Unsworth
Primary School

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Computing Curriculum

The Unsworth Computing Curriculum

Our computing curriculum aims to equip our children to become digitally literate with the knowledge, skills and understanding they need to thrive in the digital world of today and the future. At Unsworth, we use Purple Mash to enhance our curriculum offer for Computing. Through our curriculum, children will gain the ability to express themselves and develop their ideas through the use of information and communication technology. Our children have the opportunity to independently use and apply the taught skills throughout the curriculum. This enables our children to confidently make decisions about which technology can best match their needs.

Computing is taught throughout all areas and subjects from Reception to Year 6, with an emphasis on children learning how to choose the technology that will enhance their learning. The computing curriculum is broken down into 3 strands: computer science, information technology and digital literacy.

Through our curriculum pupils will begin to:

- understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation (Computer science).
- analyse problems in computational terms and have repeated practical experience of writing computer programs to solve such problems (Computer science).
- evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems (Information technology).
- demonstrate they are responsible, competent, confident and creative users of information and communication technology (Digital literacy).

Our big ideas in computing

Unsworth Primary School

Our curriculum provides opportunities for our EYFS pupils to explore technology in a carefree and child-led way. This means that pupils will develop a familiarity with equipment and vocabulary and ensure a strong start into programmes of study set out in the national curriculum programme of study for computing. In Reception, our computing is centred around play-based, unplugged (no computer) activities that focus on building children's listening skills, curiosity and creativity and problem solving. Technology in the Early Years can mean taking a photograph with a camera or tablet, searching for information on the internet, playing games on the interactive whiteboard, exploring an old typewriter or other mechanical toys, using a Beebot, accessing MiniMash watching a video clip and listening to music.

Across Key Stage 1 and 2, we deliver some aspects of the computing curriculum through discrete blocks of learning, or it is integrated into the learning of other subjects where meaningful links can be made. Our curriculum is designed to enable our children to work towards an understanding of the following 'big ideas' in computing. This cumulative knowledge and skills are developed over time in appropriate, age-related steps.

By the time a child reaches Y6 we expect them to have some understanding of the following computing elements:

- 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. Select, use and combine a variety of software (including internet services) to design and create a range of programs, systems and content that accomplish given goals.
- 3. Use programmable toys and devices to carry out a set of instructions.
- 4. Question and evaluate the reliability of digital content.
- 5. Collect, analyse, evaluate and present data and information using a variety of applications on a range of digital devices.
- 6. Use technology to create, store and retrieve digital content.

- 7. To recognise acceptable/unacceptable behaviour and identify a range of ways to report concerns about content and contact.
- 8. Use technology safely and respectfully, keeping personal information private.
- 9. Use technology purposefully to create, organise, store, manipulate and retrieve digital content.
- 10. Use search technologies effectively and be discerning in evaluating digital content.

Computing Curriculum Overview

Year Group	Autumn		Spring		Summer		
R	Home corner resources, Telephone, Beebots Torches introduction to Seesaw - using tools on Seesaw such as camera, pens, eraser	Using iPads to upload to Seesaw Activities set on Seesaw – picture perfect Purple Mash paint projects introduced – tools pen/eraser.	Thermometers Timers Introduction on Purple Mash – General computing skills taught. Touchpad/mouse/typing, sorting/matching. Technology in the home – linked to past and present	Digital/ measuring scales. Timelapse beanstalks growing Revisiting Beebots – plan a route Making music on Purple Mash	Animal posters using paint and typing. Logging on using individual accounts.	Beach post cards – 2email Barnaby Bear Poster how to look after the ocean Logging on using individual accounts.	
1	Online safety and exploring Purple Mash	Pictograms	Lego Builders and Maze Explorers	Animated Story Books	Coding	Spreadsheets	Technology outside school
2	Online Safety	Coding	Making Music	Effective Searching	Creating Pictures	Presenting Ideas	
3	Online Safety (inc. emails)	Presenting	Coding		Micro:bit	Spreadsheets Graphing	
4	Online Safety	Coding	Effective Searching	Logo	Hardware	Animation	Intro to AI
5	Online Safety	Word Processing	Coding	Spreadsheets Databases	3D modelling	Micro:bit	
6	Online Safety	Quizzes	Blogging	Spreadsheets	Coding	Understanding Binary	