

IES Breckland Y10 Curriculum Map 2017-18

Subject:	-Science
Year:	10
Overview	Year 10 students study separate Physics, Biology and Chemistry in their GCSE Science lessons. There is a mixture of practical work, including Core Practicals that will be examined and theory lessons. Pupils are required to learn a number of equations during their course as these will not be provided in the exam paper
For KS4	<i>Edexcel combined science</i>
Number of lessons over 2 weeks	<i>9 (3 Biology, 3 Chemistry and 3 Physics)</i>
Break down by term	<p><i>Autumn 1 & 2</i></p> <p><i>CB2: Cells and control</i></p> <p><i>CB3: Genetics</i></p> <p><i>CC5,6 and 7: Chemical bonding</i></p> <p><i>CP3: Energy</i></p> <p><i>CP4: waves</i></p>
	<p><i>Spring 1 and 2</i></p> <p><i>CB4: Natural selection and genetic modification</i></p> <p><i>CC8: Acids and alkalis</i></p> <p><i>CP5: Light and the EM spectrum</i></p>
	<p><i>Summer 1 and 2</i></p> <p><i>CB5: Health, disease and the development of medicines</i></p> <p><i>CC9: Chemical calculations</i></p> <p><i>CP6: radioactivity</i></p>
How will students be assessed	End of unit tests, core practical assessments and mock exams.
How can parents support their child in their learning	By consolidating work using BBC KS4 Bitesize or the SAM learning website. Also by listening to or reading about developments in Science in the media e.g. Newsround/ New Scientist.

Subject:	Maths
Year:	10
Overview	<i>In Year 10 students add greater depth to the areas of maths previously covered while continue to develop their problem solving and exam techniques.</i>
For KS4	<i>AQA 8300</i>
Number of lessons over 2 weeks	8
Break down by term	<i>Autumn 1 & 2</i> <i>Calculating with Percentages</i> <i>Measures</i> <i>Surds</i> <i>Statistical Measures</i> <i>Indices</i> <i>Properties of Polygons</i> <i>Number Recap and Review</i>
	<i>Spring 1 & 2</i> <i>Congruence and similarity</i> <i>Pythagoras and Basic Trigonometry</i> <i>Simultaneous Equations</i> <i>Probability</i>
	<i>Summer 1 & 2</i> <i>Stats recap and review</i> <i>Algebra - quadratics and rearranging</i> <i>Volume</i> <i>Algebra recap and review</i> <i>Sketching Graphs</i> <i>Linear and quadratics equations and their graphs</i> <i>Geometry and measures</i>
How will students be assessed	End of topic tests and formal mock exam at the end of year.
How can parents support their child in their learning	Supporting students with completion of homework and encouraging use of the PiXL Maths App

