

Shipbourne School Computing Curriculum – using Teachcomputing.org

Purpose of Study

For our pupils to become true life-long learners, our curriculum must embrace all forms of technology and provide a comprehensive and carefully planned computing education centred around well-chosen resources and content. Our high-quality computing education will equip pupil to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. We will ensure that all pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

Aims and Intent

Our pupils have been born into a digital world and from a very early age have access to a wealth of digital resources. We are aware that often, their digital skill levels will exceed those of the adults around them. However, it is vital that our curriculum builds the foundations of a true understanding of how to use the digital world both safely and effectively, taking time to explore each unit and attain strong learning. We have chosen the Teach Computing curriculum as a basis for our curriculum, as it provides a comprehensive, inclusive and ambitious structure where knowledge and skills build upon each other ensuring that all pupils leave our school ready for their next steps.

Programmes of Study and Implementation

The Teach Computing Curriculum has been written to support all pupils. Lessons occur weekly from year 1 and are sequenced so that they build on previous learning. Planning in other curriculum areas will also ensure that use of digital hardware and software maximises learning opportunities. Where appropriate, activities are scaffolded so that all pupils can succeed and thrive. Scaffolded activities provide pupils with extra resources, such as visual prompts, to reach the same learning goals as the rest of the class. Exploratory tasks foster a deeper understanding of a concept, encouraging pupils to apply their learning in different contexts and make connections with other learning experiences. As well as scaffolded activities, embedded within the lessons are a range of pedagogical strategies which support making computing topics more accessible and are underpinned by the latest computing research. The subject of computing is much younger than many other subjects, and as such, there is still a lot more to learn about how to teach it effectively. To remain up-to-date as research continues to develop, every aspect of the Teach Computing Curriculum is reviewed each year and changes are made as necessary.

Pedagogical principles:

- Lead with concepts
- Work together
- Get hands-on
- Unplug, unpack, repack
- Model everything
- Foster program comprehension
- Create projects
- Challenge misconceptions
- Make concrete
- Read and explore code first

Our 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
- can make safe choices when accessing online content and know what to do when things go wrong.

Our curriculum begins in the Early Years where our children will:

- Learn what computers and other digital devices are used for by different people in day-to-day life
- Explore how they can use them themselves, for both work and play
- Practice specific fine motor skills
- And how to do so safely. This includes looking after computers physically as well as staying safe online
- Acquire readiness for the focused learning that begins in Year 1
- Develop listening skills, problem-solving and thoughtful questioning abilities.

This will be achieved through:

- Ensuring access to carefully selected equipment and resources as part on the learning environment
- Fostering curiosity and opportunities to explore
- Adult modelling and supported learning tasks
- Focused access to some of the Year 1 learning opportunities.

Key stage 1

Pupils should be taught to:

- 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 ☒ 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.

Key stage 2

Pupils should be taught to:

- 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
- 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
- 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.

Enrichment, Visits and Visitors

In order to maximise learning opportunities, careful planning will ensure that pupils have access to a range of 'real-life' experiences through hands-on, practical activities. In planning units, teachers ensure that visitors and local visits form an important part of provision, as well as ensuring learning is rooted in practical and active tasks thus ensuring that pupils remain engaged, enthused and challenged.

Topic Map

2023 - 2024	Term 1 Computing systems and networks	Term 2 Creating media A	Term 3 Programming A	Term 4 Data and information	Term 5 Creating media	Term 6 Programming B
Tinley (R/1)	Technology around us	Digital painting	Moving a robot	Grouping data	Digital writing	Programming animations
Hampton (2/3)	Information technology around us	Digital photography	Robot algorithms	Pictograms	Digital music	Programming quizzes
Fairlawne (4/5/6)	The internet	Audio production	Repetition in shapes	Data logging	Photo editing	Repetition in games

2024 - 2025	Term 1 Computing systems and networks	Term 2 Creating media A	Term 3 Programming A	Term 4 Data and information	Term 5 Creating media	Term 6 Programming B
Tinley (R/1)	Technology around us	Digital painting	Moving a robot	Grouping data	Digital writing	Programming animations
Hampton (2/3)	Connecting computers	Stop frame animation	Sequencing sounds	Branching databases	Desktop publishing	Events and actions in programs
Fairlawne (4/5/6)	Systems and searching	Video production	Selection in physical computing	Flat-file databases	Introduction to vector graphics	Selection in quizzes

