

**Long
Term Plan**

In Y7 students are exposed to the fundamental science that unpins the ambitious knowledge taught in subsequent years. Students become familiar with the idea of a scientific model and will build their practical ability in what will be their first experience of a lab setting.

Learning Cycle	Key Concepts and Themes	Vocabulary
HT1	The Big Bang <ul style="list-style-type: none"> What is Science and why do we study it? The importance of scientific models and the development of them. 	Investigation, Theories, Experimentation, Observe, Analysis, Evidence, Results, Data, Conclude, Hypothesis, Model
	Space <ul style="list-style-type: none"> The Earth's movements in space causing: Day and night, Years, Seasons, Eclipses The Solar System Space exploration 	Cosmology, Solar system, Sun, Stars, Axis, Seasons, Apollo, Exploration
HT2	Particles <ul style="list-style-type: none"> The Particle Model Solids, Liquids and Gases Changes of state Dissolving 	State, Solution, Solvent, Solute, Pure, Condense, Sublimation, Deposition
HT3	Cells <ul style="list-style-type: none"> Alive, dead or never living? Cells and cell structures Cell shape and size Diffusion and the cell membrane 	Microscope, Organism, Organelle, DNA, Diffuse, Respiration, Unicellular, Multicellular
HT4	Forces <ul style="list-style-type: none"> Sir Isaac Newton Describing forces Balanced and unbalanced forces Friction 	Momentum, Friction, Magnetic, Weight, Balanced, Unbalanced, Electrostatic, Upthrust, Resultant
	Solubility <ul style="list-style-type: none"> What is solubility Comparing solubility of different substances How to change the rate of solubility 	Saturated, Insoluble, Microscopic, Dissolve, Mass, Thermal, Kinetic energy
HT5	Sound and Light <ul style="list-style-type: none"> Types of waves Waves carry energy Production and transmission of sound How sound is detected Characteristics of light 	Particles, Vibration, Vacuum, Loud, Quiet, High, Low, Absorb, Reflect, Scatter
	Health and Disease <ul style="list-style-type: none"> Good and ill health Leading a healthy lifestyle Mental health Disease 	Health, Disease, Symptoms, Antibiotic Resistance, Environment, Genome, Infectious, Medicine
HT6	Variation <ul style="list-style-type: none"> Differences within species Charles Darwin Changes in species over time Collecting evidence through fossils 	Species, Variation, Inherited, Genetic, Evidence, Habitat, Extinct, Fossils, Continuous, Discontinuous

Skill Development

- To decide whether or not given data supports a specific theory
- To be able to carry out a practical activity, following instructions regarding safety
- To be able to use scientific equipment correctly
- To understand the importance of using models in science

Year 7: Science