Curriculum Map

Subject: Computing   **Year Group: 8**

The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Content	**Topic:** Computer Software (CS) **Key Areas:** ➢ Different functions of an operating software. ➢ Computer Threats. ➢ Utility software and Application software **Keywords:** Multi-Tasking, Multi-User, GUI, Command Line Interface, Off-the-shelf software, Computer Virus and Database **NC Strand:** CS9	**Topic:** Programming-HTML (CS) **Key Areas:** ➢ Introduction to HTML using notepad. ➢ What are tags? ➢ Basic HTML skills. ➢ Website development – planning and linking pages **Keywords:** HTML, CSS, Tags (opening & closing), angle bracket and using images **NC Strand:** CS4	**Topic:** Programming-Java Script (CS) **Key Areas:** ➢ Introduction to Java Script ➢ Data types: strings, substrings, numbers and Boolean ➢ Create variables ➢ Use alert box ➢ Create IF statements ➢ Create functions **Keywords:** JavaScript, data types, variable, if statement **NC Strand:** CS4	**Topic:** Website Development (IT) **Key areas:** ➢ Design the structure of a website ➢ Create tables and forms to layout webpages ➢ Create internal and external links ➢ Embed media (images, audio, video) in webpages **Keywords:** Dreamweaver software, tables, links, logo and banners **NC Strand:** IT2	**Topic:** Database Development (IT) **Key areas:** ➢ Flat File Database ➢ Relational Database ➢ Data types ➢ Primary keys ➢ Foreign keys ➢ Queries ➢ Forms ➢ Reports ➢ Validation **Keywords:** Access software, data type, queries, forms, report, validation **NC Strand:** IT1	**Topic:** Data Representation (CS) **Key areas:** ➢ Data representation Text ➢ Representation of bitmap images ➢ Representation of sound ➢ Calculate file sizes (images and sound) **Keywords:** Data representation, character set, ASCII code, bitmap, pixels, resolution and colour depth **NC Strand:** CS11

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Skills	➢ Lateral thinking ➢ Critical thinking ➢ Analysis ➢ problem-solving	➢ Computational thinking ➢ Critical thinking ➢ Analysis ➢ problem-solving	➢ computational Skills ➢ Critical thinking ➢ Analysis ➢ problem-solving	➢ Creative thinking ➢ Critical thinking ➢ problem-solving ➢ Teamwork	➢ Analysis ➢ computational Skills ➢ Critical thinking ➢ problem-solving	➢ Critical thinking ➢ computational Skills ➢ problem-solving ➢ Analysis
Key questions	➢ Name some common Utility software. ➢ Describe an operating system and its importance. ➢ Explain Multi-tasking. ➢ Distinguish between various features of GUI. ➢ Evaluate computer stored program	➢ Enumerate some common tags. ➢ Describe HTML and how it is used ➢ Distinguish between HTML and CSS ➢ Evaluate the importance of HTML	➢ Explain what is JavaScript ➢ Describe how JavaScript can be used in websites development ➢ Distinguish between alert and prompt box ➢ Evaluate the term variable and function	➢ Describe the structure of a website ➢ Explain the use of tables in website ➢ Distinguish between a logo and a banner ➢ Create a website with links pages, embedded banner and audio	➢ Describe what database is ➢ Explain relational database. ➢ Distinguish between primary and foreign key. ➢ Evaluate the application of database in real-life situation	➢ Define data representation. ➢ Explain the term character set. ➢ Distinguish between representation of bitmap image and sound ➢ Calculate file size of a given number
Assessment	**Formative Assessment:** Starter test, class activities, homework, Quizzes, group work task, target questioning **Summative Assessment:** Unit test, End-of-term test, End-of-year test	**Formative Assessment:** Starter test, class activities, homework, Quizzes, group work task, target questioning **Summative Assessment:**	**Formative Assessment:** Starter test, class activities, homework, Quizzes, group work task, target questioning **Summative Assessment:**	**Formative Assessment:** Starter test, class activities, homework, Quizzes, group work task, target questioning **Summative Assessment:**	**Formative Assessment:** Starter test, class activities, homework, Quizzes, group work task, target questioning **Summative Assessment:**	**Formative Assessment:** Starter test, class activities, homework, Quizzes, group work task, target questioning **Summative Assessment:**

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
		Unit test, End-of-term test, End-of-year test	Unit test, End-of-term test, End-of-year test	Unit test, End-of-term test, End-of-year test	Unit test, End-of-term test, End-of-year test	Unit test, End-of-term test, End-of-year test
Literacy/ Numeracy/ SMSC/ Character	Knowledge of operating system helps student to understand how to take care of computers, which make them responsible consumers.	HTML encourage student to be creative and exercise their imaginations in helping humanity.	Designing, creating and exercise their imaginations to help humanity.	Designing, creating and exercise their imaginations to help the way we communicate with each other.	Knowledge in this section helps student to be organise in their daily life	Knowledge in this section helps student know how to calculate and appreciate the work of computers