Computer Science

YEAR 11

EXAM – FINAL EXAM

Revision for exam: Prepare for the Comp 1 and Comp 2 Exams.

2.5 Languages and IDE – COMP 2

Impact of digital technologies: Understand how digital tech impacts our daily lives.

1.6 Ethical Impacts of Tech – COMP 1

Boolean Logic: Understand how to use logic gates and truth tables.

2.4 Boolean Logic – COMP 2

Testing and Error Detection: Understand how to identify errors in syntax.

2.3 Robust Programs – COMP 2

Validation: Understand how to incorporate validation and authentication into programs.

YEAR 10

2.1 Algorithms – COMP 2

Pseudocode: Develop understanding of problem solving using pseudocode

1.2 Memory and Storage – COMP 1

Binary Coding: Understand how computers use binary for calculations

2.2 Programming – COMP 2

Python Coding: Develop understanding of FOR, WHILE and IF using Python.

1.3 Computer Networks – COMP 1

Networking: Understand topologies and hardware required in computer networks

1.4 Network Security – COMP 1

1.5 Systems Software – COMP 1

1.1 Systems Architecture – COMP 1

OCR IT TASTER – IT THEORY

Excel Functions: Experimenting in creating dashboards to data analysis

IMEDIA TASTER – FRONT-END DESIGN

Photography: Investigate the principles behind photography.

CS TASTER – COMPUTATIONAL THINKING

Creativity: Using techniques such as biomimicry to create design.

CYBER SECURITY – IT THEORY

Security breaches: Protocols and actions to prevent network security breaches.

Learning about different CS pathways through project tasters for Year 9 Options/

Experience of multiple pathways and skills available in Year 10.

YEAR 9

WEB THEORY – IT THEORY

The Internet: Learn how we manage and transfer data across networks

Searching: Use search engines efficiently to improve accuracy of results

Network Topologies: How networks are designed and constructed.

MICRO-BIT GAMING – COMPUTATIONAL THINKING

Managing Data: Use sorting algorithms to control data.

THE INTERNET OF THINGS – COMPUTING THEORY

SMART Tech: Investigate the impact of SMART technologies on our lives.

COMPUTER ARCHITECTURE – COMPUTING THEORY

Computer Components: Understanding the function of different computer hardware.

Evaluate: Understand how to make appropriate hardware choices.

BBC SCHOOL REPORT – FRONT-END DESIGN

Research and Interviews: Develop questioning techniques to interview staff and students.

Video editing: Working with videos to edit, import and export.

PYTHON PROGRAMMING – COMPUTATIONAL THINKING

Flowcharts: Breaking down algorithms into simple steps.

Algorithms: Understanding programming techniques such as FOR loops

Processes: Developing algorithms to solve problems

Teams: Work in teams develop flow chart solutions to real world problems.

Broadening knowledge of programming and understanding of the workings of computer hardware.

Experience of the practical application of skills in creative and problem solving tasks.

YEAR 8

BLOCK TO WRITTEN PROGRAMMING – COMPUTATIONAL THINKING

Develop: Block games in Kodu and Scratch
Written programs in SmallBasic

Graphics: Produce graphics using SmallBasic

DATA ANALYTICS – IT THEORY

Reports: Experimenting with different methods of reporting trends and queries.

FLOWOL – COMPUTATIONAL THINKING

Planning: Create detailed solutions using efficient programming.

Learning about foundation principles in Computer Systems and an introduction to programming

Experience of multiple software both technical and creative.

YEAR 7

Coding: What are the differences between using block and written programming software?

Evaluate: Does your produce work? Can you fix problems?

Design: Designing different features such as layout, navigation and information to include in an App.

APP DESIGN – FRONT-END DESIGN

Product Analysis: What makes an App suitable, or desirable? How can we learn from others?

Data Models: Using spreadsheets and databases for manage data.

E-SAFETY – IT THEORY

Viruses: Different computer viruses. How do we protect our devices?

Cryptography: How are messages/data sent securely across networks?

Rules: How to safely use a variety of computer features.

Baseline Assessment: What do you already know about CS?

Introduction to CS: Work areas and expectations

Welcome! Settling in, usernames and passwords.

THE FERNWOOD SCHOOL