THE COMPUTING LEARNING JOURNEY

EMMAUS CATHOLIC MAC
Our journey with Christ

HAGLEY CATHOLIC HIGH SCHOOL
SEMPER FIDELIS

Computing is the doorway to the future, and we know how important it is to ensure our young people can live in the digital world as responsible young people whilst also understanding how computers work. Throughout the curriculum, pupils will learn how to use a variety of software from Excel through to Photoshop, as well as learning the fundamentals of programming. Starting with Block based programming to complete text-based programming.
Each year develops on the previous material to give a comprehensive computing education.

YEAR 13

Present a final product

Liaise with a client to create a bespoke piece of software

UNIT 3 – PROGRAMMING PROJECT
Implement programming into a client brief

What is Big O?

How do we test the efficiency of an algorithm?

UNIT 2 - ALGORITHMS AND PROGRAMMING
What are the different development models?

How do we evaluate the success of our games?

How do we adapt our games based on client feedback?

How do we develop game concepts?

UNIT 15 - GAMES DESIGN AND PROTOTYPING
What are the principles of games design?

How do we respond to feedback?

How do we create applications?

What solutions are there?

UNIT 6 - APPLICATION DESIGN
How are applications designed?

How do we respond to a cyber incident?

Why do people attack computer systems?

What are threats?

UNIT 3 - CYBER SECURITY
What is cyber security?

YEAR 13 APPLIED IT

How do we use mantissas?

What is Two's complement?

How is data and information classified?

How to do use computers in an environmentally friendly way?

YEAR 12

What categories of information are there?

UNIT 2 – GLOBAL INFORMATION
Understand where information is held globally and how it is transmitted

What are some of the ethical issues of IT use?

How do we communicate effectively as IT users?

What are operating systems?

UNIT 2 - COMPUTATIONAL THINKING, ALGORITHMS AND PROGRAMMING
How do we create advanced programs?

What is assembly language?

How do operating systems work?

What is the difference between and input and an output?

UNIT 1 – COMPUTER SYSTEMS
What is the purpose and function of a microprocessor?

What types or data are there?

What is the difference between HTML and Python?

What is OOP?

UNIT 1 – COMPUTER SYSTEMS
How do we protect networks?

What is an Integrated Development Environment?

Is a number truly random?

UNIT 2 - COMPUTATIONAL THINKING, ALGORITHMS AND PROGRAMMING
How do we test our programs effectively?

What is utility software?

UNIT 1 – FUNDAMENTALS OF IT
Understand computer hardware & software

YEAR 12 APPLIED IT

What makes an effective Graphical User Interface?

Know the importance of accessibility

How can we make something interactive?

R097: INTERACTIVE DIGITAL MEDIA
What types of media are there?

How do we protect ourselves against cyber threats?

UNIT 1 – COMPUTER SYSTEMS
What are the ethics of using a computer?

YEAR 11

What documents might the media industry use?

R094: VISUAL IDENTITY AND DIGITAL GRAPHICS
What is meant by visual identity?

How do we communicate a message effectively?

How do we use Moodboards, Mindmaps and Visualisation Diagrams?

Learn advanced features of Photoshop & Illustrator

Who is our product for?

How do we know the purpose of our graphics?

R093: CREATIVE IMEDIA IN THE MEDIA INDUSTRY
What makes up the media industry?

YEAR 10 CREATIVE IMEDIA

YEAR 10

UNIT 1 - COMPUTER SYSTEMS
What makes up a computer?

How do we save data?

What is the purpose of a network and how do they work?

How do computers actually work?

What is the difference between searching and sorting data?

How do databases store data?

What is a logic gate?

Know about different data types

PROGRAMMING CONCEPTS (PYTHON)
Develop advanced text-based code editor

YEAR 10 COMPUTER SCIENCE

Know how to split/trim sound clips

Understand the different network topologies

Develop a website using professional software

Use a range of tools to create an appealing graphic product

YEAR 9

SOUND EDITING (AUDACITY)
What makes a good radio advert?

NETWORKS
Know how a network works

WEB DESIGN (DREAMWEAVER)
Use HTML to produce a basic website

GRAPHICS DESIGN (ADOBE ILLUSTRATOR & PHOTOSHOP)
Learn how to save files effectively

What is a CPU & how does it work?

COMPUTATIONAL THINKING ALGORITHMS (FLOWOL)
Know what a control system is

Learn how to program a Micro:bit

Solve computational problems

Know some of the laws to protect users of computers

YEAR 8

UNDERSTANDING COMPUTERS
Know the difference between software & hardware

Use and create flowcharts

PROGRAMMING FUNDAMENTALS (MICRO:BIT)
Understand how programs are written

PROGRAMMING BASICS (PYTHON)
Use a text-based code editor

COMPUTER CRIME & CYBER SECURITY
Understand the dangers of using a computer or the internet

DIGITAL LITERACY
Know how to use a search engine effectively

Understand the purpose of formulae

Check the reliability of information

How to create a game

Who can we report inappropriate things to?

CATHOLIC LIFE PRESENTATIONS (POWERPOINT)
How to create a professionally appropriate presentation

YEAR 7

SPREADSHEET MODELLING
Use data to model scenarios

GAME PROGRAMMING CONCEPTS (SCRATCH)
What makes a good game?

ONLINE SAFETY, PERSONAL SAFETY AND WELLBEING
How to stay safe online?

Know how to create content for a particular audience

WELCOME