

# Curriculum Overview      Computing



Our intent is to model and educate our students on the responsible, ethical, and safe use of technology, enabling children to thrive and achieve success in their future endeavours. The computing curriculum at St Aldhelm's is designed to equip our students with the skills, knowledge, and values they need to navigate the digital world with confidence, creativity, and responsibility, leveraging the latest research and best practices through the use of Purple Mash schemes of work.

## EYFS – Understanding the World

In Early years children focus on building the following skills and working towards their early learning goals that will give them a strong foundation of knowledge that they will be able to build on when beginning computing in year one. This includes activities involving building fine motor skills, observing patterns, anticipating events and exploring a wide range of activities considering the relationship between cause and effect. We believe this gives children a strong foundation for building their computing skills and knowledge through KS1 and KS2.

30 – 50 months	40 – 60 months	Early learning
<p>To explore a range of simple toys and devices.</p> <p>To explore different skills in making toys work by pressing, lifting, pulling to achieve different effects such as sound movement or new images.</p>	<p>To know how to operate simple toys or devices.</p> <p>To show an interest in real objects with knobs or pulleys.</p> <p>To show skill in making toys work by pressing or lifting to achieve effects such as sound, movement or new images.</p> <p>To explore cause and effect through a variety of activities.</p>	<p>Make comments about what they have heard and ask questions to clarify their understanding</p> <p>Offer explanations for why things might happen, making use of recently introduced vocabulary from stories, non-fiction, rhymes and poems when appropriate.</p> <p>Express their ideas and feelings about their experiences using full sentences, including use of past, present, and future tenses and making use of conjunctions, with modelling and support from their teacher.</p> <p>Give focused attention to what the teacher says, responding appropriately even when engaged in activity, and show an ability to follow instructions involving several ideas or actions.</p> <p>Be confident in trying new activities and show independence, resilience and perseverance in the face of challenge.</p>

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		<p>Work and play cooperatively and take turns with others.</p> <p>Use a range of small tools, including scissors, paint brushes and cutlery.</p> <p>Anticipate – where appropriate – key events in stories.</p> <p>Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form, and function.</p>
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Year 1						
	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
National curriculum links and Unit plans.	<p><i>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</i></p> <p><b>-Introduction to purple mash (3 lessons)</b></p> <p><b>-2be safe scheme:</b> Self-image and identity, Online relationships</p>	<p><i>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</i></p> <p><b>-Data explorers (6 lessons)</b></p> <p><b>-2be safe scheme:</b> Online reputation</p>	<p><i>Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.</i></p> <p><b>-Creating and following instructions (3 lessons)</b></p> <p><b>-2be safe scheme:</b> Online bullying, Managing information online.</p>	<p><i>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</i></p> <p><b>-Animated stories (6 lessons)</b></p> <p><b>- 2be safe scheme:</b> Health, wellbeing and lifestyle</p>	<p><i>Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.</i></p> <p><i>Create and debug simple programs</i></p> <p><i>Use logical reasoning to predict the behaviour of simple programs.</i></p> <p><b>-Coding (6 lessons)</b></p> <p><b>-2be safe scheme:</b> Privacy and security.</p>	<p><i>Recognize common uses of information technology beyond school</i></p> <p><b>-Technology around us (4 lessons)</b></p> <p><b>-2be safe scheme:</b> Copyright and ownership</p>

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Year 2						
	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
National curriculum links and Unit plans.	<p>Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.</p> <p>Use technology purposefully to create, organise, store, manipulate and retrieve digital content.</p> <p>Recognise common uses of information technology beyond school.</p> <p><b>-Route explorers (4 lessons)</b></p> <p><b>-2be safe scheme:</b> Self-image and identity, Online relationships</p>	<p>Recognize common uses of information technology beyond school</p> <p><b>-The internet (4 lessons)</b></p> <p><b>-2be safe scheme:</b> Online reputation</p>	<p>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</p> <p><b>-Creating pictures (5 lessons)</b></p> <p><b>- 2be safe scheme:</b> Online bullying, Managing information online.</p>	<p>Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.</p> <p>Create and debug simple programs</p> <p>Use logical reasoning to predict the behaviour of simple programs.</p> <p>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</p> <p>Recognize common uses of information technology beyond school</p> <p><b>-Coding (6 lessons)</b></p> <p><b>-2be safe scheme:</b> Health, wellbeing and lifestyle.</p>	<p>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</p> <p><b>-Spreadsheets (4 lessons)</b></p> <p><b>-2be safe scheme:</b> Privacy and security.</p>	<p>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</p> <p><b>-Presenting ideas (4 lessons)</b></p> <p><b>-2be safe scheme:</b> Copyright and ownership</p>

