



	Essential concepts and skills to be taught	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2	Progression of knowledge and skills <u>across</u> year groups
R	Knowledge: Skills: Key people: Vocabulary: (could include links to knowledge organisers) Key people: Tim Peak Mae Jaimeson Caroline Hershel King Charles III Vocabulary: All about me Local Community Transport Transport Safe Tuk Tuk Gondolas Felucca Dog Sled Space Astronaut Astronomer Growing and changing Crops Fruit Vegetables	All about me 1. Location of our school 2. The local area – what do I like? What would I change? 3. My route to school – what do I pass? Do I take transport? 4. Who features in our lives? 5. People who help us in the community Assessment question: Where is my school?	Transport: past and present 1. Transport in our local area 2. Transport for longer journeys 3. Road safety – how we travel safely 4. How do people from different cultures travel? Assessment question: How can I travel to different places?	Space 1. Astronauts and Astronomers 2. Where do rockets take off from? 3. Famous astronauts and astronomers – Tim Peak, Mae Jaimeson and Caroline Hershel Assessment question: What is it like in space?	Growing and changes 1. Farming in our local area – what crops are grown where we live? 2. Identify fruit and vegetables that can be grown locally or within Berkshire 3. Identify where fruit and vegetables we eat come from. 4. Try different fruits and vegetables from different areas of the world. Assessment question: What food can I find locally?	Kings and Queens 1. The Monarchy 2. Buckingham Palace and Windsor Castle 3. Countries around the world that have King Charles as their monarch 4. The Union Flag of The United Kingdom 5. Flags from countries that children have connections to Assessment question: Where does the King rule?	Stories from the past 1. Locate the places that features in the key stories chosen for this topic. Assessment question: How does my local community and places described in books differ?	YR Science linked to EYFS framework: Space Children will know that astronauts are people who travel into space. Children will know that in the past, astronauts went to the moon. Children will recognise Neil Armstrong as an astronaut that walked on the surface of the moon. Children will know that now scientists can send robots into space. Children will know that the Mars Rover is exploring Mars and taking picture of its surface



	Kings and Queens The Monarchy Buckingham Palace Windsor Castle						
	Stories from the past						Growing and changing Children can describe some of the phases of the human life cycle. Children know they have changed since they were born and can describe some of the things they can do now that they couldn't before. Children will think about things they'd like to do in the future; travel, talents, interests, jobs, etc. Children will have the opportunity to think about a wide range of careers they may aspire to do in the future



Science Curriculum Overview

1	Knowledge: Skills: Key people:	The Human Body	Animals and their Needs	Seasons and Weather	Taking Care of the Earth	Plants	Materials and Magnets	Progression from YR
	Naming parts of the body.	Living things and naming animals.	The four seasons,	The Earth’s natural resources	What do plants need to grow?	Classification of materials	Compare and group together a variety of	
	The five senses and associated body parts.	Grouping animals	Recording the weather.	The conservation of natural resources, logging and recycling.	What are the parts and functions of plants?	Magnets	everyday materials on the basis of their	
	Understanding sensory impairment	Describing animals.	Understanding daily weather and weather forecasts over time.	How pollution is caused and can be prevented?	How do plants produce food, flowers and seeds?	Magnetic attraction.	simple physical properties (Yr1 NC)	
	Vocabulary:	How plants and animals obtain food	Weather symbols.		What are deciduous and evergreen trees?	Vocabulary	Identify and describe the basic structure of a variety of common	
	Iris	How to care for animal babies?	Weather around the world.	Vocabulary		Absorbant	flowering plants, including trees (Yr1 NC)	
	Knees	How to care for pets?	Floods and hurricanes.	Air	Vocabulary	Attract	Observe and describe weather associated with the seasons and how day length varies (NC Yr1)	
	Legs	Vocabulary	Vocabulary	Care	Absorb	Bendy	Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) (NC Yr1)	
	Microscope	Amphibian	Wing	Chemicals	Anchor	Bright		
	Mouth	Animal	Cirrus	Conservation	Annual	Conclusion		
Arms	Beak	Clouds	Construction	Autumn	Dark			
Ears	Bird	cumulus (pile)	extinction	Deforestation	Dull			
Eyes	Care	Danger	Earth	Environment	Force			
Face	Carnivore	Dark	Erosion	Flooding	Glass			
Feet	Cat	Data	Flood	Fumes	Hard			
Head	Claw	Droplet	Fluffy	Land	Investigate			
Hair	Describe	Extreme	Forecast	Logging	Invisible			
Contact lenses	Diet	Float	Future	Manufactured	Magnet			
Bitter	Dog	Flood	Graph	Resources	Materials			
Blindness	Domestic	Fluffy	Hurricane	Materials	Metal			
Contact Lenses	Features	Forecast	Information	Natural	Opaque			
Deaf	Fins	Future	Measure	Natural resources	Plan			
Ear drum	Fish			New	Plastic			
Elbows	Food			Non-renewable resource	Predict			
Eye lid	Fur				Properties			
Finger	Gills				Purpose			
Glasses	Grouping				Record			
Hands					Repel			
Hearing					Rock			
					Rough			
					Shiny			
					Smooth			
					Soft			
					Stiff			



