The Priory Church of England Primary School

Subject Overview: Science

Year R	**ELG: The Natural World** • Explore the natural world around them, making observations and drawing pictures of animals and plants. • Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class. • Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.					
	Chemistry: Melting and Freezing *freeing Supertato characters* **Biology: Body Parts** *familiar and less familiar (thigh, calf, elbow, etc.) - similarities (same body parts) and differences (different heights) between people* **Biology: Senses** *feely bags (touch), sound hunt - loud, quiet, high, low (hearing), guess the flavour crisp (smell & taste)*	**Physics: Seasonal Changes** *four seasons order; changes (plants, weather, day length)* **Chemistry: Natural Materials** *observing natural materials (bark, leaves, etc.)* **Physics: Shadows** *bigger, smaller - The Black Rabbit by Philippa Leathers*	**Biology: Plant Growth** *monitor the growth of plants growing in different locations* **Chemistry: Materials** *identify and describe materials, using this information for a purpose (Incy Wincy's roof)* **Biology: RSPB Big Schools Birdwatch** *observe and count*	**Biology: Minibeast Habitats** *Minibeast Hunt - using identification charts; identifying habitats* **Biology: Grouping Minibeasts** *legs, wings, similarities and differences*	**Biology: Categories of Animals** *grouping and classifying* **Biology: Life Cycles** *similarities and differences; different animal groups* **Biology: Food Products and Animals** *products from animals (food, wool)* **Biology: Animal Camouflage**	**Chemistry: Fossils** **Biology: Diet** *dinosaurs - herbivore, omnivore, carnivore* **Biology: Eggs vs. Live Births** **Physics: Floating and Sinking** *fruits that float / sink*

Year 1	**The Human Body** **Biology: Animals, Including Humans** 1: What parts do human bodies have? 2: Do the oldest children have the longest feet? 3: Which part of the body do you use to see? 4: Which part of the body do you use to hear? 5: Which part of the body do you use to taste? 6: Which part of the body do you use to touch? 7: Which part of the body do you use to smell?	**Materials** **Chemistry: Everyday Materials** 1: What are different materials like? 2: How is rock different? 3: What is an object and a material? 4: What is the difference between water and ice? 5: Which materials float and sink? 6: Which materials absorb water? 7: Which materials are transparent and opaque?	**Planting A** **Biology: Plants** 1: How do the things I plant change over time?	**Caring for the Planet** **Sustainability** 1: Why is it important to care for our planet? 2: How can we care for our planet?	**Plants** **Biology: Plants** 1: What are the parts of a plant? 2: What are the parts of a tree? 3: What are wild and garden plants? 4: What plants are there locally? 5: What are deciduous trees? 6: What are evergreen trees? 7: What trees are in my local area?	**Planting C** **Biology: Plants** 1-2: How do the things I plant change over time?
			Animals **Biology: Animals, Including Humans** 1: What is a mammal? 2: What is a bird? 3: What is a fish? 4: What is an amphibian? 5: What is a reptile? 6: Are all animals the same? 7: What is a carnivore? 8: What is a herbivore? 9: What is an omnivore?	**Seasonal Changes** **Physics: Seasonal Changes** 1-2: What is Spring like?		**Growing and Cooking** **Sustainability** 1: Where does my food come from? 2: What have I planted and grown this year?
	Seasonal Changes **Physics: Seasonal Changes** 1-2: What is Autumn like?	**Seasonal Changes** **Physics: Seasonal Changes** 1-2: What is Winter like?		**Planting B** **Biology: Plants** 1-2: How do the things I plant change over time?		**Seasonal Changes** **Physics: Seasonal Changes** 1-2: What is Summer like?
Year 2	**Animals Needs for Survival** **Biology: Animals, Including Humans** 1: What do mammals need to survive? 2: What do birds need to survive? 3: What do fish need to survive? 4: What do amphibians need to survive? 5: What do reptiles need to survive? 6: What do humans need to survive?	**Materials** **Chemistry: Everyday Materials and Their Uses** 1: What materials are used? 2: What is wood, paper and cardboard used for? 3: What is brick and rock used for? 4: What is glass and plastic used for? 5: What is metal used for? 6: What are fabrics used for? 7: Why are objects made from different materials? 8: How can the shape of objects be changed? 9-10: Which material would be the best for an umbrella?	**Plants (Light and Dark)** **Biology: Plants** 1: What is similar and different about plants? 2: What are the parts of a plant? 3: What do plants need to grow? 4-5: Do plants grow healthier in the light or dark?	**Living Things and Their Habitats** **Biology: Living Things and Their Habitats** 1: What is a habitat? 2: What lives in polar habitats? 3: What lives in desert habitats? 4: What lives in ocean habitats? 5: What lives in woodland habitats? 6: What is a microhabitat? 7: What food is available in habitats? 8: What is a food chain? 9: What is the difference between living, dead and never alive?	**Plants (Bulbs and Seeds)** **Biology: Plants** 1: What are bulbs and seeds? 2: What do plants need to grow? 3-4: How do bulbs and seeds change over time?	**Plants (Bulbs and Seeds)** **Biology: Plants** 1: How do bulbs and seeds change over time?
	Humans **Biology: Animals, Including Humans** 1: Why is exercise good for you? 2: What is a healthy diet? 3: Why is hygiene important? 4: Why is teeth care important?				**Growing Up** **Biology: Animals, Including Humans** 1: What is 'offspring'? 2: What is the life cycle of humans? 3: What is the life cycle of mammals? 4: What is the life cycle of amphibians? 5: What is the life cycle of a butterfly? 6: Are there patterns between the life cycles of different animals?	**Growing Up** **Biology: Animals, Including Humans** 1: What is the life cycle of a butterfly?
		Plastic **Sustainability** 1: How is plastic helpful and harmful? 2: How can we reduce our plastic waste in school?		**Plants (Light and Dark)** **Biology: Plants** 1: Do plants grow healthier in the light or dark?		**Wildlife** **Sustainability** 1: What does wildlife do for us? 2: What can we do for wildlife?

