OCR J277
Component 1 – Computer Systems 1.5 hrs
Component 2 – Algorithms and Programming 1.5hrs
Component 3 – Programming Project (NEA)

GCSE COMPUTER SCIENCE
LEARNING JOURNEY

WESTFIELD ACADEMY
believe | strive | achieve

SUCCESS COMES FROM HARDWORK

Exam preparation

Revision

1.5 End of Unit Test

1.5 System Software
Operating systems, utility software?

PPE

1.4 End of Unit Test

1.4 Threats and vulnerabilities
Forms of attacks and preventions.

2.1 Algorithms
Structure diagrams
Trace tables

1.3 End of Unit Test

PPE

1.6 End of Unit Test

1.6 Legal ethical cultural and environmental issues.
Impacts of technology on wider society, legislation.

Component 3 Programming Project NEA

YEAR 11 GCSE

1.3 Networks and Topologies
LAN's WAN's, network hardware, the internet, wired and wireless networks, protocols, layers, performance.

2.2 Additional programming techniques
Records. SQL
Searching and sorting algorithms

2.2 Programming Fundamentals
Storing data, data types. Sequence, selection, iteration, SQL, arrays.

2.1 Algorithms
Lists

Component 3 Programming Project NEA
Programming techniques • Analysis • Design • Development • Testing and evaluation and conclusions

2.5 End of Unit Test

2.5 Programming languages and IDEs
Translators, Compilers, Interpreters,

2.2 Programming Fundamentals
Storing data

2.1 Algorithms
Sub-programs

PPE

2.3 Defensive design
Authentication, Input validation
Maintainability, Naming conventions
Commenting, indentation

2.1 Algorithms
Random number generation, iteration
Input validation

1.2 End of Unit Test PART TWO

1.2 Units
Storage capacities, characters, images, sound

PPE

2.1 Algorithms
Abstraction
Decomposition
Algorithmic thinking

2.1 Algorithms
Iteration,
Input validation

2.3 Producing Robust Programs
Defensive programming, testing

1.2 End of Unit Test PART ONE

1.1 End of Unit Test

1.2 Compression

2.1.2 Algorithms
Flowcharts

YEAR 10 GCSE

1.1 Systems Architecture
What is the CPU?
Components
Performance of the CPU
Embedded systems.

1.2 Memory and Storage
Primary Storage, secondary storage, units of storage, data storage, Transistors and switches.

2.4 Boolean Logic
AND, NOT, OR

2.1 Algorithms
Input/Output, If statements, data types, selection and condition.

2.2 Programming fundamentals
Data Types