COMPUTING YEAR PLANNER (LTP) – YEAR 8

Term	Module Title	Learning Content / Skills	Assessment Schedule*	Home Learning Support
Autumn 1 – Autumn 2	**Theory: Understanding Computers**	This is a theoretical unit covering the basic principles of computer architecture and use of binary. Pupils will revise some of the theory on input and output covered in previous learning and continue to look at the Input-Process-Output sequence and the Fetch-Decode-Execute cycle through practical activities. Pupils will then look at some simple binary to decimal conversion and vice versa, and learn how text characters are represented using the ASCII code. This will be followed by some simple binary addition. Pupils will learn more in depth how storage devices represent data using binary patterns and physically save these patterns. Finally, they will look at a brief history of communication devices, how new technologies and applications are emerging and the pace of change. Key skills: Computational thinking Mathematical Theoretical Speaking and listening Applying knowledge and understanding Research Understanding key terminology	Formative – Assessment of classroom work and homework tasks will be at least once every two weeks. These tasks will be marked on the 0-9 grading system using the unit mark sheets. Reflection time will be given to students to work on their targets which will allow for an improvements in their grades on work which has already been marked. An overall summative assessment will take place at the end of the module (end of term). This will be graded 0-9 using the unit mark sheets.	Think of an activity that you might do at home, for example making a smoothie. Can you identify the input, process and output that takes place in order to make a smoothie? Try writing a secret message to your parents or siblings using ASCII. Practice converting binary to denary, denary to binary and doing binary addition.

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Autumn 2 – Spring 1	HTML	This is a practical unit where students will learn the basics of HTML and CSS, and how to create a responsive design which adapts to any size of screen for viewing on, say, a mobile phone or a PC. They will learn how to create text styles and add content, including text and graphics, in a specified position on a page, as well as navigation links to other pages on their website and to external websites. Students will decide on a topic for their websites, document their designs and collect suitable text and images. They will then use their HTML templates to create their websites, including a web form. Pupils can view the data collected by the web form into a simulated database. Key skills: HTML coding CSS Responsive design Navigation and structure Creativity Logical thinking	Formative – Assessment of classroom work and homework tasks will be at least once every two weeks. These tasks will be marked on the 0-9 grading system using the unit mark sheets. Reflection time will be given to students to work on their targets which will allow for an improvements in their grades on work which has already been marked. An overall summative assessment will take place at the end of the module (end of term). This will be graded 0-9 using the unit mark sheets.	What are the two most common websites you go on? Can you explain their purpose, audience and the house style used? Research 5 new HTML tags and explain how they could be used on your website. Research 5 tips on what makes a good website. Consider font, colours and layout.
Spring	Database	This is a practical unit covering the basic theory,	Formative – Assessment of	Create a database which

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1- Spring 2		creation and use of a single-table database and a simple relational database involving two tables in a one-to-many relationship. Pupils will start by looking at an existing single-table database, learning how to add records and make queries. The students will be using Microsoft Access to create the following: • a flat-file or two-table relational database of their own, using suitable field types and adding in appropriate validations • an input form with help text, combo boxes and list boxes • queries and a report using data from one or both tables • a front end menu for their application linking to the database input form and report Key skills: Create tables Applying data validation Complex queries Generating reports Analysing data Understanding data types	classroom work and homework tasks will be at least once every two weeks. These tasks will be marked on the 0-9 grading system using the unit mark sheets. Reflection time will be given to students to work on their targets which will allow for an improvements in their grades on work which has already been marked. An overall summative assessment will take place at the end of the module (end of term). This will be graded 0-9 using the unit mark sheets.	holds data about your family members. For example, their DOB, contact number, facial features. Think of ways how a database might be useful to help manage data in the household. Can you think of 5 other places that might use a database and how it would used? What kind of data would be held on there.
Summer 1 & 2	Python	This is an introduction to Python, a powerful but easy-to-use high-level programming language. Python is an object-oriented language used to develop computer	Formative – Assessment of classroom work and homework tasks will be at least once every	Try writing algorithms for everyday processes you might do in the house. E.g.

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		programs. Students will understand the process of developing programs, the importance of writing correct syntax, being able to formulate algorithms for simple programs and debugging their programs. Key skills: Logic Computational thinking Sequencing Problem Solving Python functions Syntax	two weeks. These tasks will be marked on the 0-9 grading system using the unit mark sheets. Reflection time will be given to students to work on their targets which will allow for an improvements in their grades on work which has already been marked. An overall summative assessment will take place at the end of the module (end of term). This will be graded 0-9 using the unit mark sheets.	Going to bed, making a cup of tea, boiling and egg. Try writing a pseudocode for a program which allows someone to enter a temperate and the program outputs if it is too hot or too cold. Think of 3 things in the house which might use a variable and identify what it might be?