	Hearing Aid Human Neck Nose Pupil Reflection Resilience Salt Scent Senses Sensory impairment Sight Skin Skull Smell Sound Sour Sweet Taste Taste buds Teeth Telescope Toes Tongue Touch Vibration Vision Wave (sound) Assessment All children must know: To identify, name, label and draw the basic parts of the human body.	Guinea Pig Herbivore Hoof Horn Invertebrates Legs Mammal Medicine Omnivore Paw Rabbit Reptile Responsibility Shelter Snout Sorting Tail Tame Teeth Tentacles Water Whiskers Assessment All children must know: I can name and describe a variety of animals using scientific vocabulary I know that animals can be grouped by their features e.g. whether they are amphibians or mammals	Meteorologist Predict Prepare Rain gauge Assessment question: All children must know: We have four seasons; spring, summer, autumn and winter. Our weather is warmer during the spring and summer and cooler during the autumn and winter. To know the tools used to gather data about the weather There are different types of cloud and that clouds indicate the weather we are about to experience To recognise weather symbols used in weather forecasting and explain the importance of	Old Pollution Purpose Recycle Recycle Renewable Resource Rubbish Waste Water World Assessment All children must know: To know that there are natural and man-made resources. Some resources are renewable and some are non-renewable. To know that logging means cutting down trees. To identify some of the ways in which the environment can be polluted and how we can reduce pollution.	Rely Reproduce Root Roots Seed Spring Stem Survive Variety Warmth Water Assessment All children must know: To name and describe the purpose of parts of a plant, and what they need in order to grow. To understand that plants spread their seeds to reproduce. To understand that some trees are evergreen, and some are deciduous. To understand that plants are grown for food and to recognise which parts of plants we eat.	Suited Thick Thin Transparent Waterproof Wood Assessment All children must know: Materials have different properties. Magnetism is a force we cannot see. Materials, including magnets, have different uses around the home and in everyday life.	Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense (NC Yr1)
--	---	---	--	---	--	---	---



		To identify and label parts of our body relating to our senses. I know my senses help me to understand the world around me.	I know that animals can be grouped by what they eat e.g. herbivores, omnivores and carnivores I know that there are wild and domestic animals. Domestic animals are animals that we keep as pets and wild animals live freely without regular contact from humans	accurate forecasts Meteorologists can study the weather and predict how it will change. Some weather can be dangerous, for example, flooding and hurricane.				
2	Knowledge: Skills: Key people:	Human Body The skeletal and muscular system Exercise Digestive system and healthy eating. Circulatory system Preventing illness Germs and disease. Vocabulary	Living Things in their Environments Habitats: rainforest, desert, meadow and underground habitats. Food chains, oceans and undersea habitats, deep ocean habitats and habitat destruction and damage. Vocabulary	Electricity Circuits conductive and non-conductive Materials safety rules. Vocabulary Appliance Battery Bulb Buzzer Caution Circuit Conduct Conductor	Plants Seeds and bulbs. How water and light keep plants healthy? How to keep plants healthy. Vocabulary Ash Tree Aspen Tree Bramble Bulb Comparative test Cow parsley Cress	Materials and matter Comparing materials. Changing materials. concepts of atoms, matter, solids, liquids, gases and measurements. Vocabulary Atoms Bonds Container Dull Engineer Flimsy	Astronomy Solar system Orbit and rotation Sun and moon Planets Stars Constellations. Vocabulary Astronaut Constellation Crescent Day	Progression from Y1 Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. Find out and describe how plants need water, light and a suitable



