

NATIONAL 5 COMPUTING SCIENCE

REQUIREMENTS	<p>This course is about the backend of ICT, using computers to create solutions to problems. This involves Software Development, Web development, Computer systems and Database design.</p> <p>Computing is suited for self-motivated pupils who enjoy problem solving and who are or want to be proficient with computers. The course does start from the beginning in each component, so no prior knowledge is required, only work ethic. There is also enough extra mile content to stretch those who have prior experience, so is designed to suit both.</p> <p>You will learn to produce solutions to simplified real world problems by creating software, websites, and databases and show a deeper understanding of computer systems.</p>
COURSE CONTENT	<p>Outline:</p> <ul style="list-style-type: none"> • Software development Use of variables, Loops, Conditions and simple Input/Output to create a solution to basic problems <ul style="list-style-type: none"> ○ System Analysis ○ Design (Structure diagrams, flow charts) ○ Implement (JAVA using Netbeans IDE) • Web Development Linked pages with embedded media elements and style applied. <ul style="list-style-type: none"> ○ HTML and CSS using Notepad ++ • Database Design Creation of a relational database to store data for a company in simplified scenarios. <ul style="list-style-type: none"> ○ Design ○ Implement (Use access) ○ Query (SQL) • Computer Systems <ul style="list-style-type: none"> ○ Data representation ○ Computer systems <p>Pupils get taught tools to develop solutions using software development, database development and web development. You use what you have learned in various simplified scenarios.</p> <p>JAVA has been chosen as the coding language, this is due to its international popularity and the purity of the language which makes for a strong platform</p>

	for pupil's knowledge and it easy to switch to other languages if they ever need to. This is coded using a free platform (IDE) called Netbeans which is used in business as well. The subject is predominantly practical based, with some theory.
PROGRESSION / NEXT STEPS	N5 computing is required to do Higher. N5 will be a good base for most technical degrees. The skills learned will help you in careers as Designers, Engineers, Software Developers, Network technicians etc...

HIGHER COMPUTING SCIENCE	
REQUIREMENTS	<p>This course continues on from N5 Computing, and goes further into System Development, Database Development, Web Development and Computer Systems.</p> <p>It takes the various skills to new levels to equip the learner more to create better designed solutions to problems and to solve more complicated problems.</p> <p>It allows for creative exploration into concepts to produce usable software products and understanding of computers and network infrastructure is expanded.</p>
COURSE CONTENT	<p>Outline:</p> <ul style="list-style-type: none"> • Software development OOP concepts introduced. • Web Development Java script and other elements introduced to produce more interactive websites. • Database Design More detailed exploration of relationships in databases and how to use towards developing solutions. • Computer Systems More detailed understanding <p>Pupils are taught tools to develop solutions using software development, database development and web development. They use what they have learnt in various simplified scenarios.</p> <p>JAVA has been chosen as the coding language, this is due to its international popularity and the purity of the language makes for a good platform to learn coding and it easy switch to other languages easier if the need arises. This is coded using a free platform (IDE) called Netbeans, which is used in corporate as well.</p> <p>The subject is predominantly practical based, with some theory.</p>

PROGRESSION / NEXT STEPS	Higher will be a good base for most technical degrees and is required if looking at proceeding to Advanced Higher. The skills learned will help you in careers as Designers, Engineers, Software Developers, Network technicians etc...
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