



LOWER SCHOOL GRADE DESCRIPTORS

SCIENCE – Year 9

YEAR 9	7	<p>Biology:</p> <ul style="list-style-type: none"> • A deeper understanding of cell biology including structural differences, mitosis and diffusion. • An understanding of how microscopy aids the understanding of cell biology. • An understanding of human health and factors that affect it. • An understanding of how pathogens work. • An understanding of DNA. 	<p>Chemistry:</p> <ul style="list-style-type: none"> • An understanding of the Earth’s atmosphere and how it has changed over time. • An understanding of the impact of human activity on pollution levels. • An understanding of the Earth’s natural resources and why scientists are seeking ways to minimise the use of limited resources. • An understanding of atomic structure and the development of the Periodic Table. • An understanding of the reactivity of groups 1, 7 and 0. • An understanding of what a chemical equation represents. • An understanding of chemical bonding. 	<p>Physics:</p> <ul style="list-style-type: none"> • The ability to develop their ideas about forces and motion, moving to more qualitative approaches. • The ability to collect data and plot various motion graphs and interpret them. • An understanding of the Solar System, galaxies and stars and how scientists have developed our understanding of space. • An understanding of the properties of waves and how they transfer energy. • The ability to rearrange simple equations and perform basic arithmetic with a calculator.
	<p>An understanding of how scientific knowledge and understanding changes, building on processes such as questioning, investigating and evidence gathering. They describe and explain the importance of a wide range of applications and implications of science in familiar and unfamiliar contexts.</p>			
	EP	<p>Biology:</p> <ul style="list-style-type: none"> • An exceptional understanding of cell biology, identifying links and patterns within and between topics. • An ability to interpret, evaluate and synthesise data, from a range of sources in a range of contexts, and apply their understanding to a wide range of biological systems. 	<p>Chemistry:</p> <ul style="list-style-type: none"> • An exceptional understanding of atomic structure and the Periodic Table. • The ability to manipulate chemical equations, mastering formulae and balancing. • An understanding of different types of chemical bonding. 	<p>Physics:</p> <ul style="list-style-type: none"> • A correct strong intuition regarding natural phenomena. • A mastery of appropriate technical vocabulary with the ability to explain fluently and confidently why common misconceptions are incorrect. • The ability to communicate findings and arguments, showing their awareness of the degree of uncertainty and a range of alternative views. • The ability to evaluate evidence critically and give reasoned accounts of how they could collect additional evidence.