Year 8 Computing Curriculum Overview

Poynton High School and Performing Arts College

	What will I learn?	How will I learn it?	Why is it important that I learn this?	Why am I learning this now?
Year 8 HT 1	**Networks and WWW** Students will learn what a computer network is and explore the benefits of networking. They will learn about network transmission, different types of networking hardware, and the difference between the Internet and the World Wide Web.	Practical demonstrations of networks and communication. Case studies exploring how networks are used. Activities, videos and worksheets through Google Classroom.	Networks are an essential part of modern life. They allow people and devices to communicate, share information and access services, and have changed the way we learn, work, play and communicate.	This unit builds students' understanding of networks and associated hardware. It introduces how data is transmitted across networks and provides a foundation for understanding the Internet and the services it provides.
Year 8 HT 2	**Programming in Small** Basic Students will be introduced to text-based programming. They will learn about Turtle Graphics, variables, loops, input, output and selection. They will also learn the importance of writing code accurately, documenting programs and debugging their work.	Practical demonstrations and guided activities using Small Basic and its IntelliSense features. Students will begin with Turtle Graphics before developing programs using variables, loops and selection. Worksheets and mini activities will support their learning.	Programming develops logical thinking, problem-solving and computational thinking. Moving into text-based programming helps students understand how real programs are written and the importance of accuracy when coding.	Students have already used block-based programming tools such as Scratch and Kodu in Year 7. Small Basic provides a bridge between block-based programming and the text-based Python programming they will encounter in Year 9 and beyond.
Year 8 HT 3	**Using Spreadsheet** Students will learn how to format spreadsheets,	Students will create and use spreadsheet models, applying	Spreadsheet skills are useful in many areas of Computing, education	Students have already developed basic digital skills and are ready to use technology to work with larger

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	use formulae and built-in functions, and create graphs and charts. They will develop their understanding of how spreadsheets can be used to organise, analyse and present data.	formulae and functions to manipulate data. They will create a Google Form to collect their own data and use it in a spreadsheet. Teacher-led activities, examples and worksheets will be provided through Google Classroom.	and the workplace. They also develop students' numeracy, data-handling and problem-solving skills and have links with other subjects.	amounts of data. This unit provides a foundation for more advanced data handling and spreadsheet work later in their education.
Year 8 HT 4	**Vector Graphics** Students will learn how to create and edit vector graphics using shapes, objects and paths. They will learn how to manipulate and group objects and understand the difference between vector and bitmap graphics and when each type is suitable.	Students will use Inkscape, a free, open-source graphics application. They will complete guided challenges and practical activities before applying their skills to an open-ended graphics project. Students will develop their skills independently and work with their peers.	Graphics are used throughout digital media and everyday life. Understanding vector graphics helps students create high-quality digital designs and provides skills that can be used in Computing and creative subjects.	Students will use graphics in many areas of the KS3 Computing curriculum. Learning about vector graphics now gives them a broader understanding of digital images and prepares them for more advanced graphics and creative projects in Year 9.
Year 8 HT 5	**Developing for the Web** Students will learn how websites are created using HTML and styled using CSS. They will also explore how search engines work, including	Practical HTML and CSS activities where students create and edit web pages. Students will experiment with different ways of changing the	Understanding how websites work helps students become more informed and confident users of the web. Effective search skills help them find useful	Students use the web regularly for learning, communication and entertainment. This unit helps them understand the technology behind the websites they use while developing the skills they need to

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	how web pages are indexed, and develop techniques for searching effectively and safely.	appearance of a website. They will also carry out searches using different search engines and complete activities focused on finding reliable information.	and reliable information, while learning about online safety helps them use the web responsibly.	search, evaluate and use online information safely.
Year 8 HT 6	**Mobile App Development** Students will learn how apps are designed and developed. They will explore decomposition, breaking a problem into smaller parts, and learn about graphical user interfaces (GUIs). They will revisit sequencing, selection and variables while developing and debugging their own apps and games.	Students will use Code.org Game Lab and a block-based programming language. They will work individually and through pair programming to design, code and debug their projects. Help sheets, video tutorials and Oak Academy resources will support their learning.	App development brings together programming, problem-solving, creativity and user interface design. Students develop important computational thinking skills while creating something that has a clear purpose for a user.	Students have already learned key programming concepts in Year 7 and Year 8. This unit reinforces sequencing, selection and variables while introducing decomposition and debugging, providing further preparation for text-based programming in Year 9.