2025 - 2026	Term 1 Computing systems and networks	Term 2 Creating media A	Term 3 Programming A	Term 4 Data and information	Term 5 Creating media	Term 6 Programming B
Tinley (R/1)	Technology around us	Digital painting	Moving a robot	Grouping data	Digital writing	Programming animations
Hampton (2/3)	Information technology around us	Digital photography	Robot algorithms	Pictograms	Digital music	Programming quizzes
Fairlawne (4/5/6)	Communication and collaboration	Webpage creation	Variables in games	Introduction to spreadsheets	3D modelling	Sensing movement

2023-2024 Curriculum Coverage

	Term 1 Computing systems and networks	Term 2 Creating media A	Term 3 Programming A	Term 4 Data and information	Term 5 Creating media	Term 6 Programming B
EYFS	<p>Our curriculum begins in the Early Years where our children will:</p> <ul style="list-style-type: none"> Learn what computers and other digital devices are used for by different people in day-to-day life Explore how they can use them themselves, for both work and play Practice specific fine motor skills And how to do so safely. This includes looking after computers physically as well as staying safe online Acquire readiness for the focused learning that begins in Year 1 Develop listening skills, problem-solving and thoughtful questioning abilities <p>This will be achieved through:</p> <ul style="list-style-type: none"> Ensuring access to carefully selected equipment and resources as part on the learning environment Fostering curiosity and opportunities to explore Adult modelling and supported learning tasks Focused access to some of the Year 1 learning opportunities 					
Year 1	<p>Technology around us Recognising technology in school and using it responsibly.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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>Digital painting Choosing appropriate tools in a program to create art, and making comparisons with working non-digitally.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> Use technology purposefully to create, organise, store, manipulate, and retrieve digital content 	<p>Moving a robot Writing short algorithms and programs for floor robots, and predicting program outcomes.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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>Grouping data Exploring object labels, then using them to sort and group objects by properties.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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>Digital writing Using a computer to create and format text, before comparing to writing non-digitally.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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 	<p>Programming animations Designing and programming the movement of a character on screen to tell stories.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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
Year 2/3	<p>Information technology around us Identifying IT and how its responsible use improves our world in school and beyond.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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 	<p>Digital photography Capturing and changing digital photographs for different purposes.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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 	<p>Robot algorithms Creating and debugging programs, and using logical reasoning to make predictions.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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 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 	<p>Pictograms Collecting data in tally charts and using attributes to organise and present data on a computer.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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 	<p>Digital music Using a computer as a tool to explore rhythms and melodies, before creating a musical composition.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> Use technology purposefully to create, organise, store, manipulate, and retrieve digital content 	<p>Programming quizzes Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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

Year 4/5/6	<p style="text-align: center;">Term 1 Computing systems and networks</p> <p>The internet Recognising the internet as a network of networks including the WWW, and why we should evaluate online content.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> • 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 • 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 style="text-align: center;">Term 2 Creating media A</p> <p>Audio production Capturing and editing audio to produce a podcast, ensuring that copyright is considered.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> • 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 	<p style="text-align: center;">Term 3 Programming A</p> <p>Repetition in shapes Using a text-based programming language to explore count-controlled loops when drawing shapes.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> • 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 style="text-align: center;">Term 4 Data and information</p> <p>Data logging Recognising how and why data is collected over time, before using data loggers to carry out an investigation.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> • 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 style="text-align: center;">Term 5 Creating media</p> <p>Photo editing Manipulating digital images, and reflecting on the impact of changes and whether the required purpose is fulfilled.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> • 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 	<p style="text-align: center;">Term 6 Programming B</p> <p>Repetition in games Using a block-based programming language to explore count-controlled and infinite loops when creating a game.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> • 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

2024 – 2025 Curriculum Coverage

	Term 1 Computing systems and networks	Term 2 Creating media A	Term 3 Programming A	Term 4 Data and information	Term 5 Creating media	Term 6 Programming B
EYFS	<p>Our curriculum begins in the Early Years where our children will:</p> <ul style="list-style-type: none"> Learn what computers and other digital devices are used for by different people in day-to-day life Explore how they can use them themselves, for both work and play Practice specific fine motor skills And how to do so safely. This includes looking after computers physically as well as staying safe online Acquire readiness for the focused learning that begins in Year 1 Develop listening skills, problem-solving and thoughtful questioning abilities <p>This will be achieved through:</p> <ul style="list-style-type: none"> Ensuring access to carefully selected equipment and resources as part on the learning environment Fostering curiosity and opportunities to explore Adult modelling and supported learning tasks Focused access to some of the Year 1 learning opportunities 					
Year 1	<p>Technology around us Recognising technology in school and using it responsibly.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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>Digital painting Choosing appropriate tools in a program to create art, and making comparisons with working non-digitally.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> Use technology purposefully to create, organise, store, manipulate, and retrieve digital content 	<p>Moving a robot Writing short algorithms and programs for floor robots, and predicting program outcomes.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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>Grouping data Exploring object labels, then using them to sort and group objects by properties.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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>Digital writing Using a computer to create and format text, before comparing to writing non-digitally.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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 	<p>Programming animations Designing and programming the movement of a character on screen to tell stories.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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

