**Science Curriculum Overview**

**2024-2025**

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|  | **AUTUMN** | | | | **SPRING** | | | | | **SUMMER** | | | | |
| **1** | **Everyday materials**  1. Everyday materials  2. Properties of materials  3. Uses of different materials  4. Classify materials  5. John McAdam  Enquiry: Which is the best material for keeping Gingerbread Geoff dry? | **Animals including humans: parts of the body**  1. Basic parts of the body  2. Senses  3. Eyes and Sight  4. Ears and Hearing  5. Touch, taste and smell  Enquiry: Which foods can I identify by taste? Which smells can I match? | | **Seasonal Changes: Autumn/Winter**  1. Autumn characteristics  2. Winter characteristics  3. Record the weather  4. Length of the day  Enquiry: How are plants and the weather different in different seasons? How is the length of days different? | **Plants**  1. Bulbs and Seeds  2. Parts of a plant  3. Garden and Wild Plants  4. Trees  5. Fruit and Vegetable Plants  6. Tayshan Hayden-Smith  Enquiry: Are all plants the same? | | **Seasonal Changes: Winter/Spring**  1. Winter characteristics  2. Spring characteristics  3. Record the weather  4. Length of the day  Enquiry: How are plants and the weather different in different seasons? How is the length of days different? | | | **Animals including humans**  1. Fish  2. Amphibians  3. Reptiles  4. Birds  5. Mammals  6. Carnivores, herbivores and omnivores  Enquiry: What is the same or different about two different animals? | | **Seasonal Changes: Spring/Summer**  1. Spring characteristics  2. Summer characteristics  3. Record the weather  4. Length of the day  Enquiry: 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 parts  2. Exercise  3. Balanced diets  4. Hygiene – washing hands  Enquiry: 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 Living  2. What is a habitat?  3. Local habitats and minibeasts  4. How do living things stay alive  Enquiry: Which is the most common minibeast in our local area? | | **Plants: plants and growing**  1. Parts of a plant  2. Plant life cycles  3. What do plants need to grow well?  4. Comparing plants  Enquiry: What do seeds need to germinate? | **Uses of everyday materials**  1. Properties of materials  2. Suitability of materials  3. John Dunlop  4. Squashing, bending, twisting, stretching  Enquiry: Which material is the most suitable for a given task? | | | **Animals including humans: offspring**  1. What are offspring?  2. Different types of offspring  3. Basic human timeline  Enquiry: What is the life cycle of a frog / chick / caterpillar? | **Living things and their habitats**  1. How do living things stay alive?  2. Microhabitats  3. World Habitats  4. Simple food chains  Enquiry: What animals are present in three local micro-habitats? | | **Plants: harvesting and cooking**  1. Maria Clark Taylor  2. Plants which can be eaten  3. Harvesting  4. How can plants be used in cooking?  Enquiry: What did Maria Clark Taylor do? | | |
| **3** | **Animals including humans**  1. The Skeletal System  2. Bones of the body  3. Skeletons of different animals  4. The Muscular System  5. Nutritional values of foods  6. Daily diets  Enquiry: Can people with bigger hands catch a ball better? | **Rocks**  1. Sorting rocks  2. How rocks are formed  3. Permeability  4. Fossils  5. Soil  6. Mary Anning  Enquiry: Can different rocks be scratched with a nail, are porous, or can float in water? | | **Plants: life cycles**  1. Life cycle of a plant  2. Pollination  3. Different plant life cycles  4. Locating where plants are within their life cycle in the local area  Enquiry: What does a plant look like in winter? | **Forces and magnets**  1. Pushes and Pulls  2. Using magnets in real-life  3. Magnet Strength  4. Magnetic Poles  Enquiry: Which materials are magnetic? | | **Plants: life cycles**  1. Life cycle of a plant at different times of the year  2. Life cycle of plants around the world  3. Locating where plants are within their life cycle in the local area  Enquiry: What does a plant look like in winter? | | | **Light**  1. Why do we need light?  2. Light source  3. Reflection  4. Light safety  5. 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 plant  2. How plants grow  3. Differences between plants  4. Transportation of water  Enquiry: How can removing the leaves or roots affect plant growth? | | | **Plants: life cycles**  1. Mary Seacole  2. Locating where plants are within their life cycle in the local area  3. Comparing plant life cycles from across the year  Enquiry: What does a plant look like in winter? |
