



The Purpose of Study

A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science, and design technology and provides insights into both natural and artificial systems. At the core of computing is computing science, in which pupils are taught the principals of information and computation, how design systems work, and how to put this knowledge to use through programming. Building on all of this, children are equipped to use IT to create programs, systems and a range of content. Computing also ensures that children become digitally literate – able to use and express themselves and develop their ideas through ICT – at a level suitable for the future workplace and as active participants in a digital world.

Aims of study

That all children:

- Can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation.
- Can analyse problems in computational terms and have repeated practical experience of writing computer programs in order to solve such problems.
- Can evaluate and apply IT, including new or unfamiliar technologies, analytically to solve problems.
- Are responsible, competent, confident and creative users of ICT.

	Autumn	Spring	Summer
Year 3	We are programmers We are bug fixers	We are network engineers We are communicators	We are presenters We are opinion pollsters
Year 4	We are software developers We are designers	We are musicians We are HTML editors	We are wiki authors We are meteorologists



Coverage

Key Stage 2 Computing

Year 3 and 4

CodeMonkey & Lightbot – simple algorithmic design

Scratch – creating content and understanding UI. Using costumes to make things move in a controlled way, appear and disappear.

What is a network / what is the internet?

How does our school server system work? – walk round the school

How physical is the internet? Undersea cables, repairs, connections and junctions.

What is it to 'communicate'?

Facetime / Oovoo / email / IM services

Create a short story with no words using clip art only, in Powerpoint

Powerpoint – create presentations on animals with active transitions and animations including text and pictures.

Publisher – making simple posters and other publishable materials.

Scratch – making simple scripts (algorithms) to make sprites move. Create a maze game where movement is controlled by keyboard keys.

Use www.buttonbass.com and www.incredibox.com to create musical compositions which are structured and organised musically.

HTML editing through Chrome extension 'X-Ray Goggles' to alter web pages and edit content.

PBWorks - creating and editing a wiki page. Understanding the opensource nature of a wiki, curating and using it while appreciating its inherent usefulness and associated unreliability.