	Term 1 Computing systems and networks	Term 2 Creating media A	Term 3 Programming A	Term 4 Data and information	Term 5 Creating media	Term 6 Programming B
Year 2/3	<p>Connecting computers Identifying that digital devices have inputs, processes, and outputs, and how devices can be connected to make networks.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> Use sequence, selection, and repetition in programs; work with variables and various forms of input and output 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 	<p>Stop-frame animation Capturing and editing digital still images to produce a stop-frame animation that tells a story.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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>Sequencing sounds Creating sequences in a block-based programming language to make music.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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>Branching databases Building and using branching databases to group objects using yes/no questions.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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>Desktop publishing Creating documents by modifying text, images, and page layouts for a specified purpose.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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>Events and actions in programs Writing algorithms and programs that use a range of events to trigger sequences of actions.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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
Year 4/5/6	<p>Systems and searching Recognising IT systems in the world and how some can enable searching on the internet.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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 	<p>Video production Planning, capturing, and editing video to produce a short film.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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 	<p>Selection in physical computing Exploring conditions and selection using a programmable microcontroller.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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>Flat-file databases Using a database to order data and create charts to answer questions.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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>Introduction to vector graphics Creating images in a drawing program by using layers and groups of objects.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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>Selection in quizzes Exploring selection in programming to design and code an interactive quiz.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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

2025 – 2026 Curriculum Coverage

	Term 1 Computing systems and networks	Term 2 Creating media A	Term 3 Programming A	Term 4 Data and information	Term 5 Creating media	Term 6 Programming B
EYFS	<p>Our curriculum begins in the Early Years where our children will:</p> <ul style="list-style-type: none"> Learn what computers and other digital devices are used for by different people in day-to-day life Explore how they can use them themselves, for both work and play Practice specific fine motor skills And how to do so safely. This includes looking after computers physically as well as staying safe online Acquire readiness for the focused learning that begins in Year 1 Develop listening skills, problem-solving and thoughtful questioning abilities <p>This will be achieved through:</p> <ul style="list-style-type: none"> Ensuring access to carefully selected equipment and resources as part on the learning environment Fostering curiosity and opportunities to explore Adult modelling and supported learning tasks Focused access to some of the Year 1 learning opportunities 					
Year 1	<p>Technology around us Recognising technology in school and using it responsibly.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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>Digital painting Choosing appropriate tools in a program to create art, and making comparisons with working non-digitally.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> Use technology purposefully to create, organise, store, manipulate, and retrieve digital content 	<p>Moving a robot Writing short algorithms and programs for floor robots, and predicting program outcomes.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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>Grouping data Exploring object labels, then using them to sort and group objects by properties.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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>Digital writing Using a computer to create and format text, before comparing to writing non-digitally.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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 	<p>Programming animations Designing and programming the movement of a character on screen to tell stories.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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

	Term 1 Computing systems and networks	Term 2 Creating media A	Term 3 Programming A	Term 4 Data and information	Term 5 Creating media	Term 6 Programming B
Year 2/3	<p>Information technology around us Identifying IT and how its responsible use improves our world in school and beyond.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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 	<p>Digital photography Capturing and changing digital photographs for different purposes.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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 	<p>Robot algorithms Creating and debugging programs, and using logical reasoning to make predictions.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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 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 	<p>Pictograms Collecting data in tally charts and using attributes to organise and present data on a computer.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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 	<p>Digital music Using a computer as a tool to explore rhythms and melodies, before creating a musical composition.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> Use technology purposefully to create, organise, store, manipulate, and retrieve digital content 	<p>Programming quizzes Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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
Year 4/5/6	<p>Communication and collaboration Exploring how data is transferred by working collaboratively online.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts 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 	<p>Webpage creation Designing and creating webpages, giving consideration to copyright, aesthetics, and navigation</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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 	<p>Variables in games Exploring variables when designing and coding a game.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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 	<p>Introduction to spreadsheets Answering questions by using spreadsheets to organise and calculate data.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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>3D modelling Planning, developing, and evaluating 3D computer models of physical objects.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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>Sensing movement Designing and coding a project that captures inputs from a physical device.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> 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