Wessex Gardens Primary School – Science Curriculum Map 2024– 2025

	Autumn 1	Autumn2	Spring 1	Spring 2	Summer 1	Summer 2
NURSERY	**All about us- Hygiene** Embedding the skill of how to go to the toilet. Understand how to wash their hands	**Light and Dark** Experiencing what light and dark is. Understanding what makes daytime and night time	**Under the Sea** Exploring the animals that live under the sea. Naming animals that live under the sea	**Animals** Identifying a range of animals. Understanding they have different habitats	**Life cycle of a chick** Class pet. Describing what is happening day by day. Making predictions	**Scientific enquiry** Looking at and observing growth and decay. Making simple predictions
RECEPTION	**All about me-body parts** Identifying key body parts and bones. Exploring what body parts, we use for certain activities and why	**Looking after ourselves** Looking at the effects of exercise and healthy eating on the body. Understanding the implications	**Season and changes** Describing the season and weather associated with it. Observing how animals behave differently in different seasons	**Growing and changing** Sequencing life cycles of humans and animals. Explaining the processes in detail	**Habitats** Understanding that animals have different habitats and why. Identifying animals and matching them to their habitats	**Scientific Enquiry** Conducting scientific experiments and making predictions on topics such as melting, floating and sinking and magnetism
YEAR 1	**Everyday materials** Pupils explore everyday materials such as wood, plastic, glass, and metal, identifying their simple properties, such as hardness, flexibility, and waterproofness. They learn to distinguish objects from the materials they are made from and group materials based on their characteristics. Through hands-on activities, pupils investigate how material properties make them suitable for different uses.	**Seasonal changes (Autumn and Winter)** Pupils explore how weather changes during autumn and winter, noting cooler temperatures, shorter days, and increased rainfall. They observe and record environmental changes, such as leaves falling and different animal activities. This study helps pupils understand seasonal patterns and how they affect the world around them.	**Animals, including humans** Pupils identify common animals and classify them by diet as carnivores, herbivores, or omnivores. They compare animal structures, learn human body parts, and explore sensory functions. Pupils also study animal behaviour and responsible care in the local environment.	**Seasonal Changes (Spring and Summer)** In Year 1, pupils will learn how spring and summer bring changes **to** weather, plants, animals, and daily life**.** They will observe warmer temperatures, longer days, and new plant growth in spring, with flowers like daffodils blooming and animals waking from hibernation**.** In summer, they will notice hotter weather, the longest daylight hours, and plants in full bloom**,** such as sunflowers and roses**.**	**Plants** In Year 1, pupils identify and name common wild and garden plants, including deciduous and evergreen trees. They learn the basic structure of flowering plants and trees, focusing on parts such as leaves, stems, roots, and flowers. Pupils observe plant growth throughout the year, studying seasonal changes in their local environment.	**Environmental Science – plastic waste** **P**upils will learn about the environmental impact of plastic, focusing on how plastic waste harms wildlife and ecosystems. They will explore the importance of reducing plastic use, recycling, and using reusable items to protect the environment.
YEAR 2	**Animals, including humans – Growth** Pupils learn that animals, including humans, grow from offspring into adults, exploring life cycles of animals like chickens, butterflies, frogs, and sheep. They study different stages of development, such as baby, toddler, child, teenager, and adult, in humans.	**Animals, including humans – Survival** Pupils discover that animals, including humans, need water, food, and air to survive and explore how exercise, balanced diets, and hygiene contribute to good health. They focus on the link between proper nutrition, physical activity, and hygiene for survival and well-being.	**Use of everyday materials** Pupils compare everyday materials such as wood, metal, plastic, and glass, learning their suitability for various uses. They explore how materials can be changed by squashing, bending, twisting, and stretching, and investigate how different materials are used for similar items.	**Living things and their habitats** Pupils learn about living, dead, and non-living things and how habitats meet the needs of organisms. They identify plants and animals in various habitats, describe simple food chains, and explore how plants and animals depend on each other for survival.	**Plants** Pupils observe how seeds and bulbs grow into mature plants and investigate the necessary conditions for growth, including water, light, and temperature. They conduct experiments to understand the importance of light and water and explore plant reproduction and germination.	**Environmental Science – Litter Pollution** Pupils learn about the environmental harm caused by littering and the global issue of pollution. They classify types of litter in their local area, discuss ways to reduce it, and generate ideas to tackle litter pollution and promote environmental awareness.
YEAR 3	**Animals, including humans** Pupils learn about the nutrition animals, including humans, need to survive, which they obtain from their diet. They study the skeleton and muscles, understanding their roles in providing support, protection, and enabling movement. Pupils explore the functions of key body parts.	**Forces and Magnets** Pupils study how objects move on different surfaces and investigate magnetic forces, which can act at a distance. They classify materials based on their magnetic properties and learn that magnets have two poles. Pupils predict and test how magnets interact, studying different types of magnets.	**Rocks** Pupils compare and group different types of rocks based on appearance and physical properties. They learn how fossils are formed when living things become trapped in rock and discover that soils are made from a mix of rocks and organic matter, exploring local samples.	**Light** Pupils explore how light enables vision, recognising that darkness is the absence of light. They investigate reflections, shadow formation, and how the size of shadows changes depending on the light source. Pupils also learn how to protect their eyes from the harmful effects of sunlight.	**Plants** Pupils explore the parts of flowering plants—roots, stems, leaves, and flowers—and their roles in growth and reproduction. They investigate plants' needs for air, light, water, nutrients, and space, and study water transport, pollination, seed formation, and seed dispersal.	**Environmental Science – Biodiversity** Pupils explore the importance of biodiversity, learning that diverse species are essential for healthy ecosystems. They examine how ecosystems provide clean air, water, and food, and how species balance supports stability. Pupils also discuss human impacts on biodiversity and its role in sustaining life on Earth.
