



EYFS

Computing at Ashmole Primary in Reception.

Foundation: Many activities in the early years revolve around children developing an understanding of their environment. Settings encourage children to explore, observe, solve problems, predict, discuss and consider. Computing resources can provide tools for using these skills as well as being examined in their own right, with computers not the only resources. Equipment is added to role-play and free choice activities throughout the children's day. These can reflect the real world, build on children's experiences and allows them opportunities to understand how, why, when and where different forms of technology are used in everyday life.

By the end of the Foundation Stage most children will:

- Show an interest in Computing.
- Know how to operate simple equipment.
- Complete a simple program on a computer.
- Use Computing hardware to interact with age-appropriate computer software.
- Recognise that a range of technology is used in places such as homes and schools.
- Select and use technology for particular purposes.



Computing Whole School Curriculum Map

Year group: 1

Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topic of the term	<u>We are treasure hunters</u>	<u>We are TV chefs</u>	<u>We are digital artists</u>	<u>We are publishers</u>	<u>We are rhythmic</u>	<u>We are detectives</u>
Computing Units	<p>Pupils learn:</p> <ul style="list-style-type: none"> that a programmable robot can be controlled by inputting a sequence of instructions to develop and record sequences of instructions as an algorithm to program a robot to follow their algorithm to debug programs to predict how their programs will work <p>• Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute them by following precise and</p>	<p>Pupils learn to:</p> <ul style="list-style-type: none"> break down a process into simple, clear steps (an algorithm) use different features of a video camera use a video camera to capture moving images. edit a video to include an audio commentary develop collaboration skills. discuss their work and think about how it could be improved. <p>Understand what algorithms are.</p> <ul style="list-style-type: none"> Use technology purposefully to create, organise, store, manipulate and 	<p>Pupils learn:</p> <ul style="list-style-type: none"> how to select and set brushes and colours to create artwork in a range of styles on iPads to use the undo function if they make mistakes, and to encourage experimentation to use multiple layers in their art to transform layers to paint on top of photographs <p>Use technology purposefully to create, organise, store, manipulate and retrieve digital content.</p> <ul style="list-style-type: none"> Recognise common uses of information technology beyond school. 	<p>Pupils learn to:</p> <ul style="list-style-type: none"> plan a small multimedia eBook choose and import images record audio commentary add and format titles and other text think carefully about protecting their privacy respect other people's copyright revise and improve their work <p>Use technology purposefully to create, organise, store, manipulate and retrieve digital content.</p> <ul style="list-style-type: none"> Use technology safely and respectfully, keeping personal information private; identify where 	<p>Pupils learn to:</p> <ul style="list-style-type: none"> record audio on an iPad program sprites to playback recorded audio in ScratchJr program ScratchJr to create repeating rhythms using recorded audio explore different effects that can be applied to audio create a repeating percussion pattern using a virtual drum machine experiment with a range of virtual instruments. <ul style="list-style-type: none"> Use technology purposefully to create, organise, store, manipulate 	<p>Pupils learn:</p> <ul style="list-style-type: none"> how data can be structured as records with fields for information how data can be organised into groups and subgroups how data can be structured as a tree how data in a table can be filtered and searched. <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



	<p>unambiguous instructions.</p> <ul style="list-style-type: none"> • Create and debug simple programs. • Use logical reasoning to predict the behaviour of simple programs. 	<p>retrieve digital content.</p> <ul style="list-style-type: none"> • Recognise common uses of information technology beyond school. 		<p>to go for help and support when they have concerns about content or contact on the Internet or other online technologies.</p> <ul style="list-style-type: none"> • Recognise common uses of information technology beyond school. 	<p>and retrieve digital content.</p> <ul style="list-style-type: none"> • Recognise common uses of information technology beyond school. • Understand what algorithms are. 	<p>to go for help and support when they have concerns about content or contact on the Internet or other online technologies.</p> <ul style="list-style-type: none"> • Recognise common uses of information technology beyond school.
<p>Links to National Curriculum</p>	<ul style="list-style-type: none"> - English - Maths - Science - PE - Art and Design <p>Pupils should be taught to:</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 ♣ 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 technology. 					
<p>Skills</p>	<p>Graphics Use ICT to generate ideas for their work. Use various tools such as brushes, pens, rubber, stamps, shapes. Save, retrieve and print work. Text Use spacebar, backspace, delete, arrow keys, return. Start to use two hands when typing. Word process short texts to present. Sound recording Record sound at and away from a computer.</p> <p>Use software to record sounds. Change sounds recorded. Save, retrieve and edit sounds. Video Capture video. Discuss which videos to keep and which to delete. Arrange clips to create a short film. Add a title and credits. Presentation Choose a suitable subject and collect some information. Create a mindmap of this data or slide show. Present the information to a group. Be able to store and retrieve data.</p>					



