Curriculum Summary

Subject: ICT and Computing

Year 7	Year 8	Year 9	Year 10	Year 11
IT First Aid Students will be taught the digital skills required to be an effective and efficient e-learner.	**IT First Aid** A brief revisit and review of key ICT skills and competencies to ensure students can perform effectively as digital learners.	**What is a user interface?** Students will learn about different types of UI including the strengths, limitations and suitability of each.	**Characteristics of data and information** Students will learn about the difference between data and information and the various ways of representing information and why.	**Data Processing** Students will understand how data can be imported from an external source. They will then explore how to apply data processing methods.
My Online Life Students will build on the e-safety skills and knowledge they developed at Primary School when it comes to keeping themselves safe online. They will also learn about their role in keeping others safe.	**Unplugged Computing** Students will learn about algorithms, binary representation, Boolean logic amongst other computing concepts. They will understand how to program a computer using offline / unplugged approaches.	**Designing an interface** Students will learn the theory behind effective design principles and study the various 'user needs' they are likely to face. They will investigate how to meet user need, including legal requirements.	**Data collection and processing** Students will learn the methods of collecting data, how to check that the data is suitable for processing. They will investigate how to judge the quality and reliability of data.	**Collecting, Presenting and Interpreting Data** Through a practical spreadsheet project, students will collect, present and interpret data via an information dashboard for a given target audience.
Digital Literacy Students will learn to use application software to manipulate an image to improve the overall effect. They will also learn to judge when and why images have been manipulated.	**Skills for the workplace** Students will learn about how and why digital skills important in today's workplace. They will focus on developing a range of skills in Microsoft Office and other application software.	**Project Planning Tools** Students will investigate different planning tools and design methodologies that can be used to plan, monitor and execute projects. To include mind maps, mood boards, storyboards and Gantt Charts.	**Threats to individuals** This is a vital key area for the modern world. Students will learn about the threats to them personally of the data being held about them and their legal and ethical rights in this area. They will understand they can challenge the data held about them.	**Drawing conclusions** Students will draw conclusions on the data set, using their dashboard in order to make recommendations. **Assessing their skills** Students will apply the knowledge they gained in Yr 9 and Yr 10 in relation to design principles and user need to assess the quality of their dashboard. They will ensure the design they have created does not lead to information being misinterpreted, bias, and inaccurate conclusions being made.
Microbit Magic As part of this module, students will learn what is inside a computer and how they can program it. They will use microbit computers to build on their programming skills and knowledge.	**Multimedia Project** Students will demonstrate their digital skills and knowledge to promote a cause of their choice. They will combine tools and use them independently in their own project.	**Developing an interface** Students will take the theoretical learning undertaken to date to make initial designs and prototypes for a specific user interface. They will consider user needs, and the features and functions that are required.		
Web Design In this module we will investigate how an online presence be used to target a specific audience. Students will learn the basics of web design.	**Computing Theory** Students will explore data representation through binary digits and binary representation. They will also code with ASCII.	**Reviewing and revising a design** Students will seek test user feedback on their interface design. They will then use this to evaluate their work, making improvements as a result.	**Practical project work** In addition to learning about the theoretical elements of this module (above), students will improve and finalise their work on User Interfaces. They will use new knowledge and skills gained to enhance their practical work.	For this module of work, students will focus on developing high end user skills in Microsoft Excel.
Microbit Programming Students will understanding the purpose of a Microbit and explore what it can do.	**Computing Programming** Students will learn about algorithms, Python programming and de-bugging.			