OCR NATIONAL IT

Course Completed.

YEAR 11

R050 Exam 40% Total Marks

R070 NEA 30% Total Marks

R070 3: Creating AR & 4: Testing

R070 1: AR & 2: Designing AR

R050 Internet of Everything

R050 4: Cyber Security & 5: Communications

Revision: Past papers and knowledge organisers for R050.

R070 NEA: Create AR object based upon scenario brief for NEA work.

Design, Create and Test: Develop AR prototype using triggers, layers and outputs. Testing using test plans and review of processes

Purpose of AR: Where AR is used in society and functions of this.

IT in everyday life: Use of IT in energy management and smart devices.

Prevention: How to prevent threats to computer systems.

Threats: What threats exist to computer systems and their impact.

Data collection and Storage: Investigate how data is stored and appropriate collection methods.

R060 1.1 & 1.2 Design Tools & HCI

R060 2.1 Data Handling

R060 3.1 & 4.1 Testing & Evaluating

NEA R060 30% Total Marks

R050 1: Design Tools & 2: HCI

R050 3: Data and Testing

Planning solutions: Look at design tools for problems

HCI design: Looking at graphs and navigation systems for a spreadsheet solution.

Spreadsheet tools: Create a spreadsheet with data validation and a range of spreadsheet functions..

Testing and Evaluation: Creating a test plan and evaluating against client requirements..

NEA R060: Completing independent NEA scenario..

Use of data & validation checks

Types of Design Tools: The use of different design tools for different projects and their suitability & HCI.

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

Creativity: Using techniques such as biomimicry to create design.

Photography: Investigate the principles behind photography.

Excel Functions: Experimenting in creating dashboards to data analysis

OCR Introduction Work areas and expectations

YEAR 10

OCR IT Taster IT Theory

iMedia Taster Front-End Design

CS Taster Computational Thinking

Cyber Security IT Theory

Web Theory IT Theory

Micro-bit Gaming Computational Thinking

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.

Managing Data: Use sorting algorithms to control data.

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

The Internet of Things Computing Theory

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

Experience of multiple pathways and skills available in Year 10.

YEAR 9

Computer Architecture Computing Theory

BBC School Report Front-End Design

Python Programming Computational Thinking

Computer Components: Understanding the function of different computer hardware.

Evaluate: Understand how to make appropriate hardware choices.

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

Flowcharts: Breaking down algorithms into simple steps.

Algorithms: Understanding programming techniques such as FOR loops

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.

Develop: Block games in Scratch Written programs in SmallBasic

Graphics: Produce graphics using SmallBasic

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

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

Processes: Developing algorithms to solve problems

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

YEAR 8

Block to Written Programming Computational Thinking

Data Analytics IT Theory

Flowol Computational Thinking

App Design Front-End Design

E-Safety IT Theory

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

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

Data Models: Using spreadsheets and databases for manage data.

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

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

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

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

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

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