Year 3	**Skeletons** **Biology: Animals, Including Humans** 1: What bones are in the human body? 2: What are the functions of the skeleton? 3: How can animals be sorted and grouped based on their skeletons? 4: What are spines and exoskeletons? 5: Are all skeletons the same?	**Nutrition and Diet** **Biology: Animals, Including Humans** 1: What food groups are there? 2: What do the food groups do? 3: What is a balanced diet? 4: How do different diets compare? 5: What do animal diets look like?	**Fossils** **Chemistry: Rocks** 1: What is a fossil? 2: How are fossils formed?	**Light** **Physics: Light** 1: What is a light source? 2: Is the Sun a natural or artificial light source? 3: How do humans see? 4: What is a shadow? 5: What do 'opaque', 'transparent' and 'translucent' mean? 6-8: How do lights and shadows interact?	**Plants A** **Biology: Plants** 1: What are the parts of a plant? 2: What are the parts of a plant? 3-4: How do plants grow? 5: What is the function of the stem? 6: What is a seed? 7: What are the reproductive parts of plants? 8: What is pollination? 9: What is seed dispersal? 10: What is the life cycle of a plant?	**Forces** **Physics: Forces** 1: What is a force? 2: What is friction? 3-4: How does friction affect objects?
		Food Waste **Sustainability** 1: What is food waste? 2: How can we reduce our food waste?	**Soils** **Chemistry: Rocks** 1: What is soil? 2: Why is soil important? 3-5: How do soils absorb water?			**Magnets** **Physics: Forces** 1: What do magnets do? 2: What materials are magnetic? 3: Are all metals magnetic? 4: What are the poles of a magnet?
	Movement **Biology: Animals, Including Humans** 1: Why do humans have joints? 2: How does the human body move?	**Rocks** **Chemistry: Rocks** 1: What is a rock? 2: What types of rock are there? 3: How can rocks be identified and grouped based on their properties? 4: What rocks are in the local area?				**Plants B** **Biology: Plants** 1: How do plants grow?
						Biodiversity **Sustainability** 1: What is biodiversity? 2: How can we increase biodiversity in our local area?
Year 4	**Group and Classify Living Things** **Biology: Living Things and Their Habitats** 1: How can animals be grouped? 2: What are vertebrates and invertebrates? 3: What is a classification key? 4: How can plants be grouped? 5: How can classification keys be used?	**States of Matter** **Chemistry: States of Matter** 1: What are the properties of solids, liquids and gases? 2: What materials are more difficult to categorise as solids, liquids or gases? 3: How can materials change state? 4: How can we use equipment? 5-6: How does the temperature of the water affect the time it takes for ice to melt? 7: What is the water cycle? 8-10: What is evaporation?	**Sound** **Physics: Sound** 1: How do we hear sounds? 2: How does the ear help us hear? 3: How is sound measured? 4: What is volume? 5: What is pitch? 6-8: How does the distance from the sound source affect the volume of the sound?	**Data Collection B** **Biology: Living Things and Their Habitats** 1-2: What living things do we have in our local area and how does this change over the year?	**Data Collection C** **Biology: Living Things and Their Habitats** 1-3: What living things do we have in our local area and how does this change over the year?	**The Digestive System** **Biology: Animals, Including Humans** 1: Why do animals have different types of teeth? 2: Why do humans have different types of teeth? 3: What are teeth made of? 4: How do teeth decay? 5: What is the digestive system? 6: How does digestion work? 7: How do teeth decay?
	Data Collection A **Biology: Living Things and Their Habitats** 1-2: What living things do we have in our local area and how does this change over the year?			**Electricity** **Physics: Electricity** 1: What is electricity? 2: What is a circuit? 3: What is the role of each part in a circuit? 4: What is a conductor/insulator? 5: What materials are conductors or insulators of electricity?	**Habitats** **Biology: Living Things and Their Habitats** 1: What is a habitat? 2: How can animals be classified? 3: How can plants be classified? 4: What impacts do humans have on different habitats?	**Food Chains** **Biology: Animals, Including Humans** 1: What is a food chain? 2: What do food chains show? 3: What types of living things are in a food chain? 4: How does human activity affect food chains and habitats?
				Energy **Sustainability** 1: What is energy? 2: How can we reduce our energy usage?	**Deforestation** **Sustainability** 1: What is deforestation? 2: What are the impacts of deforestation on habitats?	

