Computer Science Curriculum Overview

GCSE RESULTS

Year 11

Summer Term

Exam Practice

Bring it all together

Spring Term

2.5 – Programming Languages, translators and IDEs

2.4 – Boolean Logic: logic Gates and Truth Tables

2.31/2 Defensive Design/Testing

Autumn Term

2.22/3 Data Types/Additional programing techniques

2.21 Programming Fundamentals

2.1 – Computational thinking and flowcharts

Retrieval Practice

Exam Practice

Mock Exams

Recap: Unit 1

Summer Term

1.41 Threats to computer systems and networks

1.42 Identifying and preventing vulnerabilities

1.51 – System Software: Operating Systems

1.52 – System Software: Utility Software

1.6 – Ethical, legal, cultural and environmental impact

2.13 Searching and Sorting algorithms

2.12 Designing, creating and refining algorithms

Year 10

Spring Term

1.32 – Networks, Protocols and Layers

1.31 – Computer Networks and Topologies

1.22 – Memory and Storage: Storage devices and characteristics

1.21 – Memory and Storage: Primary/ RAM/ROM

Autumn Term

1.23 – Data Rep: Units/Denary/Binary/ Hex/

1.24/1.25 – Data Rep: Characters/Images/ Sound/Compression

1.13 Embedded Systems

1.12 CPU Performance

1.11 Architecture of the CPU

The iDEA Award

The Inspiring Digital Enterprise Award

Year 9

Digital Literacy: CyberSecurity

Malware, Social Engineering and Prevention Methods

Creative iMedia

Create, reuse and repurpose digital artefacts for a IDMP

Data Representation

Hexadecimal/ binary/ decimal

Programming: Python

Logic Gates and Truth tables AND/OR/NOT

Sequence, selection, iteration, variables, type casting.

Memory and Software

How data is stored data and recalled

The iDEA award

The Inspiring Digital Enterprise Award

Year 8

Inside a Network

How devices communicate with each other

Programming: Python

Sequence, selection, iteration, variables, type casting.

Data Representation

Hexadecimal

Creative Projects

Selecting, using and combining multiple applications

Digital Literacy

Digital footprints/data/ impacts/fair use

The iDEA award

The Inspiring Digital Enterprise Award

Year 7

Welcome To Wellacre!

s m a r t

Appropriate use of school email and e-safety. Learn the SMART rules for staying safe online

Digital Literacy

Rules and Wellacre network and systems

Digital Artefacts

Create, reuse and repurpose digital artefacts

Data Representation

Why binary? Instruction sets Units

01011001 → $2^7\ 2^6\ 2^5\ 2^4\ 2^3\ 2^2\ 2^1\ 2^0$

Convert Binary/ Denary

Programming: Flowol

Flowol4

Inside a computer

Hardware and Software which makes up a device