Subject: Computing   Overview with National Curriculum Objectives

Computing Intent

We believe that a high-quality, language-rich computing education is essential to support children in their computational thinking and creativity. At Oughton, we ensure that pupils become digitally literate and are able to express themselves as active participants in a technologically advanced world.

We aim to ensure children:

- can understand and apply the fundamental principles 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.
- can evaluate and apply information technology to solve problems.
- are competent, confident and creative users of information and communication technology.
- are responsible for themselves and others 'safety when using all forms of technology.

We use computers and technology to support learning across the curriculum. We are following the National Curriculum which identifies the programmes of study for each year group. We use the Herts for Learning system for assessment. We ensure that e-safety is a key focus area within school. All staff and pupils are to adhere to the Online safety Policy (see separate policy). We also aim to support Parents in online safety.

Oughton Primary and Nursery School Computing Overview

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Year Group	Autumn	Spring	Summer
Early Years	Computing and technology are still vitally important subjects to deliver to Early Years children. 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 • watching a video clip • listening to music Allowing children the opportunity to explore technology in this carefree and often child-led way, means that not only will they develop a familiarity with equipment and vocabulary but also they will have a strong start in Key Stage 1 Computing and all that it demands. Although the technology strand has been removed from the EYFS curriculum, there are lots of other assessment opportunities theses are largely cross-curricular with strong links to communication and language, mathematics, physical development and the characteristics of effective learning in particular. *See Early Years Overview of skills taught in Early Years*		
Year 1	**Programming Scratch Jr** • 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	**Computer Skills** • Use technology purposefully to create, organise, store, manipulate and retrieve digital content • Children will recognise common uses of information technology beyond school. Children will recognise common uses of information technology beyond school	**Paint** • Use technology purposefully to create, organise, store, manipulate and retrieve digital content

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Year Group	Autumn	Spring	Summer
Year 2	**Programming Turtle Logo and Scratch** • 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	**Presentation skills** • Children will recognise common uses of information technology beyond school. Children will recognise common uses of information technology beyond school • Use technology purposefully to create, organise, store, manipulate and retrieve digital content	**Computer Art** • Use technology purposefully to create, organise, store, manipulate and retrieve digital content
Year 3	**Scratch** • 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 • Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	**Drawing and Desktop Publishing** • 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 / various forms of input / 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 & be discerning in evaluating digital content • Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	**Presentation** • 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 technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

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Year Group	Autumn	Spring	Summer
Year 4	**Scratch** • 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 • Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	**Animation** • 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 technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	**Word processing** • 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 technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. •
Year 5	**Scratch** • 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 • Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	**FLOWOL** • 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 technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	**E-safety** • 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.

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Year Group	Autumn	Spring	Summer
Year 6	**Scratch** • 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 • 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.	**Excel** • 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 • 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.	**E-safety** • 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 follows the Computing Twinkl Scheme of work, which shows progression, and the building of skills. The topics in each year may change term.

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Promoting British Values at Oughton Primary and Nursery School:

There are opportunities for the promotion of British Values throughout the Computing Curriculum, focusing on:
Democracy
The Rule of Law
Individual Liberty
Mutual Respect
Tolerance of those of different faiths and beliefs

Rule of Law : All people and institutions are subject to and accountable to law that is fairly applied and enforced.
In school we promote the importance of the rule of law through such things as:
- There is a shared computing classroom code of practice.
- There are lessons linked to e-safety and we set clear boundaries, which are explained clearly, to pupils.
- Accountability is stressed to pupils on how they behaviour online.

Throughout the teaching of computing British Values is weaved in, the Rule of Law is an important discussion point during all our online/website units. We promote the need for Mutual Respect, Tolerance of the Different Faiths and Beliefs, Individual Liberty and Democracy within a range of tasks, activities and discussion had in Computing.

We comply with the Equality Act 2010 and the Special Educational Needs and Disability Regulation 2014 by ensuring that the Computing Curriculum is accessible for **all** learners through adaptations to meet the needs of our children.

Parents / Carers - if you wish to find out more about our Computing Curriculum, please email admin@oughton.herts.sch.uk and ask the Computing Subject Leader to contact you.