Computing & Computer Science Curriculum Map Overview
2021/2022

Colleges / Sixth form

Apprenticeships

Traineeships

Army/RAF/Navy

Revision

Revise for final externally-set assessment

Mock exam: OCR paper 1 & paper 2 from previous year

Databases

Insert, update, delete. Swim challenge 1

Programming - Battle boats

SQL searches

Impact of technology

The law, data protection and copyright

The FOI act and the CMI act

Cultural impacts

Privacy and surveillance

Environmental impact

Ethical impact

Impact of technology

Networks

Basic networks, real world networks

Network speed and performance, networks review

Servers, internet and WWW

Linear and binary search

Cyber Security

The cost of crime and hacker motivation

Programming - string handling

HTML

Introduction to CSS

DIVs and classes, layouts and the CSS box

Y11 Computer Science

Algorithms part 1

Comparing searching algorithms, bubble sort

Insertion sort, coding sorting algorithms

Merge sort, review Programming - XOR

computational thinking, representing algorithms

Computer Systems

The FDE cycle, main memory

Programming

Data representation

Bitmaps, vectors Programming - Input

number base conversions

Binary Maths, Hexadecimal Programming - Sequence

Y10 Computer Science

Physical Computing

Physical Computing Connections

Bare bones

Methods to prevent cyber-attack

Social engineering: Data security

Cybersecurity

Script kiddies: hacking and computer misuse

Rise of the bots: Malware

There's no place like 127.0.0.1: Compare

Introduction to Programming in Python

Algorithms and simple programs

Crunching numbers: Assignments and arithmetic expression

Relational operations, binary selection, random integers

multi-branch selection, iteration

Media Animation

Animations, names, parenting

Complex models and colours

Lights, camera, render

Exploring Google Sketchup

Using a Gantt Chart

Data Science

Organic modelling

Project

Model your fiances

Multi-Media video editing

Statistical state of mind

Make a change

Data for action

Clean it up

Global data

Orchestra conductor: hardware components and the operating system

Under the hood: hardware

It's only logical: Logical expressions

Under the hood

Icon challenges

Paths united

Showcase

Y9

3D Modelling Grand Designs

Computing Systems

Media Vector Graphics

Mobile app development

Tappy Tap App-

School Lab studios

User input

App development

Project completion

Programming 2

Features of a word processor Translate this! (Part 1 & 2): Problem solving

Licensing appropriate images

The credibility of sources

Fly cat fly! Condition controlled iteration

Loop de loop! Iteration

You've got the moves: Subroutines

Practical programming skills. Links with programming careers

Treasure those lists! Lists in programming

Modelling data

Words are not enough

Taking shortcuts

Searching the web

Navigating the web

Y8

Developing for the web

Lights and drums - encoding messages

Numbers in binary - number conversions

01010101

Representing from clay to silicon

Binary digits

Programming 1

Problem-solving

Operators

Selection

The credibility of sources

Research and plan your blog

BLOG

Using Media

Wired & wireless networks

Project completion

Computer Networks

Networking hardware

The internet

The WWW

Impact of technology

Respectful online communication

Welcome to your workstation

Y7

Sequence & variables

Count-controlled iteration

Computer networks and protocols

Presenting to an audience

Who are you talking to?