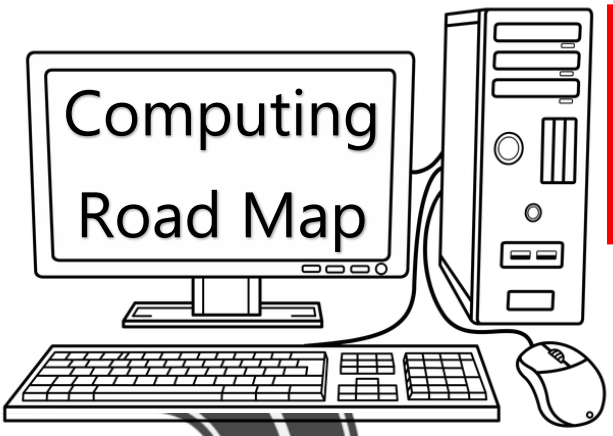
Cranford Park CE Primary

Computing Road Map



Computer Science
Computer science covers knowledge of computers and computation, including concepts such as data, system architecture, algorithms and programming.

Information Technology
Provides a context for the use of computers in society. Focuses on how computers are used in different sectors and methods used to create digital artefacts (e.g. presentations, spreadsheets and videos).

Digital Literacy
Becoming an effective and safe user of a range of computer systems. Covers a range of knowledge and skills e.g. using physical devices or knowledge of the features that are likely to mean digital content is reliable.

Reception

- Children can describe a sequence of events, using words e.g. 'first', 'then.
- Children can explore how things work.
- Children can organise their ideas
- Children can recognise and use simple technology

Year 1

- Learn to recognise safe/unsafe online behaviour
- Learn to categorise and sort objects based on different attributes
- Collect data, create pictograms and draw conclusions on different topics
- Learn to program simple sequences of commands
- Learn to create simple animated stories (with pictures and text)
- Learn how to enter data in a spreadsheet and create graphs
- Look at technology used outside of school in daily life

Year 2

- Learn to write and debug simple algorithms
- Learn to recognise safe online practices and how to be responsible online
- Learn to enter and organise data in spreadsheets and perform simple calculations
- Learn to ask different questions in surveys and present findings
- Create simple programming projects using animation
- Compose music and rhythms using digital tools
- Present ideas using digital presentation and graphics

Year 3

- Use block coding to create more complex programs (e.g. loop, conditionals)
- Learn to identify and understand online risks
- Learn to create, format and manipulate spreadsheets to organise data and use simple formulas to calculate
- Learn basics of touch typing to improve speed and accuracy
- Learn to compose, send and receive emails safely
- Create and navigate branching databases
- Learn to interact with simulations to model real world scenarios
- Create and analyse graphical representations of data, using different graphs
- Create engaging presentations using digital tools

Year 4

- Learn to design, write and debug programs using nested loops and conditionals
- Learn to evaluate reliability of online information and recognise potential threats
- Learn to input, organise and analyse data in spreadsheets using formulas and functions.
- Recognise differences in tone, vocab and style to write for different audiences
- Use programming software to control and code lego models
- Create engaging animations using digital tools
- Learn advanced searching techniques to find accurate and relevant information online
- Learn about different components of computer hardware
- Learn to compose and produce original music – creating different themes of

Year 5

- Learn to create, debug and optimise complex programs using loops, variables and functions.
- Learn to analyse online interactions
- Learn to manipulate and analyse data in spreadsheets using IF-statements and VLOOKUP
- Learn to create and manage siample databases (enter, edit and query data)
- Learn to design and develop their own computer games using game creation software
- Learn to create and manipulate 3D models using design and geometry
- Learn to create detailed concept maps to organise ideas
- Learn to use word processing software to format texts and images

Year 6

- Learn to design, develop and debug complex programs using a variety of statements proficiently
- Learn to critically evaluate their online presence and protect themselves from online threats
- Learn to create, analyse and interpret complex data sets in spreadsheets
- Learn to create and maintain a blog writing for a specific audience
- Learn to design and program interactive text adventure stories (manage progression and player choices with coding)
- Learn about computer networks and how they work
- Learn to create engaging quizzes /educational games
- Learn the basics of binary number systems (converting binary to decimal)
- Learn to use advanced features in spreadsheets e.g. pivot tables and complex functions