the significance of adaptation and how it enables living things to survive in different environments. Understand the interdependence of living things and their reliance on their environment. Understand the importance of maintaining a balanced and healthy ecosystem for the well-being of living things.			Be able to use classification keys effectively to identify and group different living things. Be able to describe and explain the basic needs of living things for their survival. Be able to recognise and identify potential dangers or changes in the environment that can affect living things. Be able to demonstrate care and responsibility towards the environment and living things, making choices that promote their well-being. Working Scientifically Ask relevant questions and using different types of scientific enquiries to answer them Identify differences, similarities or changes related to simple scientific ideas and processes Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers		

Lidlington Primary School – Curriculum Plan



Subject: Science – Food chains			Year Group: 4			Term: Summer			
									
Vocabulary	Knowledge What children will know			Understanding What children will understand			Skills What children will be able to do		
Define the word and include etymology if useful	Learning	Teaching	Assessment	Learning	Teaching	Assessment	Learning	Teaching	Assessment
	Remembering	Telling	Testing	Practising	Coaching	Observing	Reflecting	Facilitating	Evaluating
Vocabulary - Food chain – a sequence showing how energy and food pass between organisms. - Producer – an organism, usually a plant, that makes its own food. - Consumer – an organism that obtains energy by eating other organisms. - Predator – an animal that hunts and eats another animal. - Prey – an animal that is hunted and eaten by another animal. - Herbivore – an animal that eats plants. - Carnivore – an animal that eats other animals. - Omnivore – an animal that eats both plants and animals. - Energy – the capacity to make things happen or do work. - Organism – a living thing.	- Plants are producers. - Animals are consumers. - Food chains begin with a producer. - Arrows in food chains show the direction of energy transfer. - Animals can be herbivores, carnivores or omnivores. - Organisms can occupy different positions in food chains. - A change to one organism can affect other organisms in the chain.			- Organisms in a habitat are interdependent. - Energy passes from one organism to another through feeding. - Removing or reducing one organism can affect the wider food chain. - Predator and prey populations can influence one another.			- Construct food chains. - Identify producers and consumers. - Interpret food chains. - Predict possible effects of changes to a food chain. - Use evidence from observations or information sources to explain relationships.		

Lidlington Primary School - Curriculum Plan



Subject: Science – Properties, changes and separating materials			Year Group: 5			Term: Autumn			
									
Vocabulary	Knowledge What children will know			Understanding What children will understand		Skills What children will be able to do			
Define the word and include etymology if useful	Learning	Teaching	Assessment	Learning	Teaching	Assessment	Learning	Teaching	Assessment
	Remembering	Telling	Testing	Practising	Coaching	Observing	Reflecting	Facilitating	Evaluating
- Material – a substance from which something is made. - Property – a characteristic of a material. - Soluble – able to dissolve in a liquid. - Insoluble – unable to dissolve in a liquid. - Dissolve – to become incorporated into a liquid to form a solution. - Solution – a mixture formed when a substance dissolves. - Reversible change – a change that can be undone. - Irreversible change – a change that cannot easily be undone. - Evaporation – the change from liquid to gas at the surface of a liquid. - Condensation – the change from gas to liquid. - Filtering – separating an insoluble solid from a liquid. - Sieving – separating solids according to particle size.	- Materials have different properties. - Some substances dissolve in liquids and others do not. - Mixtures can be separated using different methods. - Filtering can separate an insoluble solid from a liquid. - Evaporation can recover a dissolved solid. - Some changes are reversible. - Some changes produce new substances and are irreversible. - Heating and cooling can cause changes of state.			- The properties of a material determine how it behaves and how it can be used. - Different separation methods work because materials have different physical properties. - Dissolving does not mean that a substance has disappeared. - Some changes alter the form of a material without creating a new substance, while others create new substances.		- Identify and compare material properties. - Select an appropriate method for separating a mixture. - Plan and carry out comparative and fair tests. - Measure and record results accurately. - Use evidence to determine whether a change is reversible. - Explain why a particular separation method works.			