	Energy Exercise Food Healthy Heart Hip bone Joint Kneecap Large intestine Lungs Mouth Muscles Organs Oxygen Red blood cell Rest Rib Scientist Skeleton Skull Small intestine Soft Stomach Assessment question: Children must know that: Our bodies, including our muscles and bones, need exercise to stay healthy.	Adapt Adaptation Alive Animals Badger Breathe Burrow Cactus Camels Consumer Damp Dead Desert Eat Energy Food Food chain Fox Gobi Desert Habitat Inanimate Microhabitat Mole Move Producer Rainforest Reproduce Sahara Desert Survive Tunnel Underground Worm Assessment question: Children must know that: I can name and identify a number	current Danger Dangerous electric shock Electric shock frayed Electrical current Electricity Energy Flow Insulate Insulator Light bulb Mains Plastic Plug socket Rubber Safety Store Switch Wire Wood Assessment Children must know that: Electricity is energy that we can store or use to make things work. An electrical circuit is a wire loop that allows electricity to travel around it.	Crop Crops Daffodil Daisy Germinate Harvest Ivy Leaves Oak Tree Observe Onion Package Pests Plant Predict Record Root Seed Seedling Silver Birch Sprout Stem Sweet Chestnut Tree Transport Tulip Assessment Children must know that: To be able to observe and describe how seeds and bulbs grow into mature plants To find out and describe how	Hard Inventor Liquid Liquid Magnify Materials Matter Microscope Opaque Opaque Pour Properties Properties Purpose Scientist Shape Shiny Soft Solid Strong Transparent Assessment Children must know that: The materials used around us have different properties. Solids have a definite shape, we can change the shape of some solids by bending and squashing. Liquids flow freely.	Earth Jupiter Mars Mercury Mission Mon Moon Neptune New moon Night Orbit Orion Pattern Perseverance (Mission to Mars) Planet Plough Pluto (dwarf planet) Reflect Robot Rotate Rover Saturn Seasons Solar System Space Exploration Star The Great Bear Uranus Venus Waning Waxing Assessment Children must know that:	temperature to grow and stay healthy (Yr2 NC) Identify and name a variety of plants and animals in their habitats, including microhabitats (NC Yr2) Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. (Yr2 NC)
--	---	--	---	--	--	--	---



		Our digestive system takes nutrients from food to help us stay healthy. Keeping clean stops germs from spreading and keeps us healthy.	of plants and animals, and their habitats I understand that habitats provide for the basic needs of the plants and animals that live there I understand that animals and plants are well suited to their habitats		plants need water, light and a suitable temperature to stay healthy		To know about the planets in our solar system. To know that Earth travels around the sun. To know that the moon orbits the earth. To be able to describe and name some constellations. To know that scientists explore space.	
3	Knowledge: Skills: Key people:	The Human Body The digestive system Teeth Senses Healthy diet Nutrition Vitamins Minerals Skeletons Muscles for support	Cycles in Nature Seasonal cycles Plants Animal migration Life cycles of a plant and a frog. Vocabulary Autumn Axis Cycle Decay Deciduous Dormant Earth Evergreen Frogspawn	Light How Light Travels? Shadows Transparent Opaque objects Reflection Mirrors: plane, concave, convex, How shadows change throughout the day? Vocabulary	Plants Functions of plants: roots, stem/trunk, leaves and flowers. Life and growth, variety of plants Transportation, seed formation and dispersal. Vocabulary Absorb Acorns Anther Botanist Cactus	Rocks Sorting rocks How rocks are formed? Fossils Soil Vocabulary Buried Chalky Clay Crumbly Decay Earth's crust	Forces and Magnets Forces Friction Magnets Magnetic poles, Magnetic fields, Law of magnetic attraction, compasses. Vocabulary Attract Contact Force Force Friction	Progression from Y2 Notice that some forces need contact between 2 objects, but magnetic forces can act at a distance. (Y3 NC) Recognise that soils are made from rocks and organic matter (Yr3 NC) Explore the part that flowers play



