

Overview of Computing curriculum:

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.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<i>Using the internet safely is a yearlong focus and will be covered across the curriculum and during whole school and class assemblies</i>						
EYFS- developing computational thinking	Awesome Autumn- creating patterns Winter Warmers- algorithms and collaboration		Busy Bodies- simple algorithms' and debugging Spring time- abstraction		Boats Ahoy- using simple instructions, algorithms Summer fun- logic	
KS1 COMPUTING OBJECTIVES	<u>E-Safety & Using technology</u> <i>use technology safely and respectfully, keeping personal information private</i> <i>identify where to go for help and support when they have concerns about content or contact on the internet or other online</i>		<u>Programming</u> <i>use logical reasoning to predict the behaviour of simple programs</i> <i>create and debug simple programs</i> <i>understand what algorithms are; how they are implemented as programs on digital devices; and that programs</i>		<u>Digital literacy</u> <i>use technology purposefully to create, organise, store, manipulate and retrieve digital content</i>	

	<p>technologies</p> <p><i>recognise common uses of information technology beyond school</i></p>	<p><i>execute by following precise and unambiguous instructions</i></p>	
	<p><u>Computer Systems and Data</u></p>	<p><u>Programming</u></p>	<p><u>Media</u></p>
Year 1	<p>Computing systems and networks – Technology around us</p> <p>https://teachcomputing.org/curriculum/key-stage-1/computing-systems-and-networks-technology-around-us</p> <p>Data and Information- Grouping data-</p> <p>https://teachcomputing.org/curriculum/key-stage-1/data-and-information-grouping-data</p>	<p>Programming A – Moving Robot</p> <p>https://teachcomputing.org/curriculum/key-stage-1/programming-a-moving-a-robot</p> <p>Programming B – Introduction to animation</p> <p>https://teachcomputing.org/curriculum/key-stage-1/programming-b-introduction-to-animation</p> <p>Link to drawing and painting of Tigers (Art)</p>	<p>Creating media – Digital painting</p> <p>https://teachcomputing.org/curriculum/key-stage-1/creating-media-digital-painting</p> <p>Link to Arcimbaldo & Claes Oldenburg Food Art (Art)</p> <p>Creating media – Digital writing</p> <p>https://teachcomputing.org/curriculum/key-stage-1/creating-media-digital-writing</p>
Year 2	<p>Safety Snakes</p> <p>https://www.barefootcomputing.org/resources/safety-snakes</p> <p>Data and Information-Pictograms-</p> <p>https://teachcomputing.org/curriculum/key-stage-1/data-and-information-pictograms</p>	<p>Programming A – Robot algorithms</p> <p>https://teachcomputing.org/curriculum/key-stage-1/programming-a-robot-algorithms</p> <p>Programming B – An introduction to quizzes</p> <p>https://teachcomputing.org/curriculum/k</p>	<p>Creating media – Digital photography</p> <p>https://teachcomputing.org/curriculum/key-stage-1/creating-media-digital-photography</p> <p>Link to coast trip (Art & Geography)</p> <p>Creating media -Making music</p> <p>https://teachcomputing.org/curriculum/</p>

	<p>Computing systems and Networks all around us- https://teachcomputing.org/curriculum/key-stage-1/computing-systems-and-networks-it-around-us</p>	<p>ey-stage-1/programming-b-an-introduction-to-quizzes</p>	<p>key-stage-1/creating-media-making-music</p>
<p>KS2 COMPUTING OBJECTIVES</p>	<p><u>E-Safety & Using technology</u></p> <p><i>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</i></p> <p><i>use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</i></p>	<p><u>Programming</u></p> <p><i>use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</i></p> <p><i>design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</i></p> <p><i>use sequence, selection, and repetition in programs; work with variables and various forms of input and output</i></p>	<p><u>Digital literacy</u></p> <p><i>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</i></p> <p><i>use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</i></p>
	<p><u>Computer Systems and Data</u></p>	<p><u>Programming</u></p>	<p><u>Media</u></p>
<p>Year 3</p>	<p>Computing systems and networks – Connecting Computers</p> <p>https://teachcomputing.org/curriculum/key-stage-2/computing-systems-and-networks-connecting-computers</p>	<p>Programming A – Sequence in music</p> <p>https://teachcomputing.org/curriculum/key-stage-2/programming-a-sequence-in-music</p>	<p>Creating Media – Animation</p> <p>https://teachcomputing.org/curriculum/key-stage-2/creating-media-animation</p>

