



Bishop Milner Catholic College Year 9 CURRICULUM PLAN for ICT/Computing



<p>The curriculum for this stage of students' education has been designed to build upon their prior knowledge of maintaining safe and respectful use of a range of on-line activities including social media and collaborative working platforms. The expectation that throughout extending learning of existing applications and learning new applications students will continue to develop good working practices relating to file saving, sharing and backing up both in the Cloud and on the network.</p>		
<p>HALF TERM 1: Internet safety; Databases and computing algorithms</p> <p>STUDENTS MUST KNOW:</p> <ul style="list-style-type: none"> • How to behave responsibly on the school network. • How their online presence can be tracked. • How data collection is carried out within the law. • How to sort; filter and present data. • How a computing system uses algorithms to sort data. • How to do a bubble; bucket and binary sort <p>HOW THIS WILL BE ASSESSED: Assessment will be completed at the end of this topic in the form of a slideshow.</p>	<p>HALF TERM 2: Flowcharts and binary coding</p> <p>STUDENTS MUST KNOW:</p> <ul style="list-style-type: none"> • Understand the different symbols that are used to present data flow and system flow diagrams • How to create a basic data flow diagram • Understand that computer systems use the binary system. • How to do binary; denary and hexadecimal conversions. • Be able to apply the ASCII code <p>HOW THIS WILL BE ASSESSED: Assessment will be completed at the end of this topic in the form of a Word-processed report using screenshot evidence</p>	<p>HALF TERM 3: Legal factors affecting the use of computers and the internet</p> <p>STUDENTS MUST KNOW:</p> <ul style="list-style-type: none"> • The reason behind an AUP • The GDPR laws and why they are in place. • Copyrights and patents act. • Computer misuse Act <p>HOW THIS WILL BE ASSESSED: Assessment will be completed at the end of this topic using a choice of application such as Sway or Prezi.</p>
<p>HALF TERM 4: Spreadsheet Modelling</p> <p>STUDENTS MUST KNOW:</p> <ul style="list-style-type: none"> • That some instruction set are repeated. • How to write a basic algorithm. • What the terms mean when referring to a spreadsheet. • How to create a basic formula. • How to create a basic function and autofill. • How to select correct data to generate a meaningful graph. • How to use the spreadsheet model to reach a conclusion <p>HOW THIS WILL BE ASSESSED: Assessment will be completed at the end of this topic by means of a formal assessment on the computer under exam conditions.</p>	<p>HALF TERM 5: Graphics and video editing</p> <p>STUDENTS MUST KNOW:</p> <ul style="list-style-type: none"> • How to edit, crop, rotate, layer, flip, stretch and resize images • Understand file extensions and file sizes. • How to use film editing software to crop, insert, transition effects and incorporate sound and text <p>HOW THIS WILL BE ASSESSED: Assessment will be completed at the end of this topic in the form of a short film. Both peer and teacher assessed.</p>	<p>HALF TERM 5: App Inventor and Games programming – [recall Flash]</p> <p>STUDENTS MUST KNOW:</p> <ul style="list-style-type: none"> • How to get simple animation onto a stage • That instructions need to be in a specific order and the importance of naming key frames accurately. • How to create a project that mostly works with more than one level. <p>HOW THIS WILL BE ASSESSED: Assessment will be completed at the end of this topic by presenting a Mobile App that will be both Peer and Teacher assessed</p>
<p>Embedding this knowledge can be supported by cross curricular experiences as well as developing computational thinking skills by use of program such a Scratch and MSW Logo. Codeacademy is also fun and challenging for anyone wanting to develop their programming skills.</p>		