	Protection and movement	Hibernate Mature Metamorphosis Migrate Northern Hemisphere Nutrients Orbit Plant Pollen Reproduce Seasonal Cycle Seasons Seed Spring Summer Sun Tadpoles Tilt Winter	Absorb Concave Conclude Convex Dark Dark Investigate Light Light Source Measure Observe Opaque Plane Predict Record Reflect Shadow Source Transmit Transparent	Dandelion Dispersal Features Flower Function Germination Hydrangea Leaves Nutrients Plant Pollen Pollination Pollinator Poppies Reproduce Root Seed Stem Stigma Sunflower Sycamore Thrive Transport Wilt	Fossil Geologist Geology Hard Igneous Impermeable Lava Layers Magma Metamorphosis Minerals Observation Organic Matter Palaeontologist Permeable Pressure Rock	Gravity Heat Increase Iron Lodestone Magnet Magnetic field Magnetic poles Magnetism Metal Pole Pull Push Reduce Repel South Strong Weak	in the life cycle of flowering plants, including pollination, seed formation and seed dispersal (Yr 3 NC)
	Vocabulary Anus Bicep Canine Cerebellum Cerebral Cerebrum Contract Control cortex Cranium Digest Digestive juices endoskeleton Femur Glands Heart Incisors Independent Intestine Involuntary Joint Large intestine Ligaments joint Medulla Molars Nerves Nutrition Oesophagus Pelvis Premolars Process Rectum Relax Saliva Salivary glands Scapula	Assessment question: Children must know that: I know that our natural environment changes as the seasons change. I understand how plants can change through the seasons. I know that some animals migrate and can give examples	Assessment question: Children must know that: We need light in order to see things and that dark is the absence of light.	Assessment question: Children must know that: Flowering plants all have roots, a stem or trunk, leaves and flowers but not all flowering plants look the same.	Assessment question: Children must know that: Rocks are classified by how they are formed: sedimentary, igneous and metamorphic. Rocks can also be classified by their properties such as whether they are hard or whether they are permeable Fossils are formed over a long period	Assessment question: Children must know that: Gravity is a force that causes things to fall to the ground when dropped. Friction is a force between two objects that slows down the moving object. Magnets have two poles and like poles repel whereas unlike poles attract.	Recognise that shadows are formed when the light from a light source is blocked by an opaque object (Yr3 NC) Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal (NC Yr3) Identify that humans and some other animals have skeletons and muscles for support, protection and movement. (Yr3 NC)



	Skull Small intestine Spinal column ribs Spinal Cord Stirrup Stomach Taste buds Teeth Assessment question: Children must know that: Our body contains different systems that enable us to grow, move and respond to the world around us. Our digestive system breaks down food into energy and nutrients. The brain sends messages around our bodies through our nervous system. The skeletal system support and protects our bodies. The muscular system	I can recognise the different stages in the life cycle of a frog.	Light is essential for life on Earth. Shadows are formed when a light is blocked by an opaque object. Light is reflected from some surfaces, such as mirrors. Sometimes light from the sun can be dangerous and we can protect ourselves from this.	Flowering plants create seeds. Flowering plants can only produce seeds if pollen is transferred. Conditions, including moisture and warmth, must be right for a seed to germinate and grow into a new plant	of time from the remains of plants and animals that have died. Soil is a mixture of small pieces of rock with dead organic matter.	Magnets have different strengths.	
--	---	--	---	---	--	--	--