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## Year 3

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
National curriculum links and Unit plans.	<p>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.</p> <p>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.</p> <p><b>-Email (6 lessons)</b></p> <p><b>-2be safe scheme:</b> Self-image and identity, Online relationships</p>	<p>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.</p> <p>Use sequence, selection and repetition in programs, work with variables and various forms of input and output</p> <p>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p> <p>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.</p> <p><b>-Route planners (5 lessons)</b></p> <p><b>-2be safe scheme:</b> Online reputation</p>	<p>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.</p> <p><b>-Branching data bases (4 lessons)</b></p> <p><b>-2be safe scheme:</b> Online bullying, Managing information online.</p>	<p>Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.</p> <p>Create and debug simple programs</p> <p>Use logical reasoning to predict the behaviour of simple programs.</p> <p>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</p> <p>Recognize common uses of information technology beyond school</p> <p><b>-Coding (6 lessons)</b></p> <p><b>-2be safe scheme:</b> Health, wellbeing and lifestyle.</p>	<p>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.</p> <p><b>-Touch typing (4 lessons)</b></p> <p><b>-2be safe scheme:</b> Privacy and security.</p>	<p>Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.</p> <p>Create and debug simple programs</p> <p>Use logical reasoning to predict the behaviour of simple programs.</p> <p>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</p> <p>Recognize common uses of information technology beyond school</p> <p><b>-Micro-bit (4 lessons)</b></p> <p><b>-2be safe scheme:</b> Copyright and ownership</p>

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## Year 4

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
National curriculum links and Unit plans.	<p>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.</p> <p><b>-Un-packing hardware and software (4 lessons)</b></p> <p><b>-2be safe scheme:</b> Self-image and identity, Online relationships</p>	<p>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.</p> <p><b>-Animation (6 lessons)</b></p> <p><b>-2be safe scheme:</b> Online reputation</p>	<p>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.</p> <p>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p> <p>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.</p> <p><b>-Logo (4 lessons)</b></p> <p><b>-2be safe scheme:</b> Online bullying, Managing information online.</p>	<p>Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.</p> <p>Create and debug simple programs</p> <p>Use logical reasoning to predict the behaviour of simple programs.</p> <p>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</p> <p>Recognize common uses of information technology beyond school</p> <p><b>-Coding (6 lessons)</b></p> <p><b>- 2be safe scheme:</b> Health, wellbeing and lifestyle.</p>	<p>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.</p> <p>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.</p> <p><b>-Effective searching (4 lessons)</b></p> <p><b>-2be safe scheme:</b> Privacy and security.</p>	<p>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.</p> <p>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.</p> <p><b>-Introduction to AI (4 lessons)</b></p> <p><b>-2be safe scheme:</b> Copyright and ownership</p>

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## Year 5/6

In order to meet the needs of Year 5 and 6 we have a two-year curriculum cycle. In order to provide even coverage all curriculum objectives for both 5 and 6 will be covered in both cycle A and cycle B using a mixture of the Y5/Y6 curriculum covered in purple mash. This allows children to cover all areas of the curriculum while also not repeating topics and as a result being exposed to a wide range of technology and software. (Year groups mentioned do not refer to the curriculum objects but to the location of the unit on purple mash e.g. Y5 or y6)

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Cycle A	<p>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.</p> <p>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.</p> <p><b>-Blogging (4 lessons) (Y6 purple mash)</b></p> <p><b>-2be safe scheme:</b> Self-image and identity, Online relationships</p>	<p>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.</p> <p>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.</p> <p><b>-Databases (4 lessons) (Y5)</b></p> <p><b>-2be safe scheme:</b> Online reputation</p>	<p>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.</p> <p>Use sequence, selection and repetition in programs; work with variables and various forms of input and output</p> <p>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p> <p><b>-Coding (6 lessons) (Y6)</b></p> <p><b>-2be safe scheme:</b> Online bullying, Managing information online.</p>	<p>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.</p> <p><b>-Networks (4 lessons) (Y6)</b></p> <p><b>-2be safe scheme:</b> Health, wellbeing and lifestyle.</p>	<p>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.</p> <p>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.</p> <p><b>-3D modelling (5 lessons) (Y6)</b></p> <p><b>-2be safe scheme:</b> Privacy and security.</p>	<p>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.</p> <p>Use sequence, selection and repetition in programs, work with variables and various forms of input and output</p> <p>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p> <p><b>- Binary (5 lessons) (Y6)</b></p> <p><b>-2be safe scheme:</b> Copyright and ownership</p>

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Cycle B	<p>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.</p> <p>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.</p> <p><b>-Quizzing (5 lessons) (Y5)</b></p> <p><b>- 2be safe scheme:</b> Self-image and identity, Online relationships</p>	<p>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.</p> <p>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.</p> <p><b>-Graphing (4 lessons) (Y6)</b></p> <p><b>-2be safe scheme:</b> Online reputation</p>	<p>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.</p> <p>Use sequence, selection and repetition in programs; work with variables and various forms of input and output</p> <p>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p> <p><b>-Game creator (5 lessons) (Y5)</b></p> <p><b>-2be safe scheme:</b> Online bullying, Managing information online.</p>	<p>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.</p> <p><b>-Networks (4 lessons) (Y6)</b></p> <p><b>-2be safe scheme:</b> Health, wellbeing and lifestyle.</p>	<p>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.</p> <p>Use sequence, selection and repetition in programs; work with variables and various forms of input and output</p> <p>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p> <p><b>- Coding (5 lessons) (Y5)</b></p> <p><b>-2be safe scheme:</b> Privacy and security.</p>	<p>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.</p> <p>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.</p> <p><b>-Word processing (6 lessons) (Y5)</b></p> <p><b>-2be safe scheme:</b> Copyright and ownership</p>
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