Year 5	**Forces** **Physics: Forces** 1: What are forces and friction? 2: What is air resistance? 3-5: Does the size of a parachute affect the time it takes for it to fall to the ground? 6-7: What is water resistance? 8: What is gravity? 9: How do levers, pulleys and gears work to allow a smaller force to have a greater effect?	**Space** **Physics: Earth and Space** 1: What makes up the Solar System? 2: What planets are in the Solar System? 3: How can the Solar System be modelled? 4: How do the planets orbit the Sun? 5: How have ideas about the Solar System changed over time? 6: What is Earth's axis? 7: What causes day and night? 8: What does the Moon orbit? **Global Warming** **Sustainability** 1: What is global warming? 2: What are the impacts of global warming on living things?	**Properties of Materials** **Chemistry: Properties of Materials** 1: How can we compare materials based on their transparency, hardness and magnetism? 2: How can we compare materials based on their electrical conductivity? 3-5: How can we compare materials based on their thermal conductivity? 6: Why are materials used for particular purposes?	**Animals Including Humans** **Biology: Animals, Including Humans** 1: What are the stages of the human life cycle? 2: How do babies develop? 3: What changes take place during adolescence? 4: How do adults change as they age? 5: How long are the gestation periods of different mammals? 6: Is there a relationship between the gestation period of an animal and its lifespan? **Life Cycles** **Biology: Living Things and Their Habitats** 1: What is the life cycle of mammals? 2: What is the life cycle of amphibians? 3: What is the life cycle of insects? 4: What is the life cycle of birds?	**Reproduction A** **Biology: Living Things and Their Habitats** 1: What is sexual reproduction? 2: How do plants reproduce? 3: What is pollination? 4: What is asexual reproduction? 5-6: Which plant cutting produces the tallest plant?	**Reversible & Irreversible Changes** **Chemistry: Properties of Materials** 1: What does 'dissolving' mean? 2: How can mixtures be separated by filtering and sieving? 3: How can mixtures be separated by evaporation? 4: What is a reversible change? 5: What is an irreversible change? 6: What is meant by a 'chemical reaction'? **Reproduction B** **Biology: Living Things and Their Habitats** 1-2: Which plant cutting produces the tallest plant?
Year 6	**Living Things & Their Habitats** **Biology: Living Things and Their Habitats** 1: What do animals / plants need to survive? 2: How can animals, plants and microorganisms be identified, grouped and classified? 3: How can animals be classified? 4: How can plants be classified? 5: What is a microorganism? 6: How can organisms be classified? 7: How did Linnaeus create a classification system?	**Electricity** **Physics: Electricity** 1: What symbols represent different parts of circuits? 2: What happens to the current in an incomplete circuit? 3: How do different components impact a circuit? 4-6: How does the voltage in a circuit affect the loudness of a buzzer? **Renewable Energy** **Sustainability** 1: What is renewable energy? 2: How is renewable energy used?	**Light** **Physics: Light** 1: How do we see? 2: Why do we need light to see objects? 3: How are shadows formed? 4-6: How does the distance from a light source affect the size of the shadow? 7: What is refraction? 8: How are rainbows formed? **Light Pollution** **Sustainability** 1: What is light pollution? 2: How can we reduce light pollution?	**The Circulatory System** **Biology: Animals, Including Humans** 1: What is the circulatory system and how does it work? 2: What is the role of blood in the circulatory system? 3: What is the role of the heart in the circulatory system? 4: What do arteries and veins do? 5: What is oxygenated and deoxygenated blood? 6: What is the function of the heart within the circulatory system?	**Diet, Drugs and Lifestyle** **Biology: Animals, Including Humans** 1: What is a balanced diet? 2: What is a drug? 3: What do cigarettes contain? 4-6: How does the duration of exercise affect heart rate? **Variation** **Biology: Evolution and Inheritance** 1: How do organisms show variation? 2: What is inheritance?	**Adaptations** **Biology: Evolution and Inheritance** 1: How are animals adapted to their habitat? 2: How are plants adapted to their habitat? 3: What is 'evolution'? 4: Why was Charles Darwin's work important? 5: What is 'natural selection'? 6: What is evolution by natural selection? **Fossils** **Biology: Evolution and Inheritance** 1: How are fossils formed? 2: How do fossils show that organisms may have evolved over time? 3: How did Mary Anning's discoveries change our understanding of fossils and evolution?