Lidlington Primary School - Curriculum Plan



Subject: Science – Forces and simple machines			Year Group: 5			Term: Autumn		
								
Vocabulary			Knowledge What children will know			Understanding What children will understand		
Define the word and include etymology if useful			Learning	Teaching	Assessment	Learning	Teaching	Assessment
			Remembering	Telling	Testing	Practising	Coaching	Observing
- Force – a push or pull that can change an object's movement or shape. - Gravity – the force that pulls objects towards the Earth. - Friction – a force that opposes motion when surfaces rub together. - Air resistance – a force that acts against objects moving through air. - Water resistance – a force that opposes movement through water. - Upthrust – an upward force exerted by a fluid on an object. - Lever – a rigid bar that turns around a pivot. - Pivot – the point around which a lever turns. - Pulley – a wheel with a groove used with a rope or belt to help move loads. - Gear – a toothed wheel that transfers movement and force. - Mechanism – a system of parts that works together to produce movement.			- Forces can change the movement, direction or shape of objects. - Gravity pulls objects towards Earth. - Friction acts between surfaces. - Air resistance affects objects moving through air. - Water resistance affects objects moving through water. - Levers, pulleys and gears are mechanisms that can make tasks easier or change movement.			- Forces can act on objects without the objects being in contact. - Friction and resistance can slow moving objects. - The design of an object affects how forces act on it. - Simple machines can change the size, direction or effect of a force.		
						- Investigate the effects of different forces. - Measure forces using appropriate equipment. - Plan fair tests involving forces. - Investigate how levers, pulleys and gears work. - Identify variables and control them in an investigation. - Use data to draw conclusions.		

Lidlington Primary School - Curriculum Plan



Subject: Science – Earth, Sun and Moon			Year Group: 5			Term: Spring			
									
Vocabulary	Knowledge What children will know			Understanding What children will understand			Skills What children will be able to do		
Define the word and include etymology if useful	Learning Remembering	Teaching Telling	Assessment Testing	Learning Practising	Teaching Coaching	Assessment Observing	Learning Reflecting	Teaching Facilitating	Assessment Evaluating
- Solar system – the Sun and the objects that orbit it. - Star – a huge ball of extremely hot gas that produces its own light. - Planet – a large body that orbits a star and does not produce its own light. - Orbit – the curved path of an object around another object in space. - Rotate – to spin around an axis. - Axis – an imaginary line around which an object rotates. - Moon – a natural satellite that orbits a planet. - Satellite – an object that orbits a planet or other body. - Day – the period in which a place experiences daylight. - Night – the period in which a place experiences darkness.	- The Sun is a star. - The Earth is a planet. - The Earth, Moon and other planets are part of the Solar System. - The Moon orbits Earth. - Earth rotates on its axis. - Earth takes approximately 24 hours to rotate once. - Earth orbits the Sun. - Earth takes approximately one year to orbit the Sun. - The Moon does not produce its own light.			- Day and night are caused by Earth's rotation. - The apparent movement of the Sun across the sky is caused by Earth's rotation. - The Earth is one of several planets orbiting the Sun. - The relative positions and movements of Earth, the Sun and Moon explain observable patterns.			- Create and interpret models of the Solar System. - Use models to demonstrate rotation and orbit. - Explain day and night. - Record observations of shadows and apparent movement. - Interpret diagrams and models of the Earth, Sun and Moon.		

Lidlington Primary School - Curriculum Plan



Subject: Science – Reproduction and life cycle - plants			Year Group: 5			Term: Spring			
									
Vocabulary	Knowledge What children will know			Understanding What children will understand			Skills What children will be able to do		
Define the word and include etymology if useful	Learning Remembering	Teaching Telling	Assessment Testing	Learning Practising	Teaching Coaching	Assessment Observing	Learning Reflecting	Teaching Facilitating	Assessment Evaluating
- Life cycle – the series of stages a living thing passes through during its life. - Reproduction – the process by which living things produce offspring. - Pollination – the transfer of pollen from an anther to a stigma. - Pollen – fine powder produced by the male part of a flower. - Stamen – the male reproductive part of a flower. - Anther – the part of the stamen that produces pollen. - Stigma – the part of a flower that receives pollen. - Fertilisation – the joining of male and female reproductive cells. - Seed – a structure containing a young plant and food store. - Seed dispersal – the movement of seeds away from the parent plant. - Germination – the beginning of growth from a seed.	- Plants reproduce to produce new plants. - Flowers are involved in sexual reproduction in flowering plants. - Pollen is transferred during pollination. - Fertilisation occurs after pollination. - Seeds develop following fertilisation. - Seeds can be dispersed in different ways. - Plants have different life cycles.			- Plant structures are adapted to their roles in reproduction. - Seed dispersal reduces competition between the new plant and its parent. - Different plants have different reproductive strategies. - Reproduction creates new plants of the same species.			- Identify reproductive structures in flowers. - Observe and dissect flowers safely. - Describe and sequence a plant life cycle. - Investigate seed dispersal. - Compare different plant reproductive strategies. - Record observations systematically.		