		enables us to move our bodies						
4	Knowledge: Skills: Key people: Lewis Latimer He invented a lightbulb that could stay alight for a long time	The Human Body The muscular system The skeletal system The nervous system The digestive system, teeth. Vocabulary Appendix Calcium Canine Cell Digestion Enamel Food groups Incisors Involuntary Iron Large intestine Magnesium Minerals Molars Nutrition Oesophagus	Classification of Plants and Animals Cold-blooded or warmblooded Vertebrates or invertebrates Characteristics of animal classes Classification of plants. Vocabulary Abdomen algae Amphibian Arachnids Backbone Bird Classification Cold-blooded Fern Fish Flower Fungi Gills Hatch Insects Internal	Ecology Habitats Interdependence of organisms and their environment Producers, consumers and decomposers Food webs Producers, predators and prey Human threats to the environment. Vocabulary Abdomen algae Amphibian Arachnids Backbone Bird Bird Classification Cold-blooded Fern Fish Flower Flowering Fungi Gills	Sound How sound is created? How sound travels? Sound waves Speed of sound Pitch and intensity The human voice The human ear. Vocabulary Break the sound barrier Ear drum Larynx Pitch Sound waves Supersonic Vibration Volume Assessment question: Children must know:	States of Matter The Water Cycle Change of state Evaporation Condensation Precipitation Humidity Groundwater Vocabulary Cirrus Collection Condensation Condensation Cumulonimbus Cumulus Cycle Cycle Droplet Evaporation Evaporation Gas Gas Gravity Groundwater Hail Liquid	Electricity Electric current Circuits Switches Conductors and Insulators. Vocabulary Battery Bulb Caution Circuit Conductor Danger Dangerous Electric shock frayed Electrical current Electricity Filament Flow Insulate Insulator Light bulb Plastic Plug socket Rubber Safety Switch Wire	Progression from Y3 recognise some common conductors and insulators, and associate metals with being good conductors (Yr4 NC) identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature (Yr4 NC) recognise that sounds get fainter as the distance from the sound source increases (Yr4 NC) construct and interpret a variety of food chains, identifying



	Omnivore Organs Peristalsis Premolar Salivary glands Small intestine Stomach System Tissue Urethra Vitamin Zinc Assessment question: What children must know: All living things are made up of cells, too small to be seen without a microscope. Cells make up tissues. Tissues make up organs. Organs work in systems. Scientist use a powerful magnifying To know that they need a balanced meal to be healthy and get all the nutrients they need. Understanding	Invertebrates Living thing Lungs Mammal Molluscs Moss non-flowering Photosynthesis Reproduce Reptile Scale Seed Sorting Thorax Vertebrates Warm-blooded Assessment question: What children must know: Scientists classify animals into two groups: vertebrates and invertebrates. Vertebrates have a backbone or spinal column, whereas an invertebrates does not. Animals can be classified by whether they are cold-blooded or warmblooded.	Hatch Insects Internal Invertebrates Living thing Lungs Mammal Molluscs Moss non-flowering Photosynthesis Reproduce Reptile Scale Seed Skeleton Sorting Thorax Vertebrates Warm-blooded Assessment question: Children must know that: Know that living things depend on each other within a habitat Know the 7 life processes which living things have in common: Movement, Reproduction, Sensitivity, Growth, Respiration, Excretion, Nutrition	Sound is caused by a back and forth movement called vibration. Sound waves move out from a vibrating object in all directions. In warm air, sound travels at about 770 miles per hour (340 metres per second). Sound becomes quieter further from the source. Loud sounds have larger vibrations. Quiet sounds have smaller vibrations. High pitched sounds have faster vibrations. Low pitched sounds have slower vibrations. The larynx is in the throat and the muscles vibrate the vocal cords.	Nimbostratus Precipitation Rain Reservoir Sleet Snow Solid Steam Stratus Water source Water vapour Water vapour Assessment question: Children must know: When water evaporates, it becomes water vapour. Condensation is when a gas turns back into liquid (water vapour to water). Not all water evaporates and that some of this will soak into the ground and become groundwater or join bodies of water. High in the sky the air is cooler and turns vapour back	Wood Assessment question: Children must know: Electricity is an energy that we can store or use to make things work. An electrical circuit is a wire loop that allows electricity to travel around it. Materials that allow electricity to pass through them are conductors.	producers, predators and prey (Yr 4 NC) Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment (NC Yr4)
--	---	--	--	---	--	--	---



