Oxford Road Community School

Computing Curriculum

purple mash
2simple

ORCS Computing Curriculum overview

The early years foundation stage profile aims to ensure that all children at the expected level of development will:

Early Learning Goals

1. Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form, and function
2. Share their creations, explaining the process they have used

The national curriculum for Computing aims: (overview from top section of N.C.)

1. can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
2. can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
3. can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
4. are responsible, competent, confident and creative users of information and communication technology

National Curriculum for Key stage 1

Pupils should be taught:

1. understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
2. create and debug simple programs
3. use logical reasoning to predict the behaviour of simple programs
4. use technology purposefully to create, organise, store, manipulate and retrieve digital content
5. recognise common uses of information technology beyond school
6. 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

National Curriculum for Key stage 2

Pupils should be taught:

1. design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
2. use sequence, selection, and repetition in programs; work with variables and various forms of input and output
3. use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
4. 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
5. use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
6. 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
7. use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

Purple Mash units	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS	IWB, Beebots, timers, digital cameras, recognise technology, select and use technology for purpose, interact with a range of programmes Reception – explore Mini Mash					
Year 1		1.1 - online safety and exploring purple mash (4 lessons) – *first 2 lessons, learning how to use a computer* 1.9 – technology outside of school (2 lessons)		1.6 – animated story books (5 lessons)		1,7 – coding (6 lessons)
Year 2	2.2 – online safety (3 lessons) 2.5 – effective searching (3 lessons)		2.8 – presenting ideas (4 lessons) 2.7 – making music (3 lessons)		2.1 – coding (6 lessons)	
Year 3		3.2 – online safety (3 lessons) 3.5 – email (6 lessons – condense)		3.4 – touch-typing (4 lessons) 3.8 – graphing (3 lessons)		3.1 – coding (6 lessons)
Year 4	4.2 – online safety (4 lessons)		4.6 – Animation (3 lessons) 4.7 – effective searching (3 lessons)		4.1 – coding (6 lessons)	
Year 5		5.2 – online safety (3 lessons) 5.6 – 3D modelling (4 lessons)		5.8 – word processing with Microsoft Word (8 lessons – condense)		5.1 – coding (6 lessons)
Year 6	6.2 – online safety (2 lessons) 6.4 – blogging (4 lessons)		6.9 – spreadsheets with Microsoft Excel (8 lessons - condense)		6.6 – networks (3 lessons) 6.1 – coding (6 lessons) *(condense as needed)*	

Digital literacy. Information technology. Computer science.

Rationale:

- Each year covers e-safety to consolidate and build on year before. In the first block so that it can constantly be referred back to throughout year.
- Coding at the end as a more developed skill. Will allow students to become more proficient in computing skills as year goes on that they can then apply.
- Coding each year as identified as a focus in DFE documents.
- Information technology – range of skills, drawing on skills from last year where applicable
- Condensed due to resource and time constraints