Lidlington Primary School – Curriculum Plan



Subject: Science – Reproduction and life cycles - animals			Year Group: 5			Term: Summer			
									
Vocabulary	Knowledge What children will know			Understanding What children will understand			Skills What children will be able to do		
Define the word and include etymology if useful	Learning Remembering	Teaching Telling	Assessment Testing	Learning Practising	Teaching Coaching	Assessment Observing	Learning Reflecting	Teaching Facilitating	Assessment Evaluating
- Reproduction – producing offspring. - Offspring – young produced by living things. - Life cycle – the stages an organism passes through during its life. - Gestation – the period during which a mammal's young develops inside the mother. - Mammal – an animal whose young are usually fed milk. - Amphibian – an animal that typically changes form as it develops from young to adult. - Metamorphosis – a major change in body form during development. - Egg – a reproductive structure containing a developing embryo. - Embryo – a developing organism at an early stage. - Adult – a fully developed organism capable of reproduction.	- Different animals have different life cycles. - Mammals give birth to live young. - Birds and reptiles generally lay eggs. - Amphibians undergo significant changes during development. - Insects such as butterflies undergo metamorphosis. - Offspring develop and change as they grow.			- Animals of different groups reproduce and develop in different ways. - Life cycles describe predictable stages of development. - Young animals are often different in appearance from adults. - Reproduction ensures the continuation of a species.			- Sequence stages of animal life cycles. - Compare life cycles of different animals. - Identify patterns and differences between species. - Construct and interpret life-cycle diagrams. - Research animal life cycles using reliable sources.		

Lidlington Primary School - Curriculum Plan



Subject: Science – Human development and growth			Year Group: 5			Term: Summer					
											
Vocabulary			Knowledge What children will know			Understanding What children will understand			Skills What children will be able to do		
Define the word and include etymology if useful			Learning	Teaching	Assessment	Learning	Teaching	Assessment	Learning	Teaching	Assessment
			Remembering	Telling	Testing	Practising	Coaching	Observing	Reflecting	Facilitating	Evaluating
- Growth – an increase in physical size and development. - Development – changes in abilities, structures and characteristics over time. - Infant – a very young child. - Childhood – the period of life between infancy and adolescence. - Adolescence – the period of development between childhood and adulthood. - Puberty – the stage when a child's body develops towards sexual maturity. - Adulthood – the stage of life when a person is physically mature. - Life expectancy – the average length of time a person is expected to live. - Reproduction – producing offspring.			- Humans pass through stages of development. - Babies depend on adults for their needs. - Humans grow and change throughout childhood. - Puberty involves physical and emotional changes. - Humans become sexually mature during puberty. - Adulthood follows adolescence. - Different people grow and develop at different rates.			- Human development is a continuous process. - Physical changes during puberty are part of becoming sexually mature. - Development involves changes in physical characteristics, abilities and independence. - There is considerable normal variation in the timing and rate of human development.			- Sequence stages of human development. - Compare characteristics at different stages. - Interpret information about human growth. - Identify patterns in growth data. - Communicate scientific information sensitively and accurately.		

Lidlington Primary School - Curriculum Plan



Subject: Science – Human circulatory system			Year Group: 6			Term: Autumn					
											
Vocabulary			Knowledge What children will know			Understanding What children will understand			Skills What children will be able to do		
Define the word and include etymology if useful			Learning	Teaching	Assessment	Learning	Teaching	Assessment	Learning	Teaching	Assessment
			Remembering	Telling	Testing	Practising	Coaching	Observing	Reflecting	Facilitating	Evaluating
- Circulatory system – the system that transports blood around the body. - Heart – a muscular organ that pumps blood around the body. - Blood – a fluid that transports substances around the body. - Blood vessel – a tube through which blood travels. - Artery – a blood vessel carrying blood away from the heart. - Vein – a blood vessel carrying blood towards the heart. - Capillary – a tiny blood vessel connecting arteries and veins. - Oxygen – a gas needed by cells to release energy from food. - Nutrient – a substance needed by the body for growth and health. - Pulse – the rhythmic expansion of arteries caused by the heartbeat. - Respiration – the process in cells that releases energy from food.			- The heart is a muscular pump. - Blood travels through blood vessels. - Arteries carry blood away from the heart. - Veins carry blood towards the heart. - Blood transports oxygen and nutrients. - Blood also carries waste products away from cells. - Exercise affects heart rate and breathing rate.			- The circulatory system transports substances around the body. - The heart, blood and blood vessels work together as a transport system. - The body needs oxygen and nutrients to release energy and maintain itself. - Physical activity increases the body's demand for oxygen and therefore affects heart and breathing rates.			- Measure pulse and heart rate. - Investigate how exercise affects heart rate. - Record and present data. - Interpret graphs and tables. - Explain the relationship between exercise, heart rate and oxygen demand.		