Computing Curriculum Map

Year Group :2

Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topic of the term	<u>We are astronauts</u>	<u>We are games testers</u>	<u>We are photographers</u>	<u>We are safe researchers</u>	<u>We are animators</u>	<u>We are zoologists</u>
Computing units	<p>Pupils learn to:</p> <ul style="list-style-type: none"> • plan a sequence of instructions to move sprites in ScratchJr • create, test and debug programs for sprites in ScratchJr • work with input and output in ScratchJr • use repetition in their programs • design costumes for sprites. <p>• Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute them by following precise and unambiguous instructions.</p>	<p>Pupils learn to:</p> <ul style="list-style-type: none"> • observe and describe carefully what happens in computer games • use logical reasoning to make predictions of what a program will do and test these predictions • think critically about computer games and their use • create sequences of instructions for a virtual robot to solve a problem • work out strategies for playing a game well • be aware of how to use games safely and in balance with other activities. <p>Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute them by following</p>	<p>Pupils learn to:</p> <ul style="list-style-type: none"> • consider the technical and artistic merits of photographs • use the iPad camera app • take digital photographs <ul style="list-style-type: none"> • review, reject or pick the images they take • edit and enhance their photographs <p>Use technology purposefully to create, organise, store, manipulate and retrieve digital content.</p> <ul style="list-style-type: none"> • Recognise common uses of information technology beyond school. • Use technology safely and respectfully, keeping personal information 	<p>Pupils learn to:</p> <ul style="list-style-type: none"> • develop collaboration skills through working as part of a group • develop research skills through searching for information on the Internet • think through privacy implications of their use of search engines • be more discerning in evaluating online information • improve note-taking skills through the use of mind mapping • develop presentation skills through creating and delivering a short multimedia presentation. <p>Use technology purposefully to create, organise, store, manipulate and retrieve digital content.</p>	<p>Pupils learn to:</p> <ul style="list-style-type: none"> • understand how animation works • use storyboards to plan an animation • create their own original characters, props and backgrounds for an animation • film, review and edit a stop-motion animation • record audio to accompany their animation • provide constructively critical feedback to their peers. <p>Use technology purposefully to create, organise, store, manipulate and retrieve digital content.</p>	<p>Pupils learn to:</p> <ul style="list-style-type: none"> • sort and classify a group of items by answering questions • collect data using tick charts or tally charts • take, edit and enhance photographs • use Google Sheets or Microsoft Excel to produce basic charts • record information on a digital map • summarise what they have learned in a presentation. <p>• Use technology purposefully to create, organise, store, manipulate and retrieve digital content.</p> <ul style="list-style-type: none"> • Recognise common uses of information technology beyond school.



	<ul style="list-style-type: none"> • Create and debug simple programs. • Use logical reasoning to predict the behaviour of simple programs. 	<p>precise and unambiguous instructions.</p> <ul style="list-style-type: none"> • Use logical reasoning to predict the behaviour of simple programs. • Recognise common uses of information technology beyond school. • Use technology safely and respectfully, keeping personal information private. 	<p>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>	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • 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>Links to National Curriculum</p>	<ul style="list-style-type: none"> - English - Maths - Science - PE - Art and Design <p>Pupils should be taught to:</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 ♣ 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 technology. 					



Skills	<p>Graphics Use ICT to generate ideas for their work. Use various tools such as brushes, pens, rubber, stamps, shapes. Save, retrieve and print work. Text Use spacebar, backspace, delete, arrow keys, return. Start to use two hands when typing. Word process short texts to present. Sound recording Record sound at and away from a computer.</p> <p>Use software to record sounds. Change sounds recorded. Save, retrieve and edit sounds. Video Capture video. Discuss which videos to keep and which to delete. Arrange clips to create a short film. Add a title and credits. Presentation Choose a suitable subject and collect some information. Create a mindmap of this data or slide show. Present the information to a group. Be able to store and retrieve data.</p>
---------------	--