YEAR 4	**States of matter** Pupils classify materials as solids, liquids, or gases and observe how they change state when heated or cooled. They learn about key temperatures for state changes and study evaporation and condensation in the water cycle. Pupils use water to observe transitions like melting, freezing, boiling, and condensation.	**Sound** Pupils learn that sounds are made by vibrations, which travel through a medium to the ear. They explore the relationship between pitch and the object's features, and how vibration strength affects volume. Pupils investigate how distance from the source affects sound and experiment with musical instruments to alter pitch and volume.	**Animals, including humans** Pupils study the human digestive system, focusing on the functions of parts like the mouth, teeth, oesophagus, stomach, and intestines. They explore the roles of different types of teeth and construct food chains to understand how energy flows through ecosystems.	**Electricity** Pupils identify appliances that use electricity and construct simple series circuits. They explore components such as cells, wires, bulbs, switches, and buzzers, learning how switches control circuits and understanding conductors and insulators. Pupils create devices using these components and represent circuits with diagrams, preparing for conventional symbols in Year 6.	**Living things and their habitats** Pupils group living things and use classification keys to identify plants and animals in various environments. They study environmental changes and their impact on living organisms, examining human effects like deforestation and nature reserves. Pupils classify animals as vertebrates or invertebrates and plants as flowering or non-flowering, observing habitat evolution over time.	**Environmental Science – Extinction** Pupils learn about extinction and its causes, such as habitat loss, climate change, pollution, and overexploitation. They study how extinction impacts ecosystems and biodiversity and explore conservation efforts to protect endangered species, emphasizing the importance of maintaining ecological balance.
YEAR 5	**Properties and changes of materials** Pupils explore the properties of materials, such as solubility, and investigate how mixtures can be separated using filtering, sieving, and evaporating. They study reversible changes like dissolving and state transitions, as well as irreversible changes, such as chemical reactions that create new materials.	**Forces** Pupils investigate gravity, air resistance, water resistance, and friction, studying how these forces affect movement. They also examine mechanisms like levers, pulleys, and gears, learning how they amplify force. Pupils explore contributions by scientists such as Galileo and Newton in understanding gravity.	**Animals, including humans** Pupils create timelines to study human development from childhood to old age, including changes during puberty. They compare human gestation with other animals and track the growth of babies in terms of length and mass, helping them understand the physical and biological changes across life stages.	**Earth and Space** Pupils learn about Earth's movement around the Sun and the Moon's orbit around Earth. They study the causes of day and night and the Sun's apparent motion due to Earth's rotation. They explore the solar system, understand the Sun as the central star, and learn safety precautions related to observing the Sun.	**Living things and their habitats** Pupils study the life cycles of mammals, amphibians, insects, and birds, observing reproduction in plants and animals. They explore both sexual and asexual reproduction and compare these processes. Pupils also learn about the contributions of naturalists and behaviourists like David Attenborough and Jane Goodall in wildlife conservation.	**Environmental Science – Fossil Fuels** Pupils study fossil fuels—coal, oil, and natural gas—learning about their origins and environmental impacts, particularly in relation to climate change. They explore ways to reduce fossil fuel consumption, such as through renewable energy and conservation practices, fostering awareness of sustainability and the need for eco-friendly alternatives.
YEAR 6	**Light** Pupils build on their Year 3 knowledge of light by studying its behaviour, sources, reflection, and shadow formation. They learn that light travels in straight lines, which helps explain how we see objects when light is emitted or reflected into our eyes. They also understand that shadows mirror the shape of objects casting them due to light's straight-line path.	**Animals, including humans** Pupils explore the human circulatory system, identifying key components such as the heart, blood vessels, and blood. They understand how these systems transport nutrients and oxygen and examine the effects of diet, exercise, drugs, and lifestyle on bodily functions. This builds on previous learning of internal body systems and deepens their understanding of human biology.	**Living things and their habitats** Pupils study detailed classification, sorting microorganisms, plants, and animals into broader groups and subdivisions. They classify animals into vertebrates (e.g., fish, mammals) and invertebrates (e.g., insects, worms) based on observable traits. Pupils also learn the reasons for classification and use criteria to sort plants and animals accurately.	**Evolution and Inheritance** Pupils learn about how living things change over time and use fossils as evidence of past life. They study inheritance and understand that offspring inherit traits from their parents but are not identical. Pupils explore adaptations in plants and animals (e.g., giraffe necks or arctic fox fur) and how these traits help organisms evolve.	**Electricity** Pupils build on their Year 4 knowledge by constructing and investigating simple circuits, studying how switches, bulbs, buzzers, and motors work. They explore how the number and voltage of cells affect lamp brightness and buzzer volume, and learn to represent circuits using recognised symbols, enhancing their ability to design and interpret electrical diagrams.	**Environmental Science- sustainable energy** Sustainable energy uses renewable sources like wind, solar, and hydroelectric power, which are better for the environment. Wind energy harnesses air movement, solar energy captures sunlight, and hydroelectric power generates electricity from flowing water. These clean alternatives reduce pollution and conserve natural resources, supporting a sustainable future.