Subject:	ICT
Year:	Year 10
Overview	This qualification aims to: • equip young people with the knowledge, understanding and skills they need to design and make digital products for others to use • enable young people to use digital tools as a means of expression to inform, persuade and entertain • foster young people’s creativity and develop their independent learning skills • challenge young people to reflect on what they produce and strive for improvement • increase young people’s awareness of their responsibilities in the digital world and their respect of other people’s rights • equip young people with real-world skills in planning and communication • give young people the knowledge, understanding and skills they need to support future learning
For KS4	Pearson Edexcel Level 1 Certificate in Digital Applications Qualification Number (QN) 601/3256/5
Number of lessons over 2 weeks	3
Break down by term	<i>Autumn 1 & 2</i> Delivering Unit 4: Game Making Most students will already have plenty of experience of playing computer games but they may have little or no understanding of the process of creating a computer game. With this in mind, they must be given the opportunity to explore different types of computer games, considering their graphics, music and sound effects, playability, challenge, and originality. Students will need to produce a game overview, an important stage in the development. They need to devote enough time to this stage to ensure that the initial ideas they come up with are viable given the limitations of the ICT tools available to them, their level and the amount of time they have to produce the finished game. Students need to be taught about design and how to comment on key aspects of the design process, showing how they made decisions about their designs and developed them from initial ideas into a final product. They must learn how to gather and use feedback throughout the project. Using a ‘test buddy’ will give them honest and critical feedback and could be a key success factor. Students need to be able to learn how to use software tools, including sound, graphics and authoring software, in order to prepare game assets and build their game. Suggestions for games-authoring software are given in the Resources section of this unit.
	<i>Spring 1 & 2</i> Delivering Unit 5: Coding for the Web This unit introduces students to the main programming languages involved in front-end web design: HTML, CSS and JavaScript. Students are not expected to learn server-side scripting languages such as PHP, ASP.NET, Ruby and Python. In order to understand the structure of a website’s programming script, students should be encouraged to look at the source code of the websites they visit. Students should be familiar with the importance of wireframes in the production process. They will need to create their own site structures and wireframes as part of the planning process and careful note should be taken of the client’s requirements for each page in the site, as established in the brief. Students will use HTML to build the overall structure of their web pages, however the design and layout of the site should be controlled through Cascading Style Sheets (CSS). This will allow students to separate content from presentation so that they can change the way the site looks without having to change the way it works. Students should be able to use internal and external style sheets. JavaScript is a powerful scripting language commonly used to

	<p>create the dynamic, interactive elements of a web page. As it can run in the browser, responding to user actions immediately rather than going back to the server, it is possible for students to experiment with JavaScript on their web pages. Students should be able to incorporate JavaScript into their pages to add functionality, for example to add an image slider to the page, although students will not be expected to write JavaScript from scratch. Adding tables to present information and styling them is also part of coding for the web, it will give students an opportunity to develop the skills they learned in Unit 1: Developing Web Products. Testing how the pages render in a web browser is an integral part of the coding process. Students will have to complete a test log to compare the actual outcomes with the intended outcomes and should be encouraged to evaluate the strengths and weaknesses of the finished product in order to identify possible improvements.</p>
	<p><i>Summer 1 & 2</i> Consolidation work to ensure all work is complete.</p>
<p>How will students be assessed</p>	<p>Summative Project Briefs All units will be assessed through a Summative Project Brief. The Summative Project Brief is the means by which students bring together the knowledge, skills and understanding they have acquired throughout the unit into a synoptic piece of work. There is a Summative Project Brief for each unit. Summative Project Briefs are set by Pearson, administered and marked by the centre, and moderated by Pearson</p>
<p>How can parents support their child in their learning</p>	<p>Encourage creative endeavours and encourage home learning.</p>

Subject:	Computing
Year:	Year 10
Overview	<p>A Computer Science qualification will, above all else, be relevant to the modern and changing world of computer science. Computer Science is a practical subject where learners can apply the knowledge and skills learned in the classroom to real-world problems. It is an intensely creative subject that involves invention and excitement. It will give an understanding of how computer technology works and looks at what goes on "behind the scenes". Through study of computer programming the course will help develop critical thinking, analysis and problem solving skills.</p> <p>GCSE (9-1) Computer Science has been improved and reformed to meet the demands of a modern and evolving computer science industry and educational sphere.</p>
For KS4	<i>9-1 Computer Science J276</i>
Number of lessons over 2 weeks	4
Break down by term	<p><i>Autumn 1 & 2</i> Component 1: Computer Systems: systems architecture, memory</p>
	<p><i>Spring 1 & 2</i> Component 1: storage, wired and wireless networks, network topology, protocols and layers;</p>
	<p><i>Summer 1 & 2</i> system security and software, ethical, legal, cultural and environmental concerns.</p>
How will students be assessed	Students will be assessed by means of topic tests throughout the year. These topic tests will ensure that students have understood the key concepts covered.
How can parents support their child in their learning	Encourage independent revision and ensure home learning is complete as this forms part of their course.