Lidlington Primary School - Curriculum Plan



Subject: Science – Changing circuits			Year Group: 6			Term: Autumn		
								
Vocabulary			Knowledge What children will know			Understanding What children will understand		
Define the word and include etymology if useful			Learning	Teaching	Assessment	Learning	Teaching	Assessment
			Remembering	Telling	Testing	Practising	Coaching	Observing
- Circuit – a complete path through which electrical current can flow. - Current – the flow of electric charge. - Voltage – the electrical potential difference that provides the push for current. - Cell – a source of electrical energy. - Battery – two or more cells connected together. - Component – an individual part of an electrical circuit. - Conductor – a material that allows electricity to pass through it easily. - Insulator – a material that does not allow electricity to pass through easily. - Series circuit – a circuit with components arranged in a single loop. - Resistance – opposition to the flow of electric current. - Brightness – the amount of light produced by a lamp.			- A circuit needs to be complete for current to flow. - Cells provide electrical energy. - Different components have different functions. - Changing the number of cells can affect component behaviour. - Increasing the number of cells can make bulbs brighter and motors faster. - Circuit symbols represent electrical components. - Switches control whether a circuit is complete.			- Electrical circuits form a connected system. - Changing one part of a circuit can affect the behaviour of other components. - The amount of electrical energy supplied affects how components operate. - Circuit diagrams provide a standard way of representing circuits.		
						- Construct circuits safely. - Draw circuit diagrams using recognised symbols. - Predict what will happen when a circuit is changed. - Systematically investigate variables in circuits. - Record observations and measurements. - Explain results using scientific vocabulary.		

Lidlington Primary School – Curriculum Plan



Subject: Science – Keeping healthy			Year Group: 6			Term: Spring		
								
Vocabulary			Knowledge What children will know			Understanding What children will understand		
Define the word and include etymology if useful			Learning	Teaching	Assessment	Learning	Teaching	Assessment
			Remembering	Telling	Testing	Practising	Coaching	Observing
- Health – the condition of a person's physical and mental wellbeing. - Balanced diet – a diet providing the nutrients the body needs in appropriate amounts. - Nutrition – obtaining and using nutrients from food. - Exercise – physical activity that improves or maintains fitness and health. - Sedentary – involving little physical activity. - Nutrient – a substance needed by the body. - Carbohydrate – a nutrient that provides energy. - Protein – a nutrient needed for growth and repair. - Fibre – plant material that supports healthy digestion. - Hydration – having enough water in the body. - Lifestyle – the way a person lives, including their habits and behaviours.			- Humans need a balanced diet. - Regular physical activity supports health. - Sleep is important for physical and mental wellbeing. - Water is essential for the body. - Different nutrients perform different functions. - Excessive consumption of some foods can negatively affect health. - Lifestyle choices can influence health.			- Health is influenced by several interconnected factors. - Healthy living involves balance rather than one single behaviour. - Food, exercise, sleep, hydration and lifestyle can affect physical and mental wellbeing. - Different people have different nutritional and activity needs.		
						- Interpret nutritional information. - Compare different lifestyle choices. - Plan a balanced diet or healthy lifestyle. - Analyse simple health-related data. - Explain how lifestyle choices can affect health. - Evaluate health claims using evidence.		

