

Curriculum Intent

Through science at Longshaw, we aim for all our children to build an understanding of the world around them. When studying science at the primary level, children should be acquiring specific skills and knowledge to help them to think scientifically, gain an understanding of scientific processes and an understanding of the uses and implications of science, today and for the future.

Scientific skills are embedded into each topic the children study, with the aim of developing a depth of understanding, that allows them to confidently answer questions about the world around them.

1. How do you ensure consistent delivery across all key stages?

To accompany our progressive curriculum, through which children build upon learning from previous years, our teachers are provided with CPD ensuring that all year groups have consistency in the planning and delivery of lessons. This ensures that all pupils are provided with equal opportunities and exposure to high quality teaching.

2. How does the curriculum cater for disadvantaged, SEND and other minority group students?

At Longshaw, we deliver a science curriculum that is ambitious for all pupils. We ensure that all children begin each topic with the relevant prior knowledge to succeed, before building upon this with the new learning. Modelling and scaffolding are a focus within lesson delivery, in order to aid all pupils to achieve mastery.

3. How does the curriculum embed prior knowledge and aid long term retention of knowledge?

Knowledge organisers are consistently used to ensure that pupils can refer to prior learning and see progression of the topics they have covered. In KS1 and KS2 pre- and post-learning quizzes are completed to monitor progression and retention, allowing informed decisions to be made around planning and future topic coverage.

Year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS	Children in early years settings follow the statutory framework for the Early Years Foundation Stage, that highlights the seven areas of learning and development that must shape educational programmes. This includes understanding the world and involves guiding children to make sense of their physical world and their community through opportunities to explore, observe and find out about people, places, technology and the					

	environment. Children learn and explore changes in the environment, metamorphosis, growth of self and plants, concepts of floating and sinking and magnets. This is underpinned by the 'Characteristics of Effective Learning'; playing and exploring - children investigate and experience things, and 'have a go', active learning - children concentrate and keep on trying if they encounter difficulties, and enjoy achievements, and creating and thinking critically - children have and develop their own ideas, make links between ideas, and develop strategies for doing things.					
1	BIOLOGY Plants Identifying and naming common plants and describing basic structures	BIOLOGY / PHYSICS Seasonal changes Observing changes across four seasons and describing associated weather	CHEMISTRY Everyday materials Distinguishing objects from their material, and describing simple properties	Consolidation and review	BIOLOGY Animals Naming reptiles, fish, amphibians, birds and mammals; carnivores, herbivores, omnivores	BIOLOGY Humans Human body parts and senses
2	BIOLOGY Plant growth Plants grow from seeds, and require water, light and a suitable temperature	BIOLOGY Needs of animals Animals need water, food and air to survive and to have offspring	CHEMISTRY Uses of materials Comparisons of an object's material with its use; impact of bending, twisting on solid objects	BIOLOGY Living things & habitats Introduction to habitats, micro-habitats, and simple food chains	CHEMISTRY Solids, liquids and gases How the same substances can exist as solids, liquids and gases	Consolidation and review
3	CHEMISTRY Rocks Comparisons of types of rocks and how fossils are formed	PHYSICS Light Relationship between light and how we see; the formation of shadows	BIOLOGY Organisms The role of muscles and skeletons; the importance of nutrients	BIOLOGY Plants Features of flowering plants and what they need to survive	PHYSICS Forces & motion Introducing pushes and pulls; opposing forces, and balanced forces	PHYSICS Magnetism Contact and non-contact forces, including friction and magnetism
4	BIOLOGY Classifying organisms Introduction to classifying animals and their environment	BIOLOGY Food & digestion The human digestive system and simple food chains	CHEMISTRY Particle model and states of matter States of matter in relation to particle arrangement	PHYSICS Sounds Relationship between strength of vibrations and volume of sound	PHYSICS Electricity Simple series circuits	CHEMISTRY Properties of materials Considering physical and chemical properties
5 and 6 (Cycle A)	BIOLOGY Life cycles Life cycles of a mammal, amphibian, insect, bird, and some reproduction	BIOLOGY Human development Human development to old age	BIOLOGY Evolution Fossils;	PHYSICS Electricity Investigating variations in series and parallel circuits; electricity generation	PHYSICS Forces Gravity, air and water resistance and friction; introduction to pulleys	PHYSICS Earth and space Movements of planets and the Moon, and

			introduction to the idea that adaptation may lead to evolution			relationship to day and night
5 and 6 (Cycle B)	CHEMISTRY Separating mixtures Identifying and separating mixtures; reversible and non-reversible changes	BIOLOGY / CHEMISTRY / PHYSICS Energy Introducing the concept of energy stores and energy transfers; relate this to prior knowledge	PHYSICS Light How light travels and is reflected, and how this allows us to see	BIOLOGY Further classification Further classification of organisms based on characteristics	BIOLOGY Functions of the human body Human circulatory system; transport of nutrients in the body	CHEMISTRY Physical and chemical changes Identifying physical and chemical changes