

## Learning Programme

### Systematic approach to problem solving – AS Level

Topic/Content	Objectives/Skills	Homework	Assessment	Success Criteria	Stretch & Challenge (Thirst for Learning)
<b>Aspects of software development</b>			See 1. Fundamentals of programming - Learning Programme for more details	Solving the logic puzzles	There are 4 different levels of logic puzzles, the top level are some questions that Microsoft ask in their interviews.
Analysis	<ul style="list-style-type: none"> <li>Be aware that before a problem can be solved, it must be defined, the requirements of the system that solves the problem must be established and a data model created.</li> </ul>	Pupils are given logic puzzles to solve and also small programming projects. This is also incorporated in the study of the pre-release material.  See 1. Fundamentals of programming - Learning Programme for more details			
Design	<ul style="list-style-type: none"> <li>Be aware that before constructing a solution, the solution should be designed and specified, for example planning data structures for the data model, designing algorithms, designing an appropriate modular</li> </ul>				

	structure for the solution and designing the human user interface.				
Implementation	<ul style="list-style-type: none"> <li>• Be aware that the models and algorithms need to be implemented in the form of data structures and code (instructions) that a computer can understand.</li> </ul>				
Testing	<ul style="list-style-type: none"> <li>• Be aware that the implementation must be tested for the presence of errors, using selected test data covering normal (typical), boundary and erroneous data.</li> </ul>				
Evaluation	<ul style="list-style-type: none"> <li>• Know the criteria for evaluating a computer system.</li> </ul>				