		the parts of the food pyramid. To know the essential vitamins and minerals needed in our body.		Know the three groups of living things which the cycle of nature depends on: producers, consumers and decomposers Recognise that environments can change and that this can sometimes pose dangers to living things		into water droplets. There is always water vapour in the air and the temperature changes its appearance. Precipitation returns water to the surface of the earth within the water cycle.		
5	Knowledge: Skills: Key people:	The Human Body Human growth stages adolescence and puberty The human reproductive system The endocrine system. Vocabulary Adolescence Ageing Gestation Gestation period Growth Growth stage Hormone Lifespan	Materials Properties Solubility Conductivity Flexibility, Fair testing, solubility, Separation of mixtures Reversible changes Dissolving, mixing, change of state. Vocabulary	Living Things Life cycles of a mammal amphibian, an insect and a bird Life process of reproduction in some plants and animals. Photosynthesis, vascular and non-vascular plants. Vocabulary Amphibian Anther Cycle Death	Forces Gravity Friction Air resistance Water resistance Pulleys Gears and levers Vocabulary Assessment question: Children must know: Unsupported objects fall towards the Earth because of the	Astronomy The Big Bang theory Gravity The Universe Solar System The moon Our galactic neighbourhood. Vocabulary Andromeda Astronomer Big Bang Black Hole Buzz Aldrin Ceres Cluster Crescent	Meteorology Weather and climate, Atmosphere Ozone layer Air movement Wind direction Cold and warm fronts Thunder and lightning. Vocabulary Assessment Children must know	Progression from Y4 Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky (Yr5 NC) Recognize that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect (Yr5 NC) Describe the life process of reproduction in



	Metabolism Puberty Puberty Weaned Assessment Children need to know that: Humans undergo many changes as they develop from conception to old age. Puberty is the physical process by which the human changes from child to adult and can reproduce. As humans age, they begin to slow and sometimes problems like heart disease or arthritis occur.	Conductor control Dissolved Dull Evaporation Fair Filter Flexible Hard Insoluble Insulator Irreversible Magnet Material Mixture Opaque Properties Reversible Saturated Separate Sieve Soluble Solution Solvent Temperature Thermal Thermometer Transparent Assessment Children need to know: Properties can be grouped on the basis of their properties. When a solute dissolves in a solvent to form a solution, the	Embryo Fertilisation Gamete Germinate Growth Hibernate Incubate Interconnection Larva (larvae) Life cycle Mammal Mature Metamorphosis Naturalist Ovary Pistil Pollen Pollination Primate Reproduction Seed Sepals Stamens Assessment Children need to know: There are many differences between the life cycles of mammals, amphibians, insects and birds Plants grow and reproduce in a continuing life cycle	force of gravity acting between the Earth and the falling object Air resistance, water resistance and friction, act between moving surfaces Simple machines, including levers, pulleys and gears, allow a smaller force to have a greater effect	Force Galaxy Gibbous Gravity Jovian Jupiter Laniakea Light year Mars Mass Matter Mercury Milky Way Moon Neil Armstrong Neptune Orbit Pluto (dwarf planet) Proxima Centauri Satellite Saturn Solar System Space Star Supercluster Terrestrial The Milky Way Theorise Universe Uranus Venus Waning Waxing Working Scientifically: Recording data and results of increasing complexity.	Know the atmosphere protects Earth and enables life Know human actions can help or harm the atmosphere. Know that four air masses affect the weather we experience in the UK. Know a weather front is a boundary where warm and cold air meet. Know that thunder and lightning is caused by electrical charge moving through the air.	some plants and animals (Yr5 NC) Demonstrate that dissolving, mixing and changes of state are reversible changes (NC Yr5) Describe the changes as humans develop to old age (NC Yr5)
--	---	--	--	---	---	--	---



