Co-op Academy Walkden | Computing & ICT Learning Journey

Apprenticeships
Cyber Security
Digital Analyst
Network Engineer
Software Engineer
CAD Designer
MI5, MI6 & GCHQ

Further & Higher study
A Level / Level 3+ courses in
Computer Science
Mathematics
Science
Design & Engineering

Further & Higher study
A Level / Level 3+ courses in
ICT
Creative iMedia
Media
Games Art & Development

Apprenticeships
Web Design
Games Developer
Animator
Data Analyst
Software Architect

Students will have developed effective logical thinking, problem solving, analytical, independence, team working and application skills, valuable in day-to-day future experiences

Students will have developed planning methods, creative and research skills, ability to work independently and as part of a team

Revision and final exam preparation

Year 11

Final Exam papers

Ethical, legal and environmental
Impact and risks of digital technologies on society

GDPR

Systems security and software
Authentication, encryption, firewalls & MAC addressing
Cyber security threats, processes and procedures

Networks - wired & wireless, topologies
Bus, Star, Mesh, Ring
Protocols

Memory & Storage
Primary, secondary and tertiary
Volatile vs non-volatile
Magnetic, solid state, optical & cloud storage types

R093 Exam

R093
Exam preparation and revision

NEA completion
Preparation for moderation

Optional unit (NEA 2)
Planning, creating, testing and reviewing a digital product, following a specified client brief

R094 Visual Identity and Digital Graphics (NEA 1)
Interpret and apply details of a client brief when creating a digital graphic

Year 10

GCSE Computer Science

Robust programming
Efficiency techniques using iteration, selection and subroutines

Programming Techniques
Arithmetic operations
Variables and constants
Sorting and searching algorithms

Algorithms
Abstraction and decomposition
Flow diagrams and Pseudocode

Computing logic and data representation
Binary & hex number bases
Character encoding
- ASCII and unicode
Data compre

Systems Architecture
Von Neumann architecture
FDE Cycle
Embedded Systems

CamNat. Creative iMedia

R093 Creative iMedia in the Media Industry
Pre-production planning and Distribution considerations

R093 Creative iMedia in the Media Industry
The Media Industry

R093 Creative iMedia in the Media Industry
Factors influencing product design

Year 9

KS4
Option choices

- CHATROOMS -
eSafety
Demonstrating safe practices
- peer pressure

Using Applications
Planning and designing digital products (graphic design)

Programming
Developing programming skills using Lists, tables and arrays

Using Applications
Developing digital products
Game design

Programming
Developing programming skills using functions and procedures

Computer Systems
Understanding how computer networks and their components are connected

Year 8

Using Applications
Developing web design skil using WYSIWYG software packages

Data Handling and Storage
Examining how computer systems handle data using databases

Digital Representation
Exploring how text, sound and images are handled by computer systems

Computational Thinking
Exploring data structures
Data types and types of iteration

eSafety & Trends in Computing
Demonstrating safe practices using social media and emerging technologies

Web Design
Exploring target audiences and principles of web design using HTML

Creating and repurposing digital artifacts
Exploring logo design

Computational Thinking
Problem solving
Resolving practical programming problems using Micro:bits

Animation
Examining the origins and how to create animation

Computational Thinking
Abstraction and decomposition
Basic programming constructs of
Sequence, selection and iteration

Year 7

Welcome
Navigating the network
Google Suite & Email

eSafety
Demonstrating safe practices online

Spreadsheet Modelling
Understanding how spreadsheets work in the real world

Collecting and Analysing Data
Investigating social, ethical and legal issues associated with modern data technologies

Computer Systems
Identifying the differences and features of Hardware and Software.
Inputs, outputs and storage

Combine a variety of software
Accomplish goals through collecting, analysing, evaluating and presenting data and information

Logical Reasoning
Identify and correct errors in programming

Primary School

Computer networks
Using the World Wide Web
Opportunities for communication and collaboration

eSafety
Using technology safely
Recognise acceptable/unacceptable behaviour

KS2 National Curriculum