**SCIENCE WHOLE SCHOOL OVERVIEW**

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|  |  **Autumn 1** | **Autumn 2** | **Spring 1** | **Spring 2** | **Summer 1** | **Summer 2** |
| **Reception**  | **Biology – Animals including humans**Children will know the names of body parts: heads, arms, hands, legs, feet, neck.Know the five senses.**Physics – Seasonal Changes**Know that we are in autumn. | **Chemistry – Materials**Identify plastic and metal.Know what material a magnet picks up.**Chemistry – Materials**Explore floating and sinking. | **Seasonal Changes**Know that we are in winter.**Physics – Light and Dark**Children will investigate light, dark and shadows.**Chemistry – Materials**Children will know how materials change when melting.Melt and solidify different substances such as chocolate and butter. | **Physics – Seasonal Changes**Know that we are in spring.**Biology – Animals including humans**Children will know that a butterfly comes from an egg. Children will know how to respect and care for living things.  | **Biology – Plants**Explore the life cycle of a sunflower.Children will know that seeds can turn into plants. Children will begin to understand how it takes time to grow fruit and vegetables.Children will plant and grow a fruit/vegetable/herb. | **Physics – Seasonal Changes**Know that we are in summer.Name the four seasons and weather associated with four seasons.Observe how a tree has changed over the four seasons.**The Natural World**Children will make collections of natural materials to investigate and talk about. |

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|  | **Prior learning in EYFS** | **Autumn 1** | **Prior learning in EYFS** | **Autumn 2** | **Spring 1** | **Prior learning in EYFS** | **Spring 2** | **Prior learning in EYFS** | **Summer 1** | **Summer 2** |
| **Year 1** | Know body parts, through nursery rhymes.Explore senses through experiences.----------------------------Name the four seasons and observe hot and cold seasons.   | Biology-Animals, including humans**Why are our bodies amazing?** -------------------------Physics-Seasonal changes**How do things change with the seasons?** | Observe animals, including growth and needs (life cycle of a butterfly). | Biology-Animals, including humans**How are animals similar and different?** | Name plastic, wood, metal etc.Explore strengths and magnetism of materials. | Chemistry-Materials**What are the best materials for outdoor toys?** | Grow plants and name leaf, petal, flower.Notice trees in the environment. | Biology-Plants**What plants are in my environment and how are they structured?**  |

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|  | **Prior learning**  | **Autumn 1** | **Prior learning**  | **Autumn 2** | **Prior learning**  | **Spring 1** | **Prior learning**  | **Spring 2** | **Prior learning**  | **Summer 1** | **Prior learning**  | **Summer 2** |
| Year 2 | Know that animals live in various places, such as underwater, in the ground, etc. | Biology-Living things and their habitats**How are animals and plants suited to their environment?** | Know food types eaten by some animals. | Biology – Animals, including humans**What is a food chain?** | Explore healthy foods – PSHE | Biology-Animals, including humans**What do plants and animals need to survive?** | Importance of exercise on a healthy body. | Biology-Animals including humans**Why is it important to be healthy?** | Know the names and properties of everyday materials | Chemistry-Materials**Why do materials have particular uses?** | Recognise the importance of water for plants and maybe the need for warmth and light. | Biology-Plants**How do seeds and bulbs grow into plants?** |
| Year 3  | Most will be aware of dark, light and shadows and role of sun in these.Should know about suncream for protection and maybe sunglasses.May have noticed the moon’s shape changes. | Physics-Light**What do we know about light?** | May have used magnets but may not understand why objects move towards them. | Physics-Forces**How do forces and magnets work?** | Handling of rocks and stones found on the beach/inland.Materials (including rocks and stones in Y1. | Chemistry-Rocks**Are rocks, soils and fossils important?** | Know that certain foods should be eaten in moderation. | Biology-Animals, including humans**Do humans and animals need a healthy diet?** | Name the parts of a plant.Know how seeds and plants grow and needs. | Biology-Living things and their habitats**Why do plants and trees have flowers?** | Know how seeds and plants grow and needs. | Biology-Plants**Why is water needed for plants to grow?** |
| Year 4 | Main knowledge through first-hand experience – light switches/batteries in toys etc.May have tried to make a simple circuit (by lighting up a small electric bulb). | Physics-Electricity**What can electricity run?** | Main sound knowledge through music curriculum, so far.Sense work linked to ears in Y1Experience of sound systems. | Physics-Sound**How are sounds made and how does it travel?** | Linked to everyday materials- Y1 and particular uses- Y2 | Chemistry-States of Matter**How do materials change state and how does this affect the water cycle?** | Needs to be linked to classification learning in Y1. | Biology-Plants**How can we group living things?** | Most will know where stomach is and have some knowledge of what happens to food we digest.Nutritious diet and exercise. | Biology-Animals, including humans**What happens to the food we eat?**  |

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| **Year 5** | Children will know that the amount of the moon we see changes. Retrieve knowledge re the moon’s relationship with the sun, through light and dark unit, Y3. | Physics-Earth and Space**Where in the Galaxy?** | There will be some knowledge of forces from work on magnets in Y3.May have experimented with making parachutes using cloth and heavy weights, at home. | Physics-Forces**What are forces and how do they work?** | Retrieve knowledge from comparison of materials in KS1 and Y3. | Chemistry-Materials and their properties**What are the properties of materials and how can they change?**  | Learnt about basic stages of life cycles in Y2. | Biology-Animals including humans**How do humans change as they grow old?** | Plant life cycles and function of different parts of plant studied in Y3. | Biology-Living things and their habitats**What are the reproductive life cycles in plants and animals?** |
| **Year 6** | Links to light and dark unit in Y3.Pupils will know that dark is the absence of light and that it is dangerous to look at the sun.Many will be aware that spectacles improve magnification and will have used binoculars, at some stage. | Physics- Light **Can we prove that light travels in straight lines?** | Links to work on digestive system in Y4 and ‘how we move’ in Y3.Pupils should know about colour of blood and approximate position of the heart. | Biology- Animals including humans**How does our circulatory system work?** | Links with Y4 Electricity unit. | Physics- Electricity**How does electricity work and how can its power vary?** | Pupils need to retrieve classifying animals knowledge from Y1 and Y4. | Biology- Living things and their habitats**How can we group plants and animals?** | Links to Y5 unit on how the body changes from birth to death. | Biology- Evolution and inheritance**How have living things developed over millions of years?** |