Computing Curriculum Map

Year Group :3

Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topic of the term	<u>We are programmers</u>	<u>We are bug fixers</u>	<u>We are presenters</u>	<u>We are who we are</u>	<u>We are co-authors</u>	<u>We are opinion pollsters</u>
Computing units	<p>Pupils learn to:</p> <ul style="list-style-type: none"> • plan and create an algorithm for an animated scene in the form of a storyboard • write a program in Scratch to create the animation, including characters, dialogue, costumes, backdrops and sound • review their animation programs and correct mistakes <p>Design, write and debug programs that accomplish specific goals; solve problems by decomposing them into smaller parts.</p>	<p>Pupils learn to:</p> <ul style="list-style-type: none"> • develop a number of strategies for finding errors in programs • build up resilience and strategies for problem solving • increase their knowledge and understanding of Scratch • recognise a number of common types of bugs in software. <p>Debug programs that accomplish specific goals.</p> <ul style="list-style-type: none"> • Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. 	<p>Pupils learn to:</p> <ul style="list-style-type: none"> • develop their web-based research skills • structure, prepare and deliver a talk about a given topic or subtopic studied in another curriculum area • record a piece to camera • edit a movie using static images and green screen footage • give constructive, critical feedback on recorded presentations. <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</p>	<p>Pupils learn to:</p> <ul style="list-style-type: none"> • create a number of structured presentations • narrate presentations • consider issues of trust and privacy when sharing information • Select, use and combine a variety of software to design and create content that accomplishes given goals, including presenting information • Use technology safely, respectfully and responsibly 	<p>Pupils learn to:</p> <ul style="list-style-type: none"> • understand the conventions for collaborative online work, particularly in wikis • be aware of their responsibilities when editing another people's work • become familiar with Wikipedia, including potential problems associated with its use • practise research skills • write for a target audience using a wiki tool • develop collaboration skills • develop proofreading skills. • Understand computer networks, including the Internet; how they can provide multiple 	<p>Pupils learn to:</p> <ul style="list-style-type: none"> • understand some elements of survey design • understand some ethical and legal aspects of online data collection • use the Internet to facilitate data collection • use charts to analyse data • interpret results. • 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,



	<ul style="list-style-type: none">• Use sequence in programs; work with variables and various forms of output.• Use logical reasoning to detect and correct errors in algorithms and programs.	<ul style="list-style-type: none">• Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	content that accomplish given goals, including collecting, analysing, evaluating and presenting information. • Use technology safely, respectfully and responsibly.		<p>services, such as the World Wide Web, and the opportunities they offer for communication and collaboration.</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.• Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content.	<p>evaluating and presenting data.</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.
--	---	---	---	--	---	--



Links to National Curriculum	<ul style="list-style-type: none">- English- Maths- Science- PE- Art <p>Pupils should be taught to:</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♣ 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 and Design.
Skills	<p>Graphics Acquire, store and combine images from cameras or the internet for a purpose. Use the print screen function to capture an image. Select certain areas of an image and resize, rotate and invert the image. Edit pictures using a range of tools in a graphics program. 3D modelling Year 4 only - (links to design for DT) Use internet-based software to create a 3D representation.</p> <p>Use the tools available to design their own fit for purpose object. Text Get quicker at typing with both hands. Use a variety of font sizes, styles and colours. Align text left, right and centre. Animation - Year 3 only Plan what they would like to happen in their animation. Take a series of pictures to form an animation. Move items within their animation to create movement on playback. Edit and improve their animation. To use sound within animation to enhance video/animation. Video Capture video for a purpose. Choose which clips to keep and which to discard. Trim and arrange clips to convey meaning. Add titles, credits, slide transitions, special effects. To capture and use sounds with video to enhance. Presentation Create a title slide and choose a style. Change the layout of a slide. Insert a picture/text/graph from the Internet or personal files. Decide upon and use effective transitions.</p>



