# **Curriculum Overview: Science**

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summe
N	<b>Body &amp; Senses</b> Simply describe body parts and explain what we use them for. Simply describe the senses and give examples of what each sense is used for.	Materials Understand the difference between living and non- living. Explore melting and construction of models.	Weather & Seasons Understand rain and seasons and how this affects clothing choice. Know that the wind can change direction. Know that snow melts when the weather gets warmer.	<b>Animals</b> Identify that animals are living things. Describe an animal's habitat. Identify birds based on their features. Know the animals that might live on a farm.	Plants Understand that a plant is a livi needs to live. Know the life cycle grows from a s
R	Body & Senses Understand similarities and differences in human beings. Label body parts on a diagram. Understand the functions of mouth, teeth and hair. Explain how senses relate to body parts.	Materials Know that living things need oxygen. Explore freezing, absorbency and conduct simple tests.	Weather & Seasons Explain differences between rain, ice and water. Understand the role of clouds in rainfall. Understand wind as the movement of air. Understand seasons and seasonal changes.	Animals Explain what animals need to survive in their habitat. Explain why birds need to live in a nest and the foods that they feed on. Understand the role of farm animals as producers.	Plants Describe the features of a living features of a plant and know wh Explain what a plant ne
1	Animals, Including Humans All About Animals Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. Identify those animals that are carnivores, herbivores and omnivores. Describe and compare the structure of a variety of common animals. SE: Group and sort, use observations and ideas to suggest answers	Seasonal Changes Changes in weather within and across the four seasons. Understand the link between seasons and length of day. SE: Observations, asking and answering questions, identifying and classifying, performing simple tests, gathering and recording data	Everyday Materials Exploring Everyday Materials Identify and name a variety of everyday materials, describe the simple physical properties of everyday materials, compare and group together a variety of everyday materials on the basis of their properties. SE: Identifying and classifying, using observations, performing simple tests, gathering data	Everyday Materials Building Understand which materials would be suitable for different uses, depending on their properties. Produce models with given requirements and say which materials are suitable. SE: Performing simple tests, using observations, identifying and classifying	Plants Identify and name a variety of garden plants, including decidi trees. Identify and describe the variety of common flowering pl SE: Ask simple questions, obse simple equipment, use observa classifying, gathering and
2	Animals, Including Humans Growth Basic needs for survival (animals and humans), the importance of exercise and eating the right amounts of different types of food, hygiene. SE: Using observations, identifying and classifying, performing simple tests.	Animals, Including Humans Life cycles Know that animals, including humans, have offspring which grow into adults. SE: Identifying and classifying, using observations, gathering and recording data, asking simple questions	Living Things and Their Habitats Know the difference between things that are living, dead and those that have never been alive. Know that most living things live in habitats and understand how a habitat provides for the basic needs of animals. Describe food chains and basic sources of food. SE: Identifying and classifying, close observations, using observations, asking simple questions, gathering and recording data	Living Things and Their Habitats (Habitats from Around the World) Identify that most living things live in habitats that they are suited to and describe how different habitats provide for the basic needs of different animals and plants, and how they depend on each other. Identify and name a variety of plants and animals in their habitats, including microhabitats. SE: Identifying and classifying, using observations, gathering and recording data, asking simple questions	Uses of Everyday N Identify and compare the suitd everyday materials. Explore how objects made from some mater SE: Use observations, perform sin record date
3	Plants Identify and describe the functions of different flowering plants, explore the requirements of plants for life and growth and how this varies, investigate how water is transported within plants, explore the lice cycle of flowering plants SE: Ask relevant questions, set up practical enquiries, comparisons and fair tests, systematic and careful observations, reporting on findings and making conclusions, gathering, recording and presenting data	Scientific Enquiry Undertaking experiments and observations to learn how to pose questions and write predictions, record and present results, carry out practical tests, write conclusions, conduct fair tests with controls and variables.	Animals, Including Humans Identify that animals need the right types and amount of nutrition and that they cannot make their own food. Identify that humans and some other animals have skeletons and muscles for support, protection and movement. SE: Gather, record, classify and present data, use straightforward evidence to answer questions or support findings, report on findings from enquiries, record findings using simple scientific language, identify differences, similarities or changes.	Rocks Compare and group together different rocks on the basis of their appearance and physical properties, explore how and why rocks have changed over time, describe how fossils are formed, recognise that soils are made from rocks and organic matter. SE: Report on findings from enquiries, use results to draw simple conclusions, make systematic and careful observations, identify differences, similarities or changes.	Forces and Mag Know that some forces need con a distance. Compare how thing surfaces. Describe magnets and will attract or repel. Compare of everyday materials in relat SE: Report on findings from enqui and careful observations, set up fair tests, record fi
