



	<b>Intent</b> <ul style="list-style-type: none"> <li>• Use project planning tools manage an IT project.</li> <li>• Collect and arrange data in a form suitable for processing.</li> <li>• Use advanced data manipulation tools to produce information.</li> <li>• Present information in a form suitable for the intended audience.</li> <li>• Understand the impacts of digital technology to individuals and wider society.</li> </ul>			
<b>Information Technologies</b>				
<b>Year 10</b>	<b>LO1 and 2: Initiation and planning tools and techniques (Autumn Term)</b>	<b>LO5: Data manipulation (Autumn term)</b>	<b>LO3 and 4: Collecting and processing data and information (Spring term)</b>	<b>LO6: Methods of processing data and presenting information (Spring term)</b>
<b>Knowledge</b> (facts, information, concepts and key terminology)	<ul style="list-style-type: none"> <li>• Project life cycle</li> <li>• Requirements analysis</li> <li>• Objective setting</li> <li>• Planning tools, e.g. Gantt, PERT, critical path.</li> <li>• Test planning</li> </ul>	<ul style="list-style-type: none"> <li>• Spreadsheet skills, for example: functions for data analysis (arithmetic functions, decisions, counting and lookup), cell references, macros and importing.</li> <li>• Database skills: create relational database, import data, validation, interface creation, queries.</li> </ul>	<ul style="list-style-type: none"> <li>• Data / types / information / processing.</li> <li>• Data collection and storage.</li> <li>• Checking validity, reliability and bias.</li> <li>• Security of data: threats and prevention.</li> <li>• Consequences of data loss.</li> <li>• Legislation.</li> </ul>	<ul style="list-style-type: none"> <li>• Selection of tools and techniques.</li> <li>• Suitability of different methods of presenting information.</li> <li>• Resources required for presenting information.</li> </ul>
<b>Understanding</b> (ability to connect and synthesise knowledge within a context)	<ul style="list-style-type: none"> <li>• In generating requirements, students need to take multiple factors into account: feasibility, risk, resources, constraints etc.</li> <li>• Project planning requires knowledge about multiple tools working together and the requirements of the specific project.</li> </ul>	<ul style="list-style-type: none"> <li>• Combination of functions to process data in a spreadsheet.</li> <li>• Algorithms may require several steps in a particular order to execute correctly.</li> <li>• A relational database solution requires knowledge of primary/foreign key and database design skills to eliminate redundancy.</li> </ul>	<ul style="list-style-type: none"> <li>• Which cyber security methods can prevent which attacks?</li> <li>• What type of processing is suitable for which data type?</li> </ul>	<ul style="list-style-type: none"> <li>• Use of multiple software applications in conjunction to present information.</li> </ul>
<b>Skills</b> (successful application of knowledge and understanding to a specific task)	<ul style="list-style-type: none"> <li>• Analyse a problem to generate user requirements.</li> <li>• Describe how to mitigate risks.</li> <li>• Create planning documentation.</li> <li>• Develop a test plan.</li> </ul>	<ul style="list-style-type: none"> <li>• Apply the above skills in a given scenario: Create both a spreadsheet and database solution to solve problems.</li> </ul>		<ul style="list-style-type: none"> <li>• Students complete a practical task and present the findings of processing data.</li> </ul>
<b>Formal Assessments</b> (those done by all/vast majority of the cohort)	Learning Objectives 1, 3, 4 and 6 are assessed in an external examination taken at the end of year 10. Mock exam is done over two lessons in May. There are regular assessments throughout the year covering these topics, which build on previously taught content.			
By the end of the year students on course for at least a level 2 Pass will... <ul style="list-style-type: none"> <li>• Plan a project using suitable tools.</li> <li>• Know how to collect and arrange data in a form suitable for processing.</li> <li>• Be able to select and apply advanced data manipulation tools.</li> </ul>				