

Sawley Science Curriculum Overview			Curriculum Intent – Statement of aims	Curriculum Implementation – Tools, Techniques, Opportunities	Curriculum Impact - I-can /Assessment	Links to prior and future learning (EYFS/National Curriculum)		
Category	Key Aspect	Icon	We want our children to...	So, we do this:	So that our children:	EYFS	KS1	KS2
Working Scientifically	Observe and question		... make careful observations and be able to raise relevant questions, suggesting explanations and alternatives to guide their enquiries	Model observation and questioning skills using throughout the curriculum – using 'The Big Question' (TBQ!) approach to break down learning into logical learning chunks. Introduce simple scientific equipment such as measuring tools, magnifying glasses, digi-scopes, i-pad camera and provide purposes to use them to explore, question, test and record findings.	Can observe closely, using simple equipment, to ask and answer questions	S52: Understand 'why' questions S53: Describe what they see, hear and feel M3: Ask questions to find out more and to check M4: Make comments about what they have heard and ask questions to clarify their understanding.	Use practical scientific methods, processes and skills: • asking simple questions and recognising that they can be answered in different ways;	• asking relevant questions and using different types of scientific enquiries
	Identify and classify		...develop inquisitive minds, and be able to identify, describe and classify what they notice sensitively, using scientific or technical vocabulary	Highlight and discuss key vocabulary and support children to sort and categorise items, explaining thinking and asking questions to justify ideas and scaffold conclusions. Provide opportunity for first hand exploration of materials, objects and processes in relevant contexts, and teach how to present findings using pictures, text, labels, graphs and diagrams.	Can identify and classify, based on observation and knowledge (including living/dead/never alive)	S-SS3: Describe events in some detail. M4: Use a range of small tools. M52: Talk about what they see, using a wide vocabulary.	• observing closely, using simple equipment • identifying and classifying, using their observations and ideas to suggest answers to questions; • performing simple tests;	• making systematic and careful observations similarities or changes related to simple scientific ideas • setting up simple practical enquiries, comparative and fair tests; • gathering, recording, classifying and presenting data in a variety of ways to help in answering questions; • recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
	Test and record		... collect evidence, investigate and test their own ideas logically, starting to evaluate what they find out to solve questions, problems and challenges		Can gather and record data, from observation or simple tests	S-SS3: Use talk to help work out problems and organise thinking, to explain how things work and why they happen. M4: Compare quantities, recognising when one quantity is greater than, less than or the same as the other quantity	• gathering and recording data to help in answering questions. (explore and compare the differences between things that are living, dead, and things that have never been alive)	• reporting on findings from enquiries, presentations of results or conclusions using results to draw simple conclusions, make predictions, improvements and raise questions
Materials (Chemistry)	Identify and Compare materials		...be able to identify, compare, explore and describe common materials in order to classify and consider suitability for different purposes, developing basic understanding of properties to build on in the future (developing scientific comparison and vocabulary)	Provide opportunity for first hand exploration of materials in different forms, revisiting the names, uses and properties of common materials (wood, metal, plastic, glass, rock, paper and card) through observation, questioning, and testing to see how they can be changed (by squashing, bending, twisting and stretching) Create links across the curriculum, especially with Design Technology, to provide context for exploring, testing and evaluating materials and their properties for specific purposes	Can identify and compare the material of everyday objects	M1: explore different materials, using senses. SS2: Explore collections of materials with similar and/or different properties. M2: Use all their senses in hands-on exploration of natural materials. M3: Talk about the differences between materials and changes they notice.	• distinguish between an object and the material from which it is made • identify and name a variety of everyday materials. • identify and compare the suitability of a variety of everyday materials	• compare and group together different kinds of rocks on the basis of their appearance and simple physical properties. Recognise that soils are made from rocks and organic matter.