4	Animals, Including Humans (The Digestive System, Food Chains and Webs) Describe the simple functions of the basic parts of the digestive system in humans. Identify the different types of teeth in humans and their simple functions. Construct and interpret a variety of food chains, identifying producers, predators and prey. SE: Record findings, make systematic and careful observations, report on findings, set up simple enquiries, comparative and fair tests, use results to draw conclusions.	Electricity Identify common appliances that run on electricity, construct simple electrical circuits, identify if a circuit is complete, recognise some common conductors and insulators, recognise that switches open and close circuits. SE: Report on findings, use evidence to support findings, gather, record, classify and present data, set up simple practical enquiries, comparative and fair tests, make systematic and careful observations, ask relevant questions.	Living Things and Their Habitats Recognise that living things can be grouped in a variety of ways. Use classification keys to group, identify and name a variety of living things. SE: Identify differences, similarities or changes, report on findings, gather, record, classify and present data, record findings.	Living Things and Their Habitats (Conservation) Recognise that environments can change and that this can sometimes pose dangers to living things. SE: Gather, record, classify and present data in a variety of ways.	States of Matt Compare and group materials t whether they are solids, liquids o some materials change state wh cooled, and measure or researc which this happens. Identify t evaporation and condensation i associate the rate of evaporatio SE: Gather, record, classify and straightforward evidence, make s observations and measurement results to draw conclusions
5	Properties of Materials Compare and group together everyday materials on the basis of their properties. Give reasons, based on evidence from tests, for the particular uses of everyday materials. Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution. Use knowledge of solids, liquids and gases to decide how mixtures might be separated. SE: Plan different types of scientific enquiries to answer questions. Take measurements with increasing accuracy and precision. Record data and results. Report and present findings. Use test results to make predictions to set up further comparative and fair tests.	Forces Explain that unsupported objects fall towards the Earth because of the force of gravity. Identify the effects of air resistance, water resistance and friction. Recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect. SE: Identify evidence that has been used to support or refute ideas or arguments. Take measurements with increasing accuracy and precision. Report and present findings from enquiries. Plan different types of scientific enquiries.	Changes in Materials Describe how to recover a substance from a solution. Demonstrate that dissolving, mixing and changes of state are irreversible changes. Explain that some changes result in the formation of new materials and that this kind of change is not usually reversible (including by burning and by acid on bicarbonate of soda). SE: Report and present findings from enquiries, including conclusions. Plan different types of scientific enquiry to answer questions, including recognising and controlling variables where necessary. Identify scientific evidence that has been used to support or refute ideas or arguments. Use test results to make predictions.	Animals, Including Humans Describe the changes as humans develop to old age: identify the key stages of a mammal's life cycle; explore the gestation periods of mammals; lean about foetal development; investigate the hand span of different aged children; learn about the changes experienced during puberty; describe the changes humans may experience during adulthood and old age. SE: Record data and results of increasing complexity. Report and present findings from enquiries. Take measurements using a range of scientific equipment. Identify scientific evidence that has been used to support or refute ideas or arguments.	Earth & Spac Describe the Sun, Earth and mo spherical bodies. Describe the m and other plants relative to the Sr Use the ideas of the Earth's rotati night and the apparent movem the sky. Describe the movement of the Earth. SE: Identify scientific evidence th support or refute ideas or of measurements, using a range of Report and present findings froi results to make predictions to
6	Animals, Including Humans Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. Describe the ways in which nutrients and water are transported within animals, including humans. Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. SE: Record data and results of increasing complexity. Take measurements using a range of scientific equipment. Identify scientific evidence that has been use to support or refute ideas or arguments. Plan different types of scientific enquiries. Report and present findings from enquiries	Light Recognise that light appears to travel in straight lines. Use the idea that light travels in straight lines to explain that objects are seen because they give our or reflect light into the eye. Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our ideas. Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them. SE: Record data and results. Identify scientific evidence that has been used to support or refute ideas or arguments. Plan different types of scientific enquiry. Report and present findings from enquiries.	Electricity Use recognised symbols when representing a simple circuit in a diagram. Associate the brightness of a bulb or the volume of a buzzer with the number and voltage of cells used in the circuit. Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches. .SE: Record data and results of increasing complexity. Plan different types of scientific enquiry. Report and present findings from enquiries. Use test results to make predictions to set up further comparative and fair tests. Take measurements using a range of scientific equipment.	Living Things and their Habitats Give reasons for classifying plants and animals based on specific characteristics. Describe how living things are classified into broad groups according to commonly observable characteristics and based on similarities and differences, including microorganisms, plants and animals. SE: Record data and results of increasing complexity, identify scientific evidence that has been used to support or refute ideas or arguments. Plan different types of scientific equipment with increasing a range of scientific equipment with increasing accuracy and precision. Report and present findings from enquiries.	Evolution and Inhe Recognise that living things pro same kind, but normally offspri identical to their parents. Identi plants are adapted to suit their e adaptation may lead to evolution things have changed over time a information about living things th millions of years SE: Report and present findings fr scientific evidence that has bee refute ideas or arg



