



## Year 9 Curriculum Overview

**Rationale:** The Year 9 curriculum is designed to give students an introduction to the field of cyber security whilst developing further their prior learning on programming skills (both HTML and Python), computational thinking, how to stay safe online, data representation and historical events from Year 7 and Year 8 whilst preparing them for further study at GCSE and the world of work.

Term/Length of Time	Outline	Assessment/Teacher Feedback Opportunities	Homework and Literacy resources
Autumn 1	<b>Cyber Security</b> Students will gain an understanding of the main concepts of cyber security through an online platform called 'Cyber Explorers' developed by the Department for Digital, Culture, Media and Sport (DCMS).	MS Forms based end of unit assessment. Mixture of Open and Closed questions with an additional focus on keywords/literacy	<b>Minimum homework expectation - to be set on G4S</b> Completion of revision activity using Seneca Learning or bespoke learning activity  <b>Optional homework tasks and Literacy resources</b> Creation of revision resource (e.g. mind map) to be submitted alongside compulsory activity  Complete some Bronze Award badges on the <a href="#">iDEA Award</a> to showcase your digital literacy and employability skills. Once complete you can move to Silver and then Gold certificates  Access <a href="#">BBC Bitesize</a> and research more into this topic  Complete an activity on <a href="#">Hour of Code</a>  Watch an episode of <a href="#">BBC Click</a> on the BBC iPlayer  Additional Reading for Budding Computer Scientists: <a href="#">Choose a book from this recommended reading list</a> some of which can be found in the department or the library
Autumn 2	<b>Introduction to Python Programming</b> Students will recap on prior learning from Year 8 and develop their understanding and	MS Forms based end of unit assessment. Mixture of Open and Closed questions with an additional focus on keywords/literacy	<b>Minimum homework expectation - to be set on G4S</b> Completion of revision activity using Seneca Learning or bespoke learning activity  <b>Optional homework tasks and Literacy resources</b>

	capabilities in using a high level programming language by exploring the use of selection and iteration.		<p>Creation of revision resource (e.g. mind map) to be submitted alongside compulsory activity</p> <p>Complete some Bronze Award badges on the <a href="#">iDEA Award</a> to showcase your digital literacy and employability skills. Once complete you can move to Silver and then Gold certificates</p> <p>Access <a href="#">BBC Bitesize</a> to recap on programming basics and research more into the topic of selection <a href="#">here</a> and iteration <a href="#">here</a></p> <p>Complete an activity on <a href="#">Hour of Code</a></p> <p>Watch an episode of <a href="#">BBC Click</a> on the BBC iPlayer</p> <p>Additional Reading for Budding Computer Scientists: <a href="#">Choose a book from this recommended reading list</a> some of which can be found in the department or the library</p>
Spring 1	<p><b>Searching and Sorting Algorithms</b></p> <p>Students will learn about the standard searching algorithms (Binary and Linear) and standard sorting algorithms (Bubble, Merge and Insertion). Students will need to be able to understand the main steps of each algorithm and apply the algorithm to a given data set.</p>	<p>MS Forms based end of unit assessment.</p> <p>Mixture of Open and Closed questions with an additional focus on keywords/literacy</p>	<p><b>Minimum homework expectation - to be set on G4S</b></p> <p>Completion of revision activity using Seneca Learning or bespoke learning activity</p> <p><b>Optional homework tasks and Literacy resources</b></p> <p>Creation of revision resource (e.g. mind map) to be submitted alongside compulsory activity</p> <p>Complete some Bronze Award badges on the <a href="#">iDEA Award</a> to showcase your digital literacy and employability skills. Once complete you can move to Silver and then Gold certificates</p> <p>Access <a href="#">BBC Bitesize</a> and research more into this topic</p> <p>Complete an activity on <a href="#">Hour of Code</a></p>

