**Science Curriculum Overview**

**2024-2025**

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|  | **AUTUMN** | **SPRING** | **SUMMER** |
| **1** | **Everyday materials**1. Everyday materials2. Properties of materials3. Uses of different materials4. Classify materials5. John McAdamEnquiry: Which is the best material for keeping Gingerbread Geoff dry? | **Animals including humans: parts of the body**1. Basic parts of the body2. Senses3. Eyes and Sight4. Ears and Hearing5. Touch, taste and smellEnquiry: Which foods can I identify by taste? Which smells can I match? | **Seasonal Changes: Autumn/Winter**1. Autumn characteristics2. Winter characteristics3. Record the weather4. Length of the dayEnquiry: How are plants and the weather different in different seasons? How is the length of days different? | **Plants**1. Bulbs and Seeds2. Parts of a plant3. Garden and Wild Plants4. Trees5. Fruit and Vegetable Plants6. Tayshan Hayden-SmithEnquiry: Are all plants the same? | **Seasonal Changes: Winter/Spring**1. Winter characteristics2. Spring characteristics3. Record the weather4. Length of the dayEnquiry: How are plants and the weather different in different seasons? How is the length of days different? | **Animals including humans**1. Fish2. Amphibians3. Reptiles4. Birds5. Mammals6. Carnivores, herbivores and omnivoresEnquiry: What is the same or different about two different animals? | **Seasonal Changes: Spring/Summer**1. Spring characteristics2. Summer characteristics3. Record the weather4. Length of the dayEnquiry: How are plants and the weather different in different seasons? How is the length of days different? |
| **2** | **Animals including humans: basic needs and keeping healthy**1. Basic body parts2. Exercise3. Balanced diets4. Hygiene – washing handsEnquiry: How does the amount of time spent washing your hands affect how many germs there are? | **Living things and their habitats**1. Alive, Dead, Never Living2. What is a habitat?3. Local habitats and minibeasts4. How do living things stay aliveEnquiry: Which is the most common minibeast in our local area? | **Plants: plants and growing**1. Parts of a plant2. Plant life cycles3. What do plants need to grow well?4. Comparing plantsEnquiry: What do seeds need to germinate? | **Uses of everyday materials**1. Properties of materials2. Suitability of materials3. John Dunlop4. Squashing, bending, twisting, stretchingEnquiry: Which material is the most suitable for a given task? | **Animals including humans: offspring**1. What are offspring?2. Different types of offspring3. Basic human timelineEnquiry: What is the life cycle of a frog / chick / caterpillar? | **Living things and their habitats**1. How do living things stay alive?2. Microhabitats3. World Habitats4. Simple food chainsEnquiry: What animals are present in three local micro-habitats? | **Plants: harvesting and cooking**1. Maria Clark Taylor2. Plants which can be eaten3. Harvesting4. How can plants be used in cooking?Enquiry: What did Maria Clark Taylor do? |
| **3** | **Animals including humans**1. The Skeletal System2. Bones of the body3. Skeletons of different animals4. The Muscular System5. Nutritional values of foods6. Daily diets Enquiry: Can people with bigger hands catch a ball better? | **Rocks**1. Sorting rocks2. How rocks are formed3. Permeability4. Fossils5. Soil6. Mary AnningEnquiry: Can different rocks be scratched with a nail, are porous, or can float in water? | **Plants: life cycles**1. Life cycle of a plant2. Pollination3. Different plant life cycles4. Locating where plants are within their life cycle in the local areaEnquiry: What does a plant look like in winter? | **Forces and magnets**1. Pushes and Pulls2. Using magnets in real-life3. Magnet Strength4. Magnetic PolesEnquiry: Which materials are magnetic? | **Plants: life cycles**1. Life cycle of a plant at different times of the year2. Life cycle of plants around the world3. Locating where plants are within their life cycle in the local areaEnquiry: What does a plant look like in winter? | **Light**1. Why do we need light?2. Light source3. Reflection4. Light safety5. What is a shadow?Enquiry: Does the distance from a light source affect the size of a shadow? | **Plants: parts and investigating growth**1. Parts of a plant2. How plants grow3. Differences between plants4. Transportation of waterEnquiry: How can removing the leaves or roots affect plant growth? | **Plants: life cycles**1. Mary Seacole2. Locating where plants are within their life cycle in the local area3. Comparing plant life cycles from across the yearEnquiry: What does a plant look like in winter? |
| **4** | **Electricity**1. Electrical machines2. Electrical components3. Electrical circuits4. Electrical safety5. Michael FaradayEnquiry: Which materials are electrical conductors or insulators? | **States of Matter**1. Comparing materials into solid, liquid and gas2. Molecular structure3. Exploration of heating different materials Enquiry: Do different types of chocolate melt at different temperatures?  | **Sound**1. How sound is made2. Sound and vibrations3. Relationship between sound and vibrations4. Sound and distance5. Structure of the ear and how we hear6. Alexander Graham BellEnquiry: Is there a link between the pitch of a sound and an object? | **Living things and their habitats**1. Introduction to classification keys2. Classes of vertebrates3. Classes of invertebrates4. Recognise living things in their local environment using classification keys5. How the environment changes and the dangers6. David AttenboroughEnquiry: How does a local habitat change at different points in the year? | **Animals including humans**1. Cells and nutrients2. Teeth3. The Digestive System4. Food chainsEnquiry: Which liquid affects teeth the most? |
| **5** | **Living things and their habitats: life cycles**1. Life cycle of a mammal2. Life cycle of an amphibian3. Life cycle of a bird4. Comparison of life cyclesEnquiry: Does the size of an animal impact its life span? | **Animals including humans**1. Alexander Fleming2. Human development3. Growth of babies4. Puberty5. Changes to Old AgeEnquiry: Do reaction times slow down as we age? | **Properties and changes of materials**1. Silver Spencer2. Properties of materials3. Solubility4. Separating mixtures5. Reversible and Irreversible ChangesEnquiry: How can you clean dirty water? | **Living things and their habitats: reproduction of plants**1. Life cycle of a plant2. Parts of a plant3. Asexual reproduction4. Sexual reproductionEnquiry: Do the conditions affect a plant’s growth? | **Forces**1. Forces including gravity2. Air resistance, water resistance and friction3. Gears, pulleys and leversEnquiry: How does surface area affect air resistance? | **Earth and Space**1. The Big Bang and the expanding universe2. Our Solar System3. The Moon4. Days, Months, Years5. Day and Night6. Professor Brian Cox and Stephen HawkingEnquiry:  |
| **6** | **Electricity**1. How electricity is generated2. Simple series circuits3. Parallel circuits4. Switches5. Electrical conductors and insulators6. History of electricityEnquiry: How can you make a bulb brighter or buzzer louder? | **Living things and their habitats**1. Classification keys2. Groups of living things3. Carl Linnaeus4. Cells: plant and animal5. Micro-organismsEnquiry: Do conditions affect how fast mould grows? | **Animals, including humans**1. Measuring pulses2. Circulatory System3. The Heart4. Healthy Lifestyles5. Barouh Berkovits6. Transportation of water and nutrients7. Sarah Gilbert & the Covid VaccineEnquiry: What affects our pulse? | **Light**1. How light travels2. Shadows and their shape3. How do we see4. Bob SwitzerEnquiry: How does a periscope work?  | **Evolution and Inheritance**1. Fossils and Evolution2. Inheritance3. Adaptation4. Charles Darwin5. Alfred WallaceEnquiry: Which bird beak is the most effective? |