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rom enquiries. Identify en used to support or uments.

# Summer 2 Food

Vegetables and where they grow. Balanced and healthy diets. Identify and describe a range of fruit. Know where eggs come from (and life cycle of a chicken). Know that cows produce milk. Space & Forces

Know that we live in a solar system with other planets and the Sun. Explain why space exploration is important. Understand pushing, pulling, sinking and

floating.

Animals, Including Humans All About Me

Identify, name, draw and label the basic parts of the human body and say which part of the human body is associated with each sense

SE: Identifying and classifying, performing simple tests, gathering and recording data, using observations to suggest answers

## Plants

Observe and describe how seeds and bulbs grow into mature plants. Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.

SE: Identifying and classifying, using observations, gathering and recording data, asking simple questions

### Liaht

Know that light is needed to see and darkness is the absence of light. Know that light from the sun can be dangerous. Know that light is reflected from surfaces. Know how shadows are formed and how they can

change.

SE: Gather, record, classify and present data, record findings, report findings, identify differences, similarities or changes.

### Sound

Identify how rounds are made. Recognise that vibrations from sound travel through a medium to the ear. Find patterns between the volume of a sound and the strength of the vibrations that produced it. Find patterns between the pitch of a sound and features of the object that produced it. Recognise that sounds get fainter as the distance from the sound source

increases.

SE: Report on findings from enquiries, identify differences, similarities or changes, set up simple practical enquiries, make systematic and careful observations, record and report on findings.

# Living Things and their Habitats

Describe the life process of reproduction in some plants and animals. Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. SE: Plan different types of scientific enquiries to answer questions. Report and present findings from enquiries. Identify scientific evidence that has been used to support or refute ideas or arguments.

## Looking After the Environment

A non-statutory unit designed to cover scientific enquiry and explore the scientific impact on the environment as a result of human actions over time. SE: Recording data and results of increasing complexity. Reporting and presenting findings from enguiries, including conclusion, causal relationships and explanations. Identify scientific evidence that has been used to support or refute ideas or arguments. Use test results to make predictions to set up further comparative and fair tests.