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Spring 2	<p><b>HTML Programming - Web Page</b></p> <p>Students will recap and embed their understanding on how to create a simple webpage from Year 7. In addition, students will learn about the use of CSS and DIV tags to improve web page layout.</p>	<p>MS Forms based end of unit assessment.</p> <p>Mixture of Open and Closed questions with an additional focus on keywords/literacy/numeracy</p>	<p><b>Minimum homework expectation - to be set on G4S</b></p> <p>Completion of revision activity using Seneca Learning or bespoke learning activity</p> <p><b>Optional homework tasks and Literacy resources</b></p> <p>Creation of revision resource (e.g. mind map) to be submitted alongside compulsory activity</p> <p>Complete some Bronze Award badges on the <a href="#">iDEA Award</a> to showcase your digital literacy and employability skills. Once complete you can move to Silver and then Gold certificates</p> <p>Access BBC Bitesize to recap on learning from Year 7 <a href="#">here</a> and learn about the new Year 8 topics <a href="#">here</a></p> <p>Complete an activity on <a href="#">Hour of Code</a></p> <p>Watch an episode of <a href="#">BBC Click</a> on the BBC iPlayer</p> <p>Additional Reading for Budding Computer Scientists: <a href="#">Choose a book from this recommended reading list</a> some of which can be found in the department or the library</p>
Summer 1	<p><b>Using a Computer</b></p> <p>Students will develop a deeper and more adult understanding on</p>	<p>MS Forms based end of unit assessment.</p>	<p><b>Minimum homework expectation - to be set on G4S</b></p> <p>Completion of revision activity using Seneca Learning or bespoke learning activity</p>

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	<p>how to be safe and responsible on the internet. Students will recap on what the term 'online safety means' and then move onto topics such as their online reputation, the right to privacy and illegal content.</p>	<p>Mixture of Open and Closed questions with an additional focus on keywords/literacy/numeracy</p>	<p><b>Optional homework tasks and Literacy resources</b>            Creation of revision resource (e.g. mind map) to be submitted alongside compulsory activity</p> <p>Complete some Bronze Award badges on the <a href="#">iDEA Award</a> to showcase your digital literacy and employability skills. Once complete you can move to Silver and then Gold certificates</p> <p>Access BBC Bitesize to understand more about intellectual property <a href="#">here</a></p> <p>Access Oak Academy lesson on Reality V's the Online World <a href="#">here</a></p> <p>Complete an activity on <a href="#">Hour of Code</a></p> <p>Watch an episode of <a href="#">BBC Click</a> on the BBC iPlayer</p> <p>Additional Reading for Budding Computer Scientists: <a href="#">Choose a book from this recommended reading list</a> some of which can be found in the department or the library</p>
Summer 2	<p><b>Piskelapp – Bitmap Graphics</b>            This unit aims to provide students with an understanding of the history of graphics within computer games and how to design, develop and animate 8 bit graphics to simulate early computer game characters.</p>	<p>Verbal teacher feedback on production of 2D graphics and animation. Recognition and rewards for additional activities completed beyond the classroom.</p>	<p><b>Minimum homework expectation - to be set on G4S</b>            Completion of revision activity using Seneca Learning or bespoke learning activity</p> <p><b>Optional homework tasks and Literacy resources</b>            Creation of revision resource (e.g. mind map) to be submitted alongside compulsory activity</p> <p>Complete some Bronze Award badges on the <a href="#">iDEA Award</a> to showcase your digital literacy and employability skills. Once complete you can move to Silver and then Gold certificates</p>

			<p>Access BBC Bitesize to understand more about different types of graphic <a href="#">here</a></p> <p>Create your own Piskelapp graphic by following the tutorial provided by the National Videogame Museum <a href="#">here</a></p> <p>Complete an activity on <a href="#">Hour of Code</a></p> <p>Watch an episode of <a href="#">BBC Click</a> on the BBC iPlayer</p> <p>Additional Reading for Budding Computer Scientists: <a href="#">Choose a book from this recommended reading list</a> some of which can be found in the department or the library</p>
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