

Computing Curriculum

Intent

At Jotmans Hall, we intend our high quality Computing curriculum to be fully inclusive to every child. Our aims are to fulfil the requirements of the National Curriculum for History; providing a broad, balanced and differentiated curriculum that encompasses the British Values throughout; ensuring the progressive development of historical concepts, knowledge and skills; and for the children to study life in the past.

We intend to inspire in pupils a curiosity and fascination about the Britain's past and that of the wider world. Our teaching equips pupils with knowledge about the history of Britain and how it has influenced and been influenced by the wider world; know and understand about significant aspects of the history of the wider world like ancient civilisations and empires; changes in living memory and beyond living memory; learn about the lives of significant people of the past; understand the methods of historical enquiry and be able to ask and answer questions. We want children to enjoy and love learning about history by gaining this knowledge and skills, not just through experiences in the classroom, but also with the use of fieldwork and educational visits.

Implementation

	Autumn	Spring	Summer
EYFS	Early years provision will be exposed to the understanding of internet safety as they explore the world around them and how technology is an everyday part of their learning and understanding of the world.	Early years provision will be exposed to the understanding of internet safety as they explore the world around them and how technology is an everyday part of their learning and understanding of the world.	Early years provision will be exposed to the understanding of internet safety as they explore the world around them and how technology is an everyday part of their learning and understanding of the world.

		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1/2	Year A	Word Processing Skills	Computer Skills	Painting	Programming Toys	Programming Skills Scratch Jr	Online Safety Y1
	Year B	Preparing for Turtle Logo	Online Safety Y2	Programming Turtle Logo and Scratch	Presentation Skills	Using the Internet	Using and Applying

Year A

Year 1/2	What are we learning? (Key Questions)	Vocabulary	What knowledge and understanding will we gain?	How will these be assessed?
<p>Autumn 1 – Year A</p> <p>Word Processing Skills</p>	<p>This Word Processing Skills unit will teach your class basic typing and word processing skills. Children will learn how to type with two hands, use the shift, space and enter key properly, and edit work by using the backspace, delete and arrow keys. Children will then go on to learn how to use undo and redo and to select and format text. Children should be encouraged to have good posture and sit up to the computer.</p>	<p>Keyboard, type, key, shift, space bar, enter, return, symbol, save, folder</p>	<p>Use technology to create, organise, store, manipulate and retrieve digital content.</p>	<p>Students will be assessed on the key skills in the National Curriculum through showing they can answer the Key Questions. On-going formative assessment by class teacher.</p>
<p>Autumn 2 – Year A</p> <p>Computer Skills</p>	<p>This unit will teach children the basic computer skills that they will need in order to be able to use a desktop or laptop computer. Children will learn how to use a computer mouse or a trackpad and how to switch on and shut down a computer. They will apply their mouse or trackpad skills by launching applications, manipulating windows and opening and saving files and folders. The children will then practise their clicking skills and learn how to drag objects, either using a mouse or trackpad.</p>	<p>Window, switch, folder, headphones, monitor, minimise, exit, size, trackpad, launch, save, move, system unit, keyboard, mouse, open</p>	<p>Use technology to purposefully to manipulate and retrieve digital content.</p> <p>Use technology safely and respectfully.</p> <p>Learn how to safely turn on and off computing equipment.</p> <p>Learn how to open and save files.</p> <p>Drag objects in a file from location to another.</p>	<p>Students will be assessed on the key skills in the National Curriculum through showing they can answer the Key Questions. On-going formative assessment by class teacher.</p>