Computing Curriculum Map

Year Group: 4

Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topic of the term	<u>We are software developers</u>	<u>We are makers</u>	<u>We are musicians</u>	<u>We are bloggers</u>	<u>We are artists</u>	<u>We are meteorologists</u>
Computing units	<p>Pupils learn to:</p> <ul style="list-style-type: none"> develop an educational computer game using selection and repetition understand and use variables start to debug computer programs recognise the importance of user interface design, including consideration of input and output. <p>• Design, write and debug programs that accomplish specific goals.</p> <p>• Use sequence, selection, and repetition in programs; work with variables and</p>	<p>Pupils learn:</p> <ul style="list-style-type: none"> about the input - process - output model of computation about the inputs and outputs available on a BBC micro: bit to program using the Make Code block-based environment to test and debug programs they write, using an on-screen simulator and the micro: bit how to convert and transfer a program written on screen to the micro:bit. <p>Design, write and debug programs that accomplish specific goals.</p> <ul style="list-style-type: none"> Use sequence, selection and repetition in 	<p>Pupils learn to:</p> <ul style="list-style-type: none"> create a repeating percussion rhythm play music using virtual instruments compose or edit tunes using the piano roll (pitch and duration) tool perform electronic music using pre-recorded loops, and create their own loops create a multi-track composition or performance using multiple instruments give feedback to others on their compositions and performances. <p>Use sequence and repetition; work with various forms of input and output.</p>	<p>Pupils learn to:</p> <ul style="list-style-type: none"> become familiar with blogs as a medium and a genre of writing create a sequence of blog posts on a theme incorporate additional media comment on the posts of others develop a critical, reflective view of a range of media, including text. <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> <ul style="list-style-type: none"> Use a variety of software (including Internet services) on a 	<p>Pupils learn to:</p> <ul style="list-style-type: none"> develop an appreciation of the links between geometry and art become familiar with the tools and techniques of a vector graphics package develop an understanding of turtle graphics experiment with the tools available, refining and developing their work as they apply their own criteria to evaluate it and receive feedback from their peers develop some awareness of computer generated art. 	<p>Pupils learn to:</p> <ul style="list-style-type: none"> understand different measurement techniques for weather - both analogue and digital use computer-based data logging to automate the recording of some weather data use spreadsheets to create charts analyse data, explore inconsistencies in data and make predictions practise using presentation and video software. <p>• Work with variables and various forms of input and output.</p> <ul style="list-style-type: none"> Use logical reasoning to explain



	<p>various forms of input and output.</p> <ul style="list-style-type: none">• Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	<p>programs; work with variables and various forms of input and output.</p> <ul style="list-style-type: none">• Use logical reasoning to explain how some simple algorithms work	<ul style="list-style-type: none">• Be discerning in evaluating digital content.• Select, use and combine a variety of software on a range of digital devices to design and create a range of content that accomplishes given goals.• Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour.	<p>range of digital devices to design and create a range of content that accomplish given goals.</p> <ul style="list-style-type: none">• Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour.	<ul style="list-style-type: none">• Use sequence, selection and repetition in programs; work with variables and various forms of 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 content that accomplish given goals.	<p>how some simple algorithms work.</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.
--	---	--	---	--	---	---



Links to National Curriculum	<ul style="list-style-type: none">- English- Maths- Science- PE- Art and Design <p>Pupils should be taught to:</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♣ 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 and Design.
Skills	<p>Graphics Acquire, store and combine images from cameras or the internet for a purpose. Use the print screen function to capture an image. Select certain areas of an image and resize, rotate and invert the image. Edit pictures using a range of tools in a graphics program. 3D modelling Year 4 only - (links to design for DT) Use internet-based software to create a 3D representation.</p> <p>Use the tools available to design their own fit for purpose object. Text Get quicker at typing with both hands. Use a variety of font sizes, styles and colours. Align text left, right and centre. Animation - Year 3 only Plan what they would like to happen in their animation. Take a series of pictures to form an animation. Move items within their animation to create movement on playback. Edit and improve their animation. To use sound within animation to enhance video/animation. Video Capture video for a purpose. Choose which clips to keep and which to discard. Trim and arrange clips to convey meaning. Add titles, credits, slide transitions, special effects. To capture and use sounds with video to enhance.</p> <p>Presentation Create a title slide and choose a style. Change the layout of a slide. Insert a picture/text/graph from the Internet or personal files. Decide upon and use effective transitions.</p>



Computing Curriculum Map

Year Group: 5

Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topic of the term	<u>We are game developers</u>	<u>We are cryptographers</u>	<u>We are architects</u>	<u>We are web developers</u>	<u>We are adventure gamers</u>	<u>We are VR Designers</u>
Computing units	<p>Pupils learn to:</p> <ul style="list-style-type: none"> • create original artwork and sound for a game • design and create a computer program for a computer game, which uses sequence, selection, repetition and variables • detect and correct errors in their computer game • use iterative development techniques (making and testing a series of small changes) to improve their game. • Design, write and debug programs that accomplish specific goals, 	<p>Pupils learn to:</p> <ul style="list-style-type: none"> • be familiar with semaphore and Morse code • understand the need for private information to be encrypted • encrypt and decrypt messages in simple ciphers • appreciate the need to use complex passwords and to keep them secure • have some understanding of how encryption works on the Internet. • 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 	<p>Pupils learn to:</p> <ul style="list-style-type: none"> • understand the work of architects, designers and engineers working in 3-D • develop familiarity with a simple CAD (computer-aided design) tool • develop spatial awareness by exploring and experimenting with a 3-D virtual environment • develop greater aesthetic awareness. <p>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.</p>	<p>Pupils learn:</p> <ul style="list-style-type: none"> • the name and function of components making up the school's network • how information is passed between the components that make up the Internet • what the source code for a web page looks like, and how it can be edited • how a website can be structured • how to add content to a web page. • 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 	<p>Pupils learn:</p> <ul style="list-style-type: none"> • how to plan a non-linear presentation • to create text as part of a presentation • to add and edit images in a presentation • to use hyperlinks for navigation between the slides of a presentation • to record and add audio narration to a presentation • to use commenting tools to give feedback on a presentation. • Use search technologies effectively. • Use a variety of software (including Internet services) 	<p>Pupils learn to:</p> <ul style="list-style-type: none"> • explore real-world and imagined locations in VR (if possible) • create 360° photosphere images • link physical objects to digital content using QR codes • create their own VR scene • program objects and interactions in VR. <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> <ul style="list-style-type: none"> • Use sequence, selection, and repetition in programs; work with