	<p>Data and Information- Branching Databases- https://teachcomputing.org/curriculum/key-stage-2/data-and-information-branching-databases</p>	<p>Programming B – Events and actions https://teachcomputing.org/curriculum/key-stage-2/programming-b-events-and-actions Link to patterns (Art)</p>	<p>Creating Media – Desktop Publishing https://teachcomputing.org/curriculum/key-stage-2/creating-media-desktop-publishing Link to Deadly 60 (English text)</p>
Year 4	<p>Computing systems and networks – The internet https://teachcomputing.org/curriculum/key-stage-2/computing-systems-and-networks-the-internet</p> <p>Data and Information- Data logging https://teachcomputing.org/curriculum/key-stage-2/data-and-information-data-logging</p>	<p>Programming A – Repetition in shapes https://teachcomputing.org/curriculum/key-stage-2/programming-a-repetition-in-shapes</p> <p>Programming B -Repetition in games https://teachcomputing.org/curriculum/key-stage-2/programming-b-repetition-in-games</p>	<p>Creating Media – Audio editing https://teachcomputing.org/curriculum/key-stage-2/creating-media-audio-editing Link to Vikings <i>Make a Viking podcast (History)</i></p> <p>Creating Media – Photo editing https://teachcomputing.org/curriculum/key-stage-2/creating-media-photo-editing</p>

<p>Year 5</p>	<p>Stop, think, do I consent?</p> <p>https://www.barefootcomputing.org/resources/stop-think-do-i-consent</p> <p>Computer systems and Networks- searching and systems-</p> <p>https://teachcomputing.org/curriculum/key-stage-2/computing-systems-and-networks-sharing-information</p> <p>Data and Information- Flat file databases-</p> <p>https://teachcomputing.org/curriculum/key-stage-2/data-and-information-flat-file-databases</p>	<p>Code Cracking</p> <p>https://www.barefootcomputing.org/resources/code-cracking</p> <p>Link to WW2 (History)</p> <p>Programming – Lego ‘wedo’</p> <p>Programming-Selection In Quizzes</p> <p>https://teachcomputing.org/curriculum/key-stage-2/programming-b-selection-in-quizzes</p>	<p>Creating Media – Vector drawing</p> <p>https://teachcomputing.org/curriculum/key-stage-2/creating-media-vector-drawing</p> <p>Link to collage (Art)</p> <p>Creating Media – Video editing</p> <p>https://teachcomputing.org/curriculum/key-stage-2/creating-media-video-editing</p>
<p>Year 6</p>	<p>Computing systems and networks – Communication</p> <p>https://teachcomputing.org/curriculum/key-stage-2/computing-systems-and-networks-communication</p> <p>Introduction to spreadsheets-</p> <p>https://teachcomputing.org/curriculum/key-stage-2/data-and-information-spreadsheets</p>	<p>Power Savers</p> <p>https://www.barefootcomputing.org/resources/power-savers</p> <p>Link to National Parks (Geography)</p> <p>Sensing and modelling using microbits</p> <p>https://teachcomputing.org/curriculum/key-stage-2/programming-b-sensing</p>	<p>3D Modelling-</p> <p>https://teachcomputing.org/curriculum/key-stage-2/creating-media-3d-modelling</p> <p>Webpage creation-</p> <p>https://teachcomputing.org/curriculum/key-stage-2/creating-media-web-page-creation</p>

		Programming- variables in games https://teachcomputing.org/curriculum/key-stage-2/programming-a-variables-in-games	
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