

# EASTBURY SUBJECT CURRICULUM

Subject	<b>Science Year 11</b>
Overview	<p>Pupils in Y11 will continue with the GCSE course and complete Unit 2 which is 'Additional Science'.</p> <p>Pupils will study Biology, Chemistry and Physics and will also complete two controlled assessments. They will build on the prior knowledge gained in Y9 and as a result the expectations of the course become greater. They will be required to justify answers using Scientific reasoning using correct English and scientific terminology. Pupils will also need to demonstrate their ability in problem solving, using mathematics to solve Scientific problems and the application of concepts to unfamiliar contexts.</p> <p>Pupils will have two teachers and the course will be split between them. During Y11 some pupils will improve their controlled assessment which will count for 25% of the GCSE grade.</p> <p>Pupils will be given additional skills sessions run after school on a Monday and Tuesday to focus on exam and study skills while revisiting previous Y10 material. These will support pupils in the areas which need addressing outside of the current material with the aim of better preparing them for their final exams in the summer.</p>
Term by term	
Autumn	<p><b>BIOLOGY</b> Pupils will cover <b>Cells, tissues and organs</b> – cell adaptations and movement between cell; <b>Organisms in the environment</b> – photosynthesis, plants and distribution of organisms; <b>Enzymes</b> – use of enzymes in digestion and technology; <b>Energy from respiration</b> – aerobic, anaerobic and the effects on the body</p> <p><b>PHYSICS</b> <b>Motion</b> – Distance, time, velocity and acceleration; <b>Forces</b> – resultant force, affects the have on motion and vehicle applications; <b>Work, energy and momentum</b> – kinetic and gravitational potential energy, explosions, collisions and car safety; <b>Current Electricity</b> – charge, circuits, current - potential difference graphs and resistance.</p>
Spring	<p>Some pupils will be given the opportunity to improve their coursework.</p> <p><b>BIOLOGY</b> Pupils will cover <b>Inheritance in animals and plants</b> – cell division, stem cells, DNA and the ethics of these applications; <b>Old and new species</b> – origin of life, fossils and evolution of species</p> <p><b>PHYSICS</b> <b>Mains electricity</b> – alternating current, cable plugs and fuses, electrical energy power and charge; <b>Radioactivity</b> – properties of alpha, beta and gamma radiation, discovery of the nucleus and nuclear reactions; <b>Energy from the nucleus</b> – fission, fusion, the universe and stars.</p> <p><b>CHEMISTRY</b> <b>Structure, bonding and properties</b> – ionic, covalent and metallic bonding, structure polymers and nanoscience; <b>How much?</b> – mass, yield and formula calculations, reversible reactions and chemical analysis; <b>Rates and energy</b> – factors affecting rate</p>

	of reaction, exothermic and endothermic reactions;
<b>Summer</b>	<p><b>CHEMISTRY</b>  <b>Salts and electrolysis</b> – acids bases and making salts, electrolysis for extraction and electroplating.</p> <p>Revision and prepare for the exams.</p>
<b>Homework</b>	<p>Students will have two teachers and will be given homework every week on a rotation. Homework tasks will consist of exam questions, research and or short projects.  Homework will be on <a href="http://www.showmyhomework.com">www.showmyhomework.com</a>.</p>
<b>Additional information</b>	<p>Students will follow the AQA GCSE SCIENCE A Course Unit 2 Biology, Chemistry and Physics.</p>
<b>Useful resources</b>	<p><b>Here are some helpful resources including course information</b>  <a href="http://www.aqa.org.uk">www.aqa.org.uk</a> –Search for GCSE SCIENCE A. Here you can access exam papers and mark schemes  <a href="http://www.bbc.co.uk/schools/gcsebitesize/">http://www.bbc.co.uk/schools/gcsebitesize/</a> - Click on Science AQA topics  <a href="http://www.samlearning.com">www.samlearning.com</a>  <a href="http://www.my-gcsescience.com/">http://www.my-gcsescience.com/</a> -Click on Core Science Videos</p>