	<p>including controlling or simulating physical systems and solving problems by decomposing them into smaller parts.</p> <ul style="list-style-type: none">• 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>provide multiple services, such as the World Wide Web; and the opportunities they offer for communication and collaboration.</p> <ul style="list-style-type: none">• Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	<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 information.	<p>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> <ul style="list-style-type: none">• Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.• Be discerning in evaluating digital content.	<p>on a range of digital devices to design and create content that accomplish given goals, including presenting information.</p> <ul style="list-style-type: none">• Use technology safely, respectfully and responsibly.	<p>variables and various forms of input and output.</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 information.
--	---	--	--	---	---	--





Computing Curriculum Map

Year Group: 6

Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topic of the term	<u>We are game developers</u>	<u>We are computational thinkers</u>	<u>We are publishers</u>	<u>We are connected</u>	<u>We are advertisers</u>	<u>We are AI developers</u>
Computing units	<p>Pupils learn:</p> <ul style="list-style-type: none"> • how computers use stored programs to connect input to output • how to generate and evaluate designs in response to a brief • to plan a complex project by decomposing it into smaller parts • to work with physical components of a system • how to design and write a program for an embedded system • to use criteria to provide others with feedback on their work 	<p>Pupils learn to:</p> <ul style="list-style-type: none"> • develop the ability to reason logically about algorithms • understand how some key algorithms can be expressed as programs • understand that some algorithms are more efficient than others for the same problem • understand common algorithms for searching and sorting a list. • Design, write and debug programs that accomplish specific goals. • Use sequence, selection and repetition in programs; work with variables and various forms of 	<p>Pupils learn to:</p> <ul style="list-style-type: none"> • manage or contribute to large collaborative projects, facilitated using online tools • write and review content • source digital media while demonstrating safe, respectful and responsible use • design and produce a high-quality print document. <p>Understand computer networks including the Internet and the opportunities they offer for communication and collaboration.</p> <ul style="list-style-type: none"> • Use search technologies effectively, appreciate how results are 	<p>Pupils learn:</p> <ul style="list-style-type: none"> • about appropriate rules or guidelines for a civil online discussion • how search results are selected and ranked • how to argue their point effectively, supporting their views with sources • how to counter someone else's argument while showing respect and tolerance • how to judge the reliability of an online source • some strategies for dealing with online bullying. • Understand the opportunities computer networks offer for communication and collaboration. 	<p>Pupils learn to:</p> <ul style="list-style-type: none"> • think critically about how video is used to promote a cause • storyboard an effective advert for a cause • work collaboratively to shoot original footage and source additional content • acknowledge intellectual property rights • work collaboratively to edit the assembled content to make an effective advert. • Use search technologies effectively, appreciate how results are selected 	<p>Pupils learn:</p> <ul style="list-style-type: none"> • how decision trees can be trained automatically to classify data • how speech recognition works • how a neural net recognises images • to train a neural net to classify images • to train a machine learning system to identify sentiments • to consider some ethical principles in designing AI systems. • Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by



<ul style="list-style-type: none">• Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems.• Use sequence, selection, and repetition in programs; work with 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>input and output. errors in algorithms and programs.</p> <ul style="list-style-type: none">• Use logical reasoning to explain how some simple algorithms work and to detect and correct	<p>selected and ranked, and be discerning in evaluating digital content.</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	<ul style="list-style-type: none">• Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.• Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content.	<p>and ranked, and be discerning in evaluating digital content.</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	<p>decomposing them into smaller parts.</p> <ul style="list-style-type: none">• Use and combine a variety of software 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.
--	--	--	--	---	---