<p>Spring 1 – Year A</p> <p>Painting</p>	<p>This Painting unit will teach your class basic painting skills in a painting application on a computer or tablet device. Children will use a simple painting program to paint with different colours and brushes, create shapes, fill areas, undo and redo and add text.</p>	<p>Brushes, Paint, colour, shapes, tools, settings</p>	<p>Use technology to purposefully to manipulate and retrieve digital content in the context of painting.</p> <p>Add text to a painting.</p> <p>Create simple shapes and fill areas.</p> <p>Painting with different colours and brushes.</p>	<p>Students will be assessed on the key skills in the National Curriculum through showing they can answer the Key Questions.</p> <p>On-going formative assessment by class teacher.</p>
<p>Spring 2 – Year A</p> <p>Programming Toys</p>	<p>In this unit about programming toys, children will be introduced to the principles of programming through unplugged tasks and the use of Bee-Bots. They will be introduced to algorithms as a set of step-by-step instructions given to a device, will learn how to debug simple algorithms and how to use logical reasoning to predict how a program will behave.</p>	<p>Algorithm, code, left, right, forward, backward, pause, clear, go, program, bee-bot, turn, sequence, quarter, half</p>	<p>Follow precise and unambiguous instructions.</p> <p>To create and debug programmes.</p> <p>Programming blocks for grow and shrink connecting them in sequence.</p> <p>Change speeds using programming.</p> <p>Use reasoning to predict the behaviour of simple instruction.</p> <p>Create and record sounds.</p>	<p>Students will be assessed on the key skills in the National Curriculum through showing they can answer the Key Questions.</p> <p>On-going formative assessment by class teacher.</p>
<p>Summer 1 – Year A</p> <p>Programming Skills Scratch Jr</p>	<p>This unit introduces children at Key Stage 1 to the principles of coding, using the age-appropriate ScratchJr software. A more accessible version of the popular Scratch Programming and aimed at age 5-7, ScratchJr is available as a free app for Apple, Amazon and Android tablets. The platform encourages basic understanding of algorithms and how to create precise</p>	<p>Blocks, invisible, shrink, show, hide, sprite, wait, repeat forever, tablet, sound, record, character, move, repeat, start, background, sequence</p>	<p>Follow precise and unambiguous instructions.</p> <p>To create and debug programmes.</p> <p>Use logical reasoning to predict the behaviour of something.</p> <p>Record animal sounds and then create simple programs to play and record the recorded sound.</p>	<p>Students will be assessed on the key skills in the National Curriculum through showing they can answer the Key Questions.</p> <p>On-going formative assessment by class teacher.</p>

	<p>instructions for visual working programs.</p> <p>It begins to develop a sense of creating, debugging and logical reasoning, which are required for further programming at KS2.</p>			
<p>Summer 2 – Year A</p> <p>Online Safety Year 1</p>	<p>This is the first of the PlanIt online safety units and is aimed at teaching basic online safety and digital literacy skills. In this unit, children learn about the potential dangers in the online world and what basic steps we all need to take in order to have positive digital experiences. The first lesson, which is intended to be taught at the start of the school year, focuses on why it is important for children to name their creative work. They go on to learn about using a search engine safely to find pictures. Children learn the SMART rules and look at what information should be kept safe when using the Internet. The lessons then explore the positives and potential negatives of online communication, such as email, and children will develop the skills to recognise potential dangers and act accordingly to keep themselves and others safe.</p>	<p>Online, key, safe, communicate, address, keyboard, meet, email.</p> <p>Accept, search engine, image, text, reliable, tell, device, folder, name, date, copyright, save.</p>	<p>Children can name and date a digital self-portrait.</p> <p>Use technology safely and respectfully.</p> <p>How to keep personal information safe.</p> <p>How to send emails.</p> <p>Guide others to make the right choices and keep people safe.</p>	<p>Students will be assessed on the key skills in the National Curriculum through showing they can answer the Key Questions.</p> <p>On-going formative assessment by class teacher.</p>

Year B

Year 1/2	What are we learning? (Key Questions)	Vocabulary	What knowledge and understanding will we gain?	How will these be assessed?
<p>Autumn 1 – Year B</p> <p>Preparing for Turtle Logo</p>	<p>This unit has two main aims, to enable children to create, test and debug algorithms, and preparing children to use the language of Turtle Logo. The children begin by giving and following instructions to move forward and make quarter turns, followed by walking different rectilinear shapes. The language is extended to use the main Turtle Logo commands. Children will create, text and debug algorithms for shapes and routes around school in preparation for using the commands in online programs such as Turtle Logo/Logo Interpreter or MSWLogo..</p>	<p>Move, forward, half turn, quarter turn, commands, algorithm, turn, instructions, right 90, forward 2, left 90, rectangle</p>	<p>Understand what algorithms are.</p> <p>Follow precise instructions.</p> <p>Create and debug programs.</p> <p>Using logical reasoning to predict the behaviour of simple programmes.</p>	<p>Students will be assessed on the key skills in the National Curriculum through showing they can answer the Key Questions.</p> <p>On-going formative assessment by class teacher.</p>
<p>Autumn 2 – Year B</p> <p>Online Safety Y2</p>	<p>In this unit, children learn about how what they do online leaves a trail called a digital footprint. They will look at how to improve the efficiency of their online searches, the types of websites that are best for children to access when looking for information, as well as how to identify inappropriate content and the actions they should take if they do. Children will be introduced to the term ‘cyberbullying’ and look at how they should communicate online and deal</p>	<p>Digital, online, search, keyboard, website, phone, app, search engine, cyberbullying, information, personal, private, laptop, comment, digital footprint, profile account, bullying, report, tablet</p>	<p>Children can name and date a digital self-portrait.</p> <p>Use technology safely and respectfully.</p> <p>How to keep personal information safe.</p> <p>How to send emails.</p> <p>Guide others to make the right choices and keep people safe.</p>	<p>Students will be assessed on the key skills in the National Curriculum through showing they can answer the Key Questions.</p> <p>On-going formative assessment by class teacher.</p>

