Subject Curriculum Overview for Academic Year 2023/2024

Subject: Computing	Subject Leader: L Kenvyn	Year Group: 7	AUTUMN TERM
Topic	**Key Learning Points**	**Key Vocabulary**	**Assessments**
Impact of technology – Collaborating online respectfully **Networks from semaphores to the internet**	End Point: To have strong ICT literacy skills with Windows OS & office applications, and understand how to communication in a safe and respectable manner online. • How to create a secure and memorable password • How to set a folder structure • Assess the acceptably of online comments • To define Cyberbullying • To identify Cyberbullying • To use presentation software • Understand what copyright is • To be able to reference • Be able to use office software • To define Catfishing • To identify common aspects of fake online profiles • Know what information should not be posted online and why • Know the dangers of speaking to strangers online End Point: To develop understanding and skills of utilising networks for personal needs. While being able to explain what technology is used in a network. • Can explain what a personal computer is • To define HTTP • Explain what a network cable does • Explain what a server does • Explain what a router does • To define ISP • To define WIFI • To define Bandwidth • Understand how internet speeds are measured • Advantages and disadvantages of WIFI and wired connections • Explain what information makes up a Packet payload • Explain the concept of IP address's	Computing Password Secure Hazards Email Recipient Network Online Comments Community Cyberbullying Presentation software Slide deck Audience Catfishing Network Protocol Personal computer Stand-alone HTTP Network cable Hub Server Router ISP Wired Wireless WiFi Bandwidth broadband IP address Packet payload	Students will be assessed formatively through the completion of recall homework tasks along with a formal end of term assessment completed under exam conditions. The assessment will largely be multiple choice and short answer questions. The assessment will monitor understanding of essential knowledge from modules learnt so far this year.

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Topic	**Key Learning Points**	**Key Vocabulary**	**Assessments**
Using media gaining support for a cause	End Point: To develop a sound understanding of how information technology and digital literacy can be used to influence people. • Able to choose appropriate software for a given task • Apply the key features of a word processor to format a document • Evaluate formatting techniques to understand why we format documents • Demonstrate an understanding of licensing issues involving online content by applying appropriate Creative Commons licences • Demonstrate the ability to credit the original source of an image • Critique digital content for credibility • Apply referencing techniques and understand the concept of plagiarism • Evaluate online sources for use in own work • Construct a blog using appropriate software • Create content for a blog based on credible sources	Application software Word processor Formatting Fonts Copyright licensing Creative Commons Text wrapping Cropping Credibility Source Plagiarism Referencing Citation Blog	Students will be assessed formatively through the completion of recall homework tasks along with a formal end of term assessment completed under exam conditions. The assessment will largely be multiple choice and short answer questions. The assessment will monitor understanding of essential knowledge from modules learnt so far this year.
Programming essentials in Scratch part I	End Point: To build confidence and knowledge of key programming constructs, such as variables, selection and iteration. • Compare how humans and computers understand instructions (understand and carry out) • Define a variable as a name that refers to data being stored by the computer • Predict the outcome of a simple sequence that includes variables • Trace the values of variables within a sequence • Make a sequence that includes a variable • Define a condition as an expression that will be evaluated as either true or false • Identify that selection uses conditions to control the flow of a sequence • Create conditions that use comparison operators (>,<,=) • Create conditions that use logic operators (and/or/not) • Define iteration as a group of instructions that are repeatedly executed • Identify where count-controlled iteration can be used in a program • Implement count-controlled iteration in a program • Detect and correct errors in a program (debugging)	Sequencing Subroutines Execute Variables Commands Input Process Output Expressions Conditions Selection **If** statements Operators Logic Iteration Debugging	

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Subject: Computing	Subject Leader: L Kenvyn	Year Group: 7	SUMMER TERM
Topic	**Key Learning Points**	**Key Vocabulary**	**Assessments**
Programming essentials in Scratch part II **Modelling data spreadsheets**	End Point: To build confidence and knowledge of key programming constructs, such as abstraction and decomposition. • Define a subroutine as a group of instructions that will run when called by the main program or other subroutines • Define decomposition as breaking a problem down into smaller, more manageable subproblems • Identify how subroutines can be used for decomposition • Identify where condition-controlled iteration can be used in a program • State two types of iteration • Evaluate which type of iteration is required in a program • Define a list as a collection of related elements that are referred to by a single name • Describe the need for lists, identify when lists can be used in a program and use a list • Apply appropriate constructs to solve a problem End Point: To have a strong understanding of how to model/represent data with a spreadsheet • Identify columns, rows, cells, and cell references in spreadsheet software • Use formatting techniques in a spreadsheet • Use basic formulas with cell references to perform calculations in a spreadsheet (+, -, *, /) • Use the autofill tool to replicate cell data • Explain the difference between data and information • Explain the difference between primary and secondary sources of data • Create appropriate charts in a spreadsheet • Use the functions SUM, COUNTA, MAX, and MIN in a spreadsheet • Analyse data • Use a spreadsheet to sort and filter data • Use the functions AVERAGE, COUNTIF, and IF in a spreadsheet • Use conditional formatting in a spreadsheet	Sequencing Subroutines Execute Variables Commands Input Process Output Expressions Conditions Selection **If** statements Operators Logic Iteration Debugging Data Cell Cell reference Row Column Range Autofill Formula Cell reference Primary source Secondary source Pie chart Bar chart Axis/axes Function	Students will be assessed formatively through the completion of recall homework tasks along with a formal end of term assessment completed under exam conditions. The assessment will largely be multiple choice and short answer questions. The assessment will monitor understanding of essential knowledge from modules learnt so far this year.

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How parents can support learning in the subject this academic year

Encourage students to use computers at home in creative ways, from: attempting to create digital art, research interests and hobbies online, learn how to make mods for the games they like to play.
Promote the use of online revision tools such as BBC Bitesize, Seneca and GCSEPod.

Recommended Reading

- For further reading around topics covered in lessons – https://www.bbc.co.uk/bitesize/subjects/zvc9q6f
- To further Programming skills – https://scratch.mit.edu/
- To build digital art skills – https://www.photopea.com/
- To learn more about computers in general - https://www.youtube.com/c/Techquickie/videos?view=0&sort=p&shelf_id=0

Points to note

Year 7 is the start of the students journey into learning computer science. It is assumed that students have no prior knowledge and therefore this year is used to provide all students with secure key skills and knowledge in order to succeed further.
There is no textbook or revision guide used this year.