

The Priory Belvoir Academy: Curriculum Overview

"Opportunity and Achievement for All"

SUBJECT	Science	CURRICULUM LEADER	Dr Pennington	YEAR	9
ORGANISATION OF THE SUBJECT	From the start of year 9, students start studying GCSE Science. All students study the common content of Combined Science, with the option to study Triple Science taken during module 3 of year 9. Students will complete a number of required practical's throughout the course. All students will study Biology, Chemistry and Physics as Combined Science GCSE covers all three disciplines.				
Key Concepts (The big ideas underpinning this subject)		Key Skills in this subject			
<p>Ideas of science</p> <ol style="list-style-type: none"> All material in the Universe is made of very small particles. Objects can affect other objects at a distance. Changing the movement of an object requires a net force to be acting on it. The total amount of energy in the Universe is always the same but energy can be transformed when things change or are made to happen. The composition of the Earth and its atmosphere and the processes occurring within them shape the Earth's surface and its climate. The solar system is a very small part of one of millions of galaxies in the Universe. Organisms are organised on a cellular basis. Organisms require a supply of energy and materials for which they are often dependent on or in competition with other organisms. Genetic information is passed down from one generation of organisms to another. The diversity of organisms, living and extinct, is the result of evolution. <p>Ideas about science</p> <ol style="list-style-type: none"> Science assumes that for every effect there is one or more causes. Scientific explanations, theories and models are those that best fit the facts known at a particular time. 		<ul style="list-style-type: none"> Scientific knowledge and understanding. Application of Science. Working scientifically. Practical skills and techniques. Mathematics for Science. 			

<p>3. The knowledge produced by science is used in some technologies to create products to serve human ends.</p> <p>4. Applications of science often have ethical, social, economic and political implications.</p>	
<p>What will be learnt in this subject?</p>	<p>How will learning take place in this subject?</p>
<p>Biology (modules 1 and 2) Biology topics include cell structure, health issues, non-communicable disease, adaptations and interdependence, organisation of an ecosystem, photosynthesis and biodiversity. Additionally, students complete three of the Biology required practical tasks that now assess practical skills through the written examination.</p> <p>Physics (modules 3 and 4) Physics topics include the various national and global energy resources used for generating electricity, electrical circuits, current and charge, density, forces and work done, forces and elasticity, motion and magnetism. Additionally, students complete two of the Physics required practical tasks that now assess practical skills through the written examination.</p> <p>Chemistry (modules 5 and 6) Chemistry topics include atoms and the periodic table, reactivity of metals, reactions of acids and chemistry of the atmosphere. Additionally, students complete two of the Chemistry required practical tasks that now assess practical skills through the written examination.</p>	<ul style="list-style-type: none"> • Verbal assessment in lessons • Low stakes high challenge quizzes • Practical investigations • Peer and self-assessment • Progress Assessments • End of unit test • End year examinations
<p>What methods of assessment will be used?</p>	<p>How can you support learning and progress in this subject?</p>
<ul style="list-style-type: none"> • Written assessment tasks • End of unit tests • Homework assessments • Practical technique and skill • End of year test 	<ul style="list-style-type: none"> • Support students at home, encouraging them to complete homework and discussing their grades and progress. • Ensure you are aware of the different resources your child can access when they are not in school. • Support your child with effective time management. • Support the school by allowing your child to attend extra-curricular clubs and intervention sessions.
<p>Equipment needed for this subject.</p>	<p>Learning outside the classroom: enrichment opportunities in this subject.</p>
<p>Black pen, pencil, rubber, 30cm ruler and scientific calculator</p>	