	with instances of people being unkind via digital means.			
Spring 1 – Year B Programming Turtle Logo and Scratch	This Programming Turtle Logo and Scratch unit will teach your class to create and debug algorithms. Following on from the earlier Year 2 unit on Preparing for Turtle Logo, the children use the basic commands in Logo to move and draw using the turtle on screen, and then further develop algorithms using the “repeat” command. These skills are then developed by teaching children to create algorithms in Scratch using a selection of blocks.	Repeat, clear screen, variable, algorithm, forward, sound, move, instructions, left, right	Understand what algorithms are. Learn how to repeat the command. Create and debug simple programmes. Create algorithm for sound. Create algorithm for repeat and say something. To create and use commands to change the backdrop and add sprites.	Students will be assessed on the key skills in the National Curriculum through showing they can answer the Key Questions. On-going formative assessment by class teacher.
Spring 2 – Year B Presentation Skills	This unit is intended as the first unit of the academic year. Lessons 1 and 6 focus on important computer skills needed for safe and effective computer use and introduce some further skills concerning the use of folders, searching for files and printing. Lessons 2-5 introduce children to presentations and teach the skills needed to create a simple presentation. While many schools have Microsoft PowerPoint, there are alternatives. Impress is part of Apache OpenOffice and is free, as is Google Slides, part of Google Drive, which is available with a gmail address. Schools with Apple	Log off, search, shut down, folder, photo, image, system unit, colour, black and white, windows, format, copy, double page, date, switch, monitor, inset, print	Use basic computer skills. Use a folder. Organise ideas for a presentation. Add and format an image. Record slides and present a presentation. Search and print.	Students will be assessed on the key skills in the National Curriculum through showing they can answer the Key Questions. On-going formative assessment by class teacher.

	<p>computers can also use Keynote, as well as MacOs versions of PowerPoint or Impress, or Google Slides. There are simpler presentation applications designed for children which may be used, although they may not have all the features, particularly for the later units.</p>			
<p>Summer 1 – Year B</p> <p>Using the internet</p>	<p>This unit introduces children to using the Internet safely and with a purpose. Children are shown how to search the Internet using one word; how to make sense of the returned results; how to use “for kids” to return more suitable results; how to follow links and return to the search results. Children are encouraged to use a range of search engines, including Google, Bing and Yahoo, and some more child-friendly engines like Kidrex. (Note: many of the child-friendly searches use Google.) The children then learn to blog safely and responsibly. Teachers will need to ensure they follow their own school guidelines on blogging, particularly on the use of names and photographs. Suggested guidelines are included in the lessons, but may differ from those agreed by the school. The focus of the lessons is less on the technical aspects, which will vary according to which</p>	<p>Internet, world wide web (WWW), search engine, results, Google, Bing, Yahoo, browser, ink, web page, back, blog, picture, image, photograph, post, username, password, find, image, password, comment, question.</p>	<p>Can search the internet.</p> <p>Can search the internet to find suitable results.</p> <p>I can search for information safely online.</p> <p>Follow links to another web page.</p> <p>Create an online blog.</p> <p>I can use a camera to take safe photo to use online.</p> <p>I can post positive comments and responses on a blog.</p>	<p>Students will be assessed on the key skills in the National Curriculum through showing they can answer the Key Questions.</p> <p>On-going formative assessment by class teacher.</p>

	blogging site is used, and more on how to blog in a safe and responsible way, looking at how to blog well, and how to post and respond to comments effectively.			
Summer 2 – Year B Using and Applying Y2	This unit reinforces skills taught throughout the year and links them together with a common theme of Castles. Children are given the opportunity to use their skills in a new context and apply them within software they are familiar with in order to complete a final project. Lessons are structured into three sets of 2 lessons, which can be delivered in sequence or in isolation. The first two follow up the unit on Computer Art, the second two on Presentation Skills and the final two on Programming with Scratch.	Pixel, pointillism, dots, Seurat, program, tool, size, colour, internet, rotate, Picasso, cubism, presentation, text, image, slide, PowerPoint, retrieve, open, scratch, program, algorithm, commands, instructions, repeat, sound, variable, blocks, sprites, backdrops, code, sounds, blocks.	Use technology to create, organise, store, manipulate and retrieve digital content in content of creating computer art in a particular style. Create and compare styles of art. Create presentation including text and images. Retrieve, edit and organise a presentation. Create precise instructions for a character. Create for a pair of characters involving speech and movement.	Students will be assessed on the key skills in the National Curriculum through showing they can answer the Key Questions. On-going formative assessment by class teacher.