Lidlington Primary School - Curriculum Plan



Subject: Science – Grouping and classifying living things		Year Group: 6			Term: Spring				
									
Vocabulary	Knowledge What children will know			Understanding What children will understand		Skills What children will be able to do			
Define the word and include etymology if useful	Learning	Teaching	Assessment	Learning	Teaching	Assessment	Learning	Teaching	Assessment
	Remembering	Telling	Testing	Practising	Coaching	Observing	Reflecting	Facilitating	Evaluating
- Classification – organising living things into groups according to shared characteristics. - Classify – to place something into a group based on its characteristics. - Characteristic – a feature or quality of an organism. - Vertebrate – an animal with a backbone. - Invertebrate – an animal without a backbone. - Micro-organism – a living thing too small to be seen without a microscope. - Species – a group of organisms that share characteristics and can reproduce to produce fertile offspring. - Taxonomy – the science of naming and classifying living things. - Classification key – a tool that identifies organisms using a series of choices. - Organism – a living thing.	- Living things can be classified according to observable characteristics. - Living things can be divided into broad groups such as animals, plants and micro-organisms. - Animals can be divided into vertebrates and invertebrates. - Vertebrates include mammals, birds, fish, reptiles and amphibians. - Classification keys can be used to identify organisms. - Carl Linnaeus developed an influential system of classification.			- Classification helps scientists organise and identify the enormous diversity of life. - Organisms are grouped according to shared characteristics. - More detailed classification creates increasingly specific groups. - Classification systems can change as scientists gain new evidence.		- Classify organisms using observable characteristics. - Construct classification keys. - Use keys to identify unfamiliar organisms. - Justify why organisms have been placed into particular groups. - Compare characteristics across groups.			

Lidlington Primary School - Curriculum Plan



Subject: Science – Evolution and inheritance			Year Group: 6			Term: Summer		
								
Vocabulary			Knowledge What children will know			Understanding What children will understand		
Define the word and include etymology if useful			Learning	Teaching	Assessment	Learning	Teaching	Assessment
			Remembering	Telling	Testing	Practising	Coaching	Observing
- Evolution – the gradual change in living things over generations. - Inheritance – the passing of characteristics from parents to offspring. - Variation – differences between individuals of the same species. - Characteristic – a feature of an organism. - Adaptation – a characteristic that helps an organism survive and reproduce in its environment. - Offspring – the young produced by an organism. - Generation – a group of organisms born and living around the same time. - Natural selection – the process by which organisms with advantageous inherited characteristics are more likely to survive and reproduce. - Fossil – preserved evidence of a past living organism. - Environment – the surroundings and conditions in which an organism lives.			- Offspring inherit characteristics from their parents. - Individuals of the same species show variation. - Some variation is inherited. - Environmental conditions can affect which characteristics are advantageous. - Fossils provide evidence about organisms that lived in the past. - Charles Darwin and Alfred Russel Wallace developed ideas about evolution by natural selection.			- Evolution occurs over many generations. - Variation means individuals within a species are not identical. - Inherited characteristics that provide an advantage can become more common over generations. - The fossil record provides evidence that living things have changed over time. - Evolution explains the diversity of living organisms.		
						- Identify inherited and environmental variation. - Compare characteristics within a species. - Interpret fossil evidence. - Use evidence to explain how organisms may have changed over time. - Construct explanations of natural selection. - Evaluate evidence supporting evolutionary explanations.		

Lidlington Primary School - Curriculum Plan



Subject: Science – Light and how it travels			Year Group: 6			Term: Summer			
									
Vocabulary	Knowledge What children will know			Understanding What children will understand		Skills What children will be able to do			
Define the word and include etymology if useful	Learning Remembering	Teaching Telling	Assessment Testing	Learning Practising	Teaching Coaching	Assessment Observing	Learning Reflecting	Teaching Facilitating	Assessment Evaluating
- Light source – something that produces its own light. - Reflect – to bounce light from a surface. - Reflection – the bouncing of light from a surface. - Ray – a straight line representing the path of light. - Beam – a group of light rays travelling together. - Shadow – a dark area formed when an opaque object blocks light. - Transparent – allowing most light to pass through. - Translucent – allowing some light to pass through but scattering it. - Opaque – blocking light from passing through. - Absorb – to take in light or another form of energy. - Visible – able to be seen.	- Light travels in straight lines. - We see objects because light enters our eyes. - Some objects produce their own light; others reflect light from a source. - Opaque objects block light and create shadows. - Transparent materials allow light through. - Translucent materials allow some light through. - Shadows form when an opaque object blocks light.			- Light must reach our eyes for us to see. - The straight-line movement of light explains how shadows form. - Changing the position of a light source or object changes the size and position of a shadow. - Materials interact with light in different ways because of their properties.		- Investigate how shadows change. - Use ray diagrams to represent light. - Predict shadow size and position. - Compare materials according to how they transmit light. - Design and carry out a fair test. - Use evidence to explain observations.			