| **4** | **Electricity**  1. Electrical machines  2. Electrical components  3. Electrical circuits  4. Electrical safety  5. Michael Faraday  Enquiry: Which materials are electrical conductors or insulators? | | **States of Matter**  1. Comparing materials into solid, liquid and gas  2. Molecular structure  3. Exploration of heating different materials  Enquiry: Do different types of chocolate melt at different temperatures? | | **Sound**  1. How sound is made  2. Sound and vibrations  3. Relationship between sound and vibrations  4. Sound and distance  5. Structure of the ear and how we hear  6. Alexander Graham Bell  Enquiry: Is there a link between the pitch of a sound and an object? | | **Living things and their habitats**  1. Introduction to classification keys  2. Classes of vertebrates  3. Classes of invertebrates  4. Recognise living things in their local environment using classification keys  5. How the environment changes and the dangers  6. David Attenborough  Enquiry: How does a local habitat change at different points in the year? | | | | | **Animals including humans**  1. Cells and nutrients  2. Teeth  3. The Digestive System  4. Food chains  Enquiry: Which liquid affects teeth the most? | | |
| **5** | **Living things and their habitats: life cycles**  1. Life cycle of a mammal  2. Life cycle of an amphibian  3. Life cycle of a bird  4. Comparison of life cycles  Enquiry: Does the size of an animal impact its life span? | | **Animals including humans**  1. Alexander Fleming  2. Human development  3. Growth of babies  4. Puberty  5. Changes to Old Age  Enquiry: Do reaction times slow down as we age? | | **Properties and changes of materials**  1. Silver Spencer  2. Properties of materials  3. Solubility  4. Separating mixtures  5. Reversible and Irreversible Changes  Enquiry: How can you clean dirty water? | | | **Living things and their habitats: reproduction of plants**  1. Life cycle of a plant  2. Parts of a plant  3. Asexual reproduction  4. Sexual reproduction  Enquiry: Do the conditions affect a plant’s growth? | | **Forces**  1. Forces including gravity  2. Air resistance, water resistance and friction  3. Gears, pulleys and levers  Enquiry: How does surface area affect air resistance? | | | **Earth and Space**  1. The Big Bang and the expanding universe  2. Our Solar System  3. The Moon  4. Days, Months, Years  5. Day and Night  6. Professor Brian Cox and Stephen Hawking  Enquiry: | |
| **6** | **Electricity**  1. How electricity is generated  2. Simple series circuits  3. Parallel circuits  4. Switches  5. Electrical conductors and insulators  6. History of electricity  Enquiry: How can you make a bulb brighter or buzzer louder? | | | | **Living things and their habitats**  1. Classification keys  2. Groups of living things  3. Carl Linnaeus  4. Cells: plant and animal  5. Micro-organisms  Enquiry: Do conditions affect how fast mould grows? | | **Animals, including humans**  1. Measuring pulses  2. Circulatory System  3. The Heart  4. Healthy Lifestyles  5. Barouh Berkovits  6. Transportation of water and nutrients  7. Sarah Gilbert & the Covid Vaccine  Enquiry: What affects our pulse? | | | **Light**  1. How light travels  2. Shadows and their shape  3. How do we see  4. Bob Switzer  Enquiry: How does a periscope work? | | **Evolution and Inheritance**  1. Fossils and Evolution  2. Inheritance  3. Adaptation  4. Charles Darwin  5. Alfred Wallace  Enquiry: Which bird beak is the most effective? | | |