			process is reversible.			Using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. Identifying scientific evidence that has been used to support or refute ideas or arguments		
6	Knowledge: Skills: Key people: Charles Darwin and Alfred Wallace (Evolution) Carl Linnaeus (Classification)	The Human Body The circulatory system The heart The blood Vessels The blood Blood pressure Heart rate Changes to humans as we get older Vocabulary Affect Aorta Arteries Atria	Classification of Living Things Classifying organisms Plant and animal cells Fungi, protists, monera, Taxonomy, Latin names, Vertebrates. Vocabulary Amphibian Animal Aorta Bacteria Bird Capillaries Cell	Electricity Brightness Buzzers Voltage Switches Simple circuits and symbols Vocabulary Battery Battery Cell Circuit Components Conductor Conductor Electric shock Electrical current Electrical current Electricity Energy	Light How light travels Our eyes Light sources Shadows Periscopes Vocabulary Light Mirror Prism Reflection Shade Speed of light Assessment question: Children should know:	Reproduction Asexual reproduction Sexual reproduction in non-flowering and flowering plants Pollination Fertilisation Reproduction in animals. Growth stages. Vocabulary Anther Asexual Asexual reproduction Birth	Evolution Fossils Adaptation Characteristics passing through generations Mary Anning Alfred Wallace Charles Darwin Darwin's sketches of finches. Vocabulary Adapt Adaptation Anthropology Biome Dependent variable	Progression from Y5 Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. (Yr6 NC) Describe the life process of reproduction in some plants and animals (Yr5 NC) Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that



	Atrium (atria) Blood vessels Conclusion control Dependent Fair test Independent Predictions Pulmonary circuit Result Systematic circuit Variables Veins Assessment question: What children must know: The heart and blood vessels make up the circulatory system. The heart has four chambers. It pumps blood depleted of oxygen to the lungs, and pumps oxygenated blood around the body. Lifestyle choices can impact on our circulatory system including	cell membrane cell wall Chlorophyll Chloroplast Circulatory system Class Classification Cold-blooded Cytoplasm Family Fish Fungi Genus (genera) Kingdom Mammal Mitochondria Nucleus Order Organism Phylum (phyla) Plant Protist Protist Pulse rate Reptile Species Taxon Taxonomy Transport Vacuole Valves Veins Ventricles Vertebrates Warm-blooded Assessment What children must know:	Insulator Kill-Switch Light bulb Problems Purpose Solvent Switch Switch Voltage Volts Wire Assessment question: What children must know: Electricity can flow from one place to another. This is called electrical current. We can control electricity by causing it to flow in a circuit. Making a gap in a circuit prevents electricity from flowing.	Light travels in straight lines Shadows are always the same shape as the objects that made them. The size of shadows can change, but the outline shape is always the same as the original object. Light can reflect from a surface and change the duration of travel.	Cell Division Cloning Development Dispersal Embryo Endocarp Exocarp Fertilisation Foetus Germinate Gestation Life cycle Mesocarp Ovary Pistil Pollen Regeneration Reproduction Reproduction Seed Sepals Sexual reproduction Sperm Stamens Symbiotic Zygote Assessment What children must know: Asexual reproduction does not require male and female gametes and doesn't alter genetic information. The organism	DNA Evolution Extinct Fossil Habitat Independent variable Inheritance Marsupial Mutation Natural Selection Naturalist Offspring Organism Palaeontologist Placental mammals Prehistoric Sedimentary Species Theory Variation Variation Wallace Line Assessment What children must know: To know fossils are physical evidence of life from long ago To know offspring are usually similar to, but not identical to their parents	cast them (Yr6 NC) Use recognised symbols when representing a simple circuit in a diagram (Yr6 NC) Give reasons for classifying plants and animals based on specific characteristics (NC Yr6) recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function (Yr6 NC)
--	--	---	---	---	--	--	---



		the health of our heart.	Recognising and controlling variables where necessary recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations			simply copies itself through cell division or by producing spores or budding. Sexual reproduction requires male and female cells to combine to form a fertilised egg. • Most large plants reproduce by combining a male and female gamete (pollen and ovule) to make a fertilised egg that grows into an embryo which is protected inside a seed. Most animals have male cells (sperm produced in testes) or female cells (eggs produced by ovaries). When a foetus can live outside the mother, it is born.	To know living things can adapt to suit their environment To know who Charles Darwin was and what natural selection is To know who Alfred Wallace was and understand his contribution to the theory of evolution	
--	--	--------------------------	---	--	--	--	---	--

CST links in the curriculum are indicated in purple (sustainability/care for creation also in purple)

British Values/Democracy links are indicated in red

Cultural Capital link in blue