Computing Big Ideas Coverage

Big Ideas	Humankind			Investigation		Place		Materials		Comparison	Creativity	Processes	Nature	Change	Significance
Aspect	Communication	Staying safe	Digital Citizenship	Data and Computational Thinking	Network	Digital World	Real World	Hardware	Software	Digital Searching	Creation	Physical Interactions	Real world		
EYFS	Throughout continuous provision and use of NOS														
Y1		1	6	12	6	19	7	4	11			12	6		
Y2	6	3	6	12	7	12	6		11	9	11	6	6		
Y3			6		3	18	12	6	24	6	18	12			
Y4	6	6		12	6	6	12	12	18	12	12	12	6		
Y5				12	1	6	7	6	18	8	12	6	6		
Y6	1	2	2	12	6	15	12	6	18	1	23	6	6		

Computing National Curriculum Coverage

NC Codes	KS1: CO1	KS1: CO2	KS1: CO3	KS1: CO4	KS1: CO5	KS1: CO6	KS2: CO1	KS2: CO2	KS2: CO3	KS2: CO4	KS2: CO5	KS2: CO6	KS2: CO7
Y1	12	12	12	30	12	18							
Y2	12	12	12	30	12	18							
Y3							12	18	12	6	6	36	6
Y4							12	18	12	6	12	30	18
Y5							18	18	12	6	12	36	6
Y6							12	12	12	6	6	36	18

Key stage 1

Pupils should be taught to:

- understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
- create and debug simple programs
- use logical reasoning to predict the behaviour of simple programs
- use technology purposefully to create, organise, store, manipulate and retrieve digital content
- recognise common uses of information technology beyond school
- use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

Key stage 2

Pupils should be taught to:

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Computing programmes of study: key stages 1 and 2

National curriculum in England

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 and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

Aims

The national curriculum for computing aims to ensure that all pupils:

- 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 information technology, including new or unfamiliar technologies, analytically to solve problems
- are responsible, competent, confident and creative users of information and communication technology.