



Computing – Teach Computing / Project evolve

Breadth of Study

At Beechwood Primary School we follow Barefoot Computing in EYFS and NCCE Teach Computing scheme in years 1 to 6. The Barefoot Computing scheme focus on developing their computation thinking skills linked in with the Early Years Framework this will prepare children to move into the Teach Computing curriculum in year 1. This is a cleverly crafted scheme to ensure children leave Beechwood with all the skills they will need to succeed in computing in secondary school and beyond. We acknowledge that e-safety is paramount to safe guarding our children and therefore the entire school follow this to support the children's understanding of how to stay safe on line. As a school we are proactive in dealing with any on-line safely concerns and educating our children how to conduct themselves on-line.

	Autumn	Spring	Summer
EYFS	<p>Barefoot computing: Busy Bodies / Awesome Autumn Developing computational thinking and understanding of the following concepts:</p> <ul style="list-style-type: none"> Algorithms Decomposition Debugging Logical reasoning Patterns Abstraction <p>Online safety</p> <ul style="list-style-type: none"> To tell an adult if they see something on a digital device that upsets them To know not to give out any information about themselves To know that not everything they see on the internet is true <p>Technology Make marks on a digital device to communicate their ideas (maths games and paint apps on IWB)</p>	<p>Barefoot Computing: Winter Warmers /Super Space/ Spring Time Developing computational thinking and understanding of the following concepts:</p> <ul style="list-style-type: none"> Creating, Pattern Logical thinking Algorithms Decomposition Collaborating 'Tinkering' Abstraction <p>Online safety</p> <ul style="list-style-type: none"> To tell an adult if they see something on a digital device that upsets them To know not to give out any information about themselves To know that not everything they see on the internet is true <p>Technology</p> <ul style="list-style-type: none"> Identify everyday technology: links to technology at home Talk about how everyday technology is controlled Use a package to produce a picture on screen. Control a programmable toy To understand the basic functions of an iPad (home button, lock button and volume buttons Understand that 'output' is the result of a trigger (pressing the play button) – children take a photo and record each other saying what they want to be when they grow up. 	<p>Technology</p> <ul style="list-style-type: none"> Using iPads - To navigate their way around an iPad and operate several apps confidently Control a programmable toy around a maze. To visit the computer room and learn how to log-on to the computers <p>Boats ahoy / Summer Time</p> <ul style="list-style-type: none"> Creating, Pattern Logical thinking Algorithms Decomposition Debugging Abstraction Collaborating Tinkering' <p>Technology</p> <ul style="list-style-type: none"> To log-on To write their name on a word document To learn what a mouse is and to develop basic mouse skills such as moving and clicking To use a simple online paint tool to create digital art

Year 1/2 Cycle B	<p>Computing systems and networks – Technology around us Recognise common uses of information technology beyond school 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. Evolve: copyright and ownership</p> <p>Creating media – Digital painting Use technology purposefully to create, organise, store, manipulate, and retrieve digital content Evolve: copyright and ownership</p>	<p>Programming A – Moving a robot NCCE 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 Recognise common uses of information technology beyond school</p> <p>Data and information – Grouping data Use technology purposefully to create, organise, store, manipulate, and retrieve digital content Use technology safely and respectfully</p>	<p>Creating Media – digital writing Use technology purposefully to create, organise, store, manipulate, and retrieve digital content Use technology safely and respectfully, keeping personal information private</p> <p>Programming B – Programming animations 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</p>
Year 1/2 Cycle A	<p>Computing systems and networks – Technology around us Recognise common uses of information technology beyond school 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. Evolve: copyright and ownership</p> <p>Creating media – Digital painting Use technology purposefully to create, organise, store, manipulate, and retrieve digital content Evolve: copyright and ownership</p>	<p>Creating media – Digital photography Use technology purposefully to create, organise, store, manipulate, and retrieve digital content Recognise common uses of information technology beyond school 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</p> <p>Data and information - Pictograms use technology purposefully to create, organise, store, manipulate and retrieve digital content 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</p>	<p>Creating media – Digital music Use technology purposefully to create, organise, store, manipulate, and retrieve digital content</p> <p>Programming B – Programming quizzes 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 Use technology purposefully to create, organise, store, manipulate and retrieve digital content</p>

Year 3	<p>Computing systems and networks – Connecting computers use sequence, selection, and repetition in programs; work with variables and various forms of input and output, understand computer networks including the internet, 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 Evolve: Online Relationships and Online Reputation</p> <p>Creating media - Stop-frame animation 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>Evolve: use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. Online Bullying</p>	<p>Programming A – Sequencing sounds 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</p> <p>Data and information – Branching databases 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</p>	<p>Creating Media – Desktop Publishing 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</p> <p>Programming B – Events and actions in programs 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</p>
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Year 4	<p>Networks – The internet -Understand computer networks including the internet -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</p> <p>Creating Media - Audio editing -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>Programming A – Repetition in shapes 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</p> <p>Data and information – Data logging Use sequence, selection, and repetition in programs; work with variables and various forms of input and output 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>Creative media – photo editing 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</p> <p>Programming B: Repetition in games 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</p>
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Year 5	<p>Computing System & Networks – Systems and Searching 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, and be discerning in evaluating digital content</p> <p>Creating Media - Video Production 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</p>	<p>Data and information – flat file database 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</p> <p>Programming A – selection in physical computing 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</p>	<p>Programming B – selection in quizzes 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</p> <p>Creating media – introduction to vector graphics 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</p>
Year 6	<p>Data and information – spreadsheets 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>Programming A – Variables in games Design, write and debug programs that accomplish specific goals, including controlling or simulating</p>	<p>Creating Media – 3D modelling 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.</p>	<p>Programming B – sensing movement 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</p>

	<p>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>use technology safely, respectfully, and responsibly; recognise acceptable/unacceptable behavior.</p> <p>Project Evolve – Online relationships and online reputation</p> <p>Creating media – webpage creation</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 technology safely, respectfully, and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</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>Computing systems and networks – communication and collaboration</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>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 technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</p>
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