

## Carmel College Curriculum Implementation – KS 3 Long term plan      Subject - Computing

	Year 7	Year 8	Year 9
Autumn half term 1 Sequential knowledge and skills	<b>Computing Devices</b> Learning about computer systems including a range of Input, Output, Storage and Network devices.	<b>Introduction to Cybersecurity</b> Understanding Digital Footprints, Operating Systems and Cyber Security.	<b>Digital Artefacts</b> The project Life Cycle, Working with digital artefacts (Reliability, Validity and Bias, Trustworthiness, design and usability)
Assessment Content and methods used to judge learning	HW1, HW2 Baseline Assessment based on Primary computing education.	HW1, HW2 MS Forms assessment - summary of work completed so far in years 7 and 8.	HW1, HW2 MS Forms assessment - summary of work completed so far in years 7, 8 and 9.
Autumn half term 2 Sequential knowledge and skills	<b>Introduction to Programming – Part 1</b> Planning. Writing algorithms and flowcharts. Inputs, Outputs, Sequence and Variables.	<b>Web Design (inc. HTML, CSS and JavaScript)</b> Text-based coding HTML and Web design Networks (including the Internet) and the WWW	<b>Text based Programming</b> Using Python to manipulate a range of data types. In doing so, learning about some of the more advanced features of programming
Assessment Content and methods used to judge learning	HW3, HW4 Ongoing formative assessment.	HW3, HW4 Ongoing formative assessment.	HW3, HW4 Ongoing formative assessment.
Spring half term 3 Sequential knowledge and skills	<b>Introduction to Programming – Part 2</b> Drawing shapes and patterns using the Pen tool. Using sequence, selection and iteration in programming.	<b>Transition to Text-Based Programming</b> Using Python to program computers. Using the previous knowledge learned in Scratch to ease the transfer to text programming.	<b>Algorithms and Data Representation</b> The formal algorithms for sorting and searching. How numbers, text, images and sound are stored.
Assessment Content and methods used to judge learning	HW5, HW6 Task to complete based on the skills and understanding learned in the unit. (Programming task)	HW5, HW6 Task to complete based on the skills and understanding learned in the unit. (Programming and HTML task)	HW5, HW6 Task to complete based on the skills and understanding learned in the unit. (Programming and Digital asset task)
Spring half term 4 Sequential knowledge and skills	<b>Introduction to Programming – Part 3</b> Solving a range of computing problems using the VEX VR environment and previously learned skills.	<b>Data Handling using Spreadsheets</b> Learning skills within MS Office (esp. MS Excel) to complete tasks, solve problems and look at Big Data.	<b>Project - Making The World A Better Place</b> Use of MS Office tools within careers (Word, Outlook, PowerPoint, Excel) Integrating software packages.
Assessment Content and methods used to judge learning	HW7, HW8 Ongoing formative assessment.	HW7, HW8 Ongoing formative assessment.	HW7, HW8 Ongoing formative assessment.
Summer half term 5 Sequential knowledge and skills	<b>Introduction to Data Handling</b> Questionnaires, Data Collection, Data Processing and Data Presentation. Based on the theme of 'Careers'.	<b>Computing Hardware</b> Computer Processors, Boolean logic and binary and comparing hardware. Including the use of a Micro:bit	<b>Simulation and Modelling</b> Modelling real-world problems and physical systems by using simulations in Flowol software.
Assessment Content and methods used to judge learning	HW9, HW10 MS Forms assessment - summary of work completed so far in year 7.	HW9, HW10 MS Forms assessment - summary of work completed so far in years 7 and 8.	HW9, HW10 MS Forms assessment - summary of work completed so far in years 7, 8 and 9.
Summer half term 6 Sequential knowledge and skills	<b>Introduction to Application Design</b> Designing an 'App' or a 'Bot' for a particular purpose and target audience.	<b>Micro:bits Projects</b> Using Micro:bits to complete projects involving computing hardware. (Using Block or text programming)	<b>Project - Making The World A Better Place</b> Global Project (System Life Cycle, Data, Programming, Apps, Multimedia) A project that makes use of multiple computing skills to create a set of digital products.
Assessment Content and methods used to judge learning	HW11, HW12 Ongoing formative assessment. Catch-up opportunity for those not meeting target grade.	HW11, HW12 Ongoing formative assessment. Catch-up opportunity for those not meeting target grade.	HW11, HW12 Ongoing formative assessment. Catch-up opportunity for those not meeting target grade.

--	--	--	--