



Year 11 – Big Picture (GCSE Computing 2023)

Y11 Autumn 01 Weeks 1 – 7 (7 weeks)	Y11 Autumn 02 Weeks 8 – 15 (8 weeks)
<p>2.2 Programming Fundamentals</p> <p>2.2.1 Programming fundamentals – The use of variables, constants, operators, inputs, outputs and assignments.</p> <p>2.2.1 The use of the three basic programming constructs: sequence, selection and iteration.</p> <p>2.2.1 The common arithmetic operators, comparison and Boolean operators AND, OR and NOT.</p> <p>2.2.2 Data types – include: integer, real, casting, character and string.</p> <p>2.2.3 Additional programming techniques</p> <p>2.2.3 The use of basic string manipulation</p> <p>2.2.3 The use of basic file handling operation: open, read, write and close.</p>	<p>2.3 Producing Robust Programs</p> <p>2.3.1 Defensive Design Considerations, anticipating misuse and authentication.</p> <p>2.3.1 Defensive Design - Input validation and maintainability include: use of sub programs, naming conventions, indentation and commenting.</p> <p>2.3.2 Testing - the purpose of testing: final, iterative & terminal</p> <p>2.3.2 Testing – identifying syntax and logic error</p> <p>2.3.2 Selecting and using suitable test data: Normal, boundary and invalid and erroneous.</p> <p>2.4 Boolean Logic</p> <p>2.4.1 Simple logic diagrams using AND, OR and NOT</p> <p>2.4.1 Truth tables and combining Boolean operators using AND, OR and NOT.</p> <p>2.4.1 Applying logical operators in the truth to solve problems</p> <ul style="list-style-type: none"> • Understanding of how to create, complete or edit logic diagrams and truth tables for given scenarios • Knowledge of the truth tables for each logic gate
<p>Assessment Objectives</p> <p>This is the knowledge, application and skills assessed by the Big Test:</p> <p>Mini Test: 2.2-2.3</p>	<p>Assessment Objectives</p> <p>This is the knowledge, application and skills assessed by the Big Test:</p> <p>Nov PPE Mini Test 2.4-2.5</p>
Big Test : Paper 1	



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Y11 Spring 01 Weeks ...-... (6 weeks)	Y11 Spring 02 Weeks ...- ... (5 weeks)
<p>Content</p> <p>2.5 Programming languages and Integrated Development Environments</p> <p>2.5.1 Languages – characteristics and purpose of different level of programming language: High-level & low-level languages.</p> <p>2.5.1 The purpose of translators and characteristics of a compiler and an interpreter.</p> <p>2.5.2 The Integrated Development Environment (IDE) - common tools and facilities available in an IDE: editors, error diagnostics</p> <p>2.5.1 Languages – characteristics and purpose of different level of programming language: High-level & low-level languages.</p> <p>2.5.1 The purpose of translators and characteristics of a compiler and an interpreter.</p> <p>2.5.2 The Integrated Development Environment (IDE) - common tools and facilities available in an IDE: editors, error diagnostics, run-time environment and translators., run-time environment and translators</p>	<p>Exam Technique</p> <p>Revision of Paper 1:</p> <ul style="list-style-type: none"> 1.1 System Architecture 1.2 Memory & Storage 1.3 Computer Networks, Connections and Protocols 1.4 Network Security 1.5 Systems Software 1.6 Ethical, Legal, Cultural and environmental impacts of Digital Technology <p>Revision of Paper 2:</p> <ul style="list-style-type: none"> 2.1 Algorithms 2.2 Programming Fundamentals 2.3 Producing Robust Programs 2.4 Boolean Logic 2.5 Programming languages and IDE's
<p>Assessment Objectives</p> <p>This is the knowledge, application and skills assessed by the Big Test:</p> <p>PPE 2</p>	<p>Assessment Objectives</p> <p>This is the knowledge, application and skills assessed by the Big Test:</p> <p>Exam Questions</p>