

Year 9 Computer Science – Outline Programme of Study

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Big ideas/ topics	Digital Skills	Developing for the Web – HTML	Developing for the Web – Google Sites	Media Animations	Introduction to Python	App Development
Key Knowledge	<ul style="list-style-type: none"> - Conduct independent investigation of digital skills in employment using the web. - Conduct primary research using Google forms to gather data about digital skills from within the cohort. - Analyse the data gathered. - Present their findings using Google slides. - Develop their own CV using Google resources. 	<ul style="list-style-type: none"> - Demonstrate understanding of website structure and composition. - Learn to format text using HTML tags. - Use images appropriately in webpages. - Navigate effectively between multiple pages. - Understand how search engines work and how to optimise web page metadata. 	<ul style="list-style-type: none"> - Investigate how software can be used to develop web pages for the user. - Understand what makes good website design including colour, layout and content. - Explore the use of advanced /embedded content and how this improves page quality. - Self and peer evaluate with given criteria. 	<ul style="list-style-type: none"> - Investigate the use of and history of Animation. - Use software to add, delete, remove, scale and rotate objects. - Investigate the role and advantages of keyframe animation. - Add, move, and delete keyframes to make basic animations - Use edit mode to extrude, loop cut and face editing, Apply different colours to different parts of the same model. - Add lighting and render a short animation. 	<ul style="list-style-type: none"> - Understand basic programming constructs and computational thinking. - Use variable naming conventions. - Use different forms of iteration to ensure program efficiency. - Use selection to allow user interactivity and multiple system output. - Understand input and data types, using casting to convert from one type to another. - Define and call sub-routines from within a main program. - Solve simple problems. 	<ul style="list-style-type: none"> - Investigate the purpose, function and audience of applications. - Design an application for a given user. - conduct simple market research for an app design. - Create prototype by creating the GUI. - Conduct further market research to gain feedback on initial prototype and refine the finished product. - Evaluate finished product against the initial designs and requirements.

Further information and reading list

- Our Key Stage 3 prepares students for Computer Science (AQA 8525) and Creative Media (OCR J834) at GCSE.
- Book: KS3 Computing Complete Revision & Practice (CGP) <https://www.cgpbooks.co.uk/secondary-books/ks3/computing/cos31-ks3-computing-complete-revision>
- Useful websites:
- Oak Academy: <https://classroom.thenational.academy/subjects-by-key-stage/key-stage-3/subjects/computing>
- BBC Bitesize: <https://www.bbc.co.uk/bitesize/subjects/zvc9q6f>
- Code Club: <https://projects.raspberrypi.org/en/codeclub>

Ways to support and extend student learning in this subject

Support guidance:

- Students need to be secure in their understanding and use of the Google applications. They should be able to access resources, work collaboratively online and submit a range of assignments through the Google Classroom portal. For additional support please use GCF Global and the YouTube tutorials: <https://edu.gcfglobal.org/en/topics/googleapps/>
- If you wish to revise or revisit a topic then you can use Oak Academy with its online tutorials: <https://classroom.thenational.academy/subjects-by-key-stage/key-stage-3/subjects/computing>
- Some basic python tutorials and the HTML interface: <https://trinket.io/>
- High-achieving guidance:
- Students can access online resources to extend their knowledge and support project development.
e.g. https://studio.code.org/s/csd1-2021?section_id=4083377
- Bitesize website: <https://www.bbc.co.uk/bitesize/subjects/zvc9q6f> or continue independently learning programming/animation skills with Code Club: <https://projects.raspberrypi.org/en/codeclub>