The Arthur Terry Learning Partnership

The ATLP curriculum aims to provide children with a broad and academic program that closely follows the National Curriculum.

Our provision is a coherent and carefully sequenced (knowledge engaged) curriculum based on the principles of cognitive science. There is a focus on the development of literacy and the application of acquired knowledge to ensure children access the curriculum at a depth to ensure a deep and enduring understanding in discrete subject areas.

The content and experiences within our curriculum are designed to accumulate and address the gaps in cultural capital of all our students in particularly the disadvantaged. Our extra-curricular offer supports our provision, with a focus within each subject thus helping to form stronger schemata for long term retention.

Curriculum Statement Overview for Science

Purpose of Science (taken from the NC Science Programme of Study)

A high-quality science education provides the foundation for understanding the world through the specific disciplines of biology, chemistry and physics. Science has changed our lives and is vital to the world's future prosperity, and all pupils should be taught essential aspects of the knowledge, methods, processes and uses of science. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognize the power of rational explanation and develop a sense of excitement and curiosity about national phenomena. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.

The aims of Science (taken from the NC Science Programme of Study)

- Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
- Develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them
- Are equipped with the scientific knowledge required to understand the uses and implications for science, today and for the future.

Science Intent

Our aim is to develop a love of science, to develop future scientists and teach them about the vast application and wonders of science in their everyday lives. Therefore, the science curriculum has been designed around 3 key principles:

1. Develop understanding of science via carefully planned schemata. Teaching the right knowledge at the right time, incorporating spaced practice and retrieval practice throughout, assessed with application of knowledge.
2. Emphasis on enquiry so to encourage students to question, seek, find, and predict.
3. Development of scientific skills, integrated into each unit, to enable students to explain and analyse

The substantive scientific knowledge and key vocabulary has been carefully sequenced to ensure that new content builds upon prior learning, enabling students to develop understanding and skills which are essential at GCSE and beyond.

Overview of the curriculum:

KS1	
Y1	**Y2**
Seasonal Change	Forces
Everyday Materials	Everyday Materials
Plants and Animals (including humans)	Plants Living things and their habitats

KS2			
Y3	**Y4**	**Y5**	**Y6**
Light Forces and Magnets	Sound and Electricity	Earth and Space Forces	Light Electricity
Rocks	States of Matter	Properties and changes of materials	Properties and changes of materials
Plants Animals (including humans)	Living things and their habitats Animals (including humans)	Living things and their habitats Animals (including humans)	Living things and their habitats Animals (including humans)

Ks3		
Y7	**Y8**	**Y9**
Forces (P1) Energy I (P2) Electricity & Magnetism (P2)	Space (P4) Waves- light and sound (P5) Forces II (P6)	In year 9 students develop their substantive and dicaplinary knowledge at KS3, deepening their understanding of key concepts across the 3 disaplines ensuring fluancy and stregnthening the golden threads in science subjects to KS4. Themes include Space, Energy, Atoms and Materials, Transport, Deeper ideas on reproduction, organisms and organisation.
Particles (C1) Separation Techniques (C2) Chemical Reactions (C3)	Periodic Table (C4) Chemical Reaction (C5) Earth & Atmosphere (C6)	
Organisation (B1) Reproduction & Variation (B2) Interdependence (B3)	Nutrition & Digestion (B4) Bioenergetics (B5) Genetics & Evolution (B6)	

KS4
Students have 2 routes of study during year 10 and 11, Triple Science and Trilogy Science. Students have the option to choose Triple Science. Tiering of students in Trilogy Science is decided by academic performance and student MEG. Students undertake AQA certification.

KS5
Students have 3 routes of study during year 12 and 13, AQA Advanced Level Biology, Chemistry and Physics. Suitability for these courses is based on student performance at GCSE.