	Explore / change materials				Can describe the properties of everyday materials, and how some can be changed		• describe the simple physical properties of a variety of everyday materials • find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.	• observe how magnets attract or repel each other and attract some materials and not others compare and group together a variety of everyday materials and identify some magnetic materials
Natural World (Biology /Physics)	Seasonal changes		...develop a growing understanding of changes in the seasons to provide context for future learning about the planet, our world and the natural environment. (develop observation and questioning skills)	Provide opportunity to observe and notice the changing seasons through class charts and record keeping, plan topics directly related to seasonal changes and facilitate experiences related to new life in spring, hibernation in winter, building knowledge of the changing months and seasons of the year.	Can observe and describe changes across the four seasons (e.g. weather, light, plants and animals)	SS3: Understand the effect of changing seasons on the natural world around them. M4: Understand some important processes and changes including the seasons and changing states of matter.	• observe changes across the four seasons • observe and describe weather associated with the seasons and how day length varies.	• Recognise that light from the sun can be dangerous and that there are ways to protect their eyes. Recognise that shadows are formed when the light is blocked. find patterns in the way that the size of shadows changes
	Plants and Trees		...recognise and name common plants and trees and the basic structure of plants in order to build knowledge and appreciation of the wide range of diverse plant life as a basis for further learning in biology (develop skills in identification and classification)	Provide opportunity for first hand nature study of plants and trees in the local environment and activities related to naming common varieties linked to topic work/science activities and chosen by year groups. Naming and labelling key parts of the plant.	Can identify and name a variety of plants or trees, and describe their basic structure	M4: Know some similarities and differences between the natural world around them and contrasting environments	• identify and name a variety of common wild and garden plants, in their habitats • identify and describe the basic structure of a variety of common flowering plants, including trees.	• Plants: identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers • explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant
	Growing plants		...experience growing different plants, seeds and bulbs and understand the basic life-cycle of a plant, in order to develop appreciation of the needs of living things and make connections with prior and future learning about habitats, environment, growth and change. (engage all aspects of working scientifically)	Experience growing a plant from seed, bulb or cutting every year and be familiar with basic life cycle of a plant in books / on screen and using prepared resources for sequencing. Children will be engaged in careful observation and recording of plants and seeds as they grow, and conduct basic tests to ascertain the needs of plants and the impact of different environments and provision on plant growth.	Can describe how seeds and bulbs grow into mature plants (e.g. bean life cycle)	SS2: Plant seeds and care for growing plants. M2: Explore how things work.	• observe and describe how seeds and bulbs grow into mature plants	• how they vary from plant to plant • investigate the way in which water is transported within plants
	Plant needs				Can explore and describe, what plants need to grow and stay healthy	SS2: Begin to understand the need to respect and care for the natural environment and all living things.	• find out and describe how plants need water, light and a suitable temperature to grow and stay healthy • identify that most living things live in habitats to which they are suited	• explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal
Animals and Humans (Biology)	Identify & Compare - animals		..be able to recognise, name, compare and classify a range of different living things according to type and basic needs (build subject knowledge and classify)	Develop knowledge of a range of animals (including; birds, fish, amphibians, reptiles, mammals and invertebrates) through study of a range of environments and habitats and draw comparisons about basic needs. Ensure that all children have the opportunity to observe and interact with animals first-hand through enrichment activities and visits over time and be able to compare and categorise animals based on key features (including structure, habitats and if they are carnivores, herbivores or omnivores) Build a basic understanding of food chains and life cycles through taught sessions, supported by experiences such as tadpoles and living eggs and linked to design technology food sources. Learn how to represent life cycles and food chains as follow charts and cycle diagrams	Can identify, name and compare a variety of common animals, including habitats and basic needs	M4: Explore the natural world around them, making observations and drawing pictures of animals and plants.	• identify and name a variety of common animals • describe and compare the structure of a variety of common animals • find out about and describe the basic needs of animals, including humans, for survival	
	Food chains and habitats		...develop an appreciation of the relationship between living things and their environment. ...be able to sequence food-chains and life-cycles of familiar animals, building basic understanding of the interdependence of living things and foundations for learning about reproduction (develop identification, classification and sequencing)		Can describe simple food chains or food sources in different habitats	SS3: Recognise some environments that are different to the one in which they live.	• identify that most living things live in habitats to which they are suited • identify and name a variety of common animals: carnivores, herbivores and omnivores	
	life cycles				Can describe and sequence simple growth and life cycles of humans and animals	SS2: Begin to make sense of their own life story M3: Understand the key features of the life cycle of a plant and an animal.	• describe how animals obtain their food from plants and other animals, in a simple food chain, and identify and name different sources of food. • notice that animals, including humans, have offspring which grow into adults	• identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat • identify that humans and some other animals have skeletons and muscles for support, protection and movement.
	Healthy Living		...be able to describe the importance of keeping healthy, in order to promote healthy lifestyle habits ...have a good understanding of the external structure of the human body and their senses, so they are well prepared for future learning about internal organs and processes of the human body. (build subject knowledge, observe and compare)	Develop language and build understanding about the science behind the rules of healthy living Strong links to PE, PSHE and Design Technology (heart rate, physical exercise and keeping active, healthy diet, hygiene and lifestyle choices) Engage in activities to develop a good knowledge of the parts of the human body, and explore using their senses, practical activities, games, songs and books to reinforce names and uses of body parts and address that privates are private (parts rule)	Can describe the importance of exercise, healthy diet and good hygiene.	SS3: Know and talk about the different factors that support their health and wellbeing M4: Manage their own basic hygiene and personal needs, including healthy food choices.	• describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene	
	Human Body				Can identify, name, draw and label the basic parts of the human body (and associated senses)	M1: explore different materials, using senses to investigate	• identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.	