		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 3/4	Year A	Programming Turtle Logo and Scratch	Word Processing	Drawing and DPT	Presentation skills	Using and Applying Y3 & 4	Online Safety Y3
	Year B	Scratch: Questions and Quizzes	Programming Turtle Logo	Word Processing	Animation	Internet Research and Communication	Online Safety Year 4

Year A				
Year 3/4	What are we learning? (Key Questions)	Vocabulary	What knowledge and understanding will we gain?	How will these be assessed?
Autumn 1 – Year A	This Programming Turtle Logo and Scratch unit will teach your class to create and debug algorithms.	Pen up, pen down, variable, algorithm, right, left, forward,	Design and write programs with specific goals, including controlling or stimulating physical systems.	Students will be assessed on the key skills in the National

Programming Turtle Logo and Scratch	<p>Following on from the earlier Year 2 unit on Preparing for Turtle Logo, the children use the basic commands in Logo to move and draw using the turtle on screen, and then further develop algorithms using the “repeat” command. These skills are then developed by teaching children to create algorithms in Scratch using a selection of blocks.</p>	<p>turn, calculation, instructions, commands, clear screen, move</p>	<p>Debug algorithms. Draw regular polygons.</p>	<p>Curriculum through showing they can answer the Key Questions. On-going formative assessment by class teacher.</p>
Autumn 2 – Year A Word Processing	<p>This is the third word processing unit, following the units in Years 1 and 2, aimed at teaching basic word-processing skills to children. In this unit, children will learn to use various features for formatting text. The Lesson Pack contains six Lesson Plans, each with their own Lesson Presentation, alongside a home learning task, challenge cards, posters and help cards. The first lesson, which is intended to be used at the start of the school year, focuses on some important computer skills and introduces children to screenshots and the Snipping Tool, and secure use of passwords.</p>	<p>Keyboard, typing, save, folder, shift, caps lock, space bar, edit, backspace, delete, arrow keys, undo, redo, select, window, minimise, password, screenshot, snipping tool, shortcut</p>	<p>Children can use basic computer knowledge from previous units. Take screenshots and passwords. Can change the case of text. Can align text. Use bullet points and numbering. Can use advanced keyboard shortcuts. Use text boxes and text wrap.</p>	<p>Students will be assessed on the key skills in the National Curriculum through showing they can answer the Key Questions. On-going formative assessment by class teacher.</p>
Spring 1 – Year A Drawing and DPT	<p>This unit is aimed at developing children’s graphic and presentation skills by introducing drawing as opposed to painting. It also goes on to further children’s understanding of layouts using a desktop publishing application. Children will learn to draw, order, group and</p>	<p>Text, text box, format, image, photo, photograph, wrap text, square, aspect ratio, objects, layout, background, outline, font, size, colour</p>	<p>Using a computer, draw different shapes and lines. Order and group subjects. Manipulate shapes and lines. Recognize an effective layout for a poster.</p>	<p>Students will be assessed on the key skills in the National Curriculum through showing they can answer the Key Questions. On-going formative assessment by class teacher.</p>

	<p>manipulate objects to make a picture. They will also learn to evaluate and create effective layouts, combining text and images. The Lesson Pack contains six Lesson Plans, each with their own Lesson Presentation, alongside challenge cards, home learning tasks, posters and word cards. There are a number of different drawing applications used in primary schools. 'Google Draw' comes with any gmail account. Word processors/presentation applications/desktop publishing packages have some of the features of drawing applications and can be used, but are not as good as a specific drawing application. It is worth researching what is available in your school and deciding on the best software to use, prior to starting this unit.</p>		<p>Combine text and images.</p>	
<p>Spring 2 – Year A Presentation skills</p>	<p>This unit develops childrens use of presentation software. The first three lessons teach children new skills, following on from previous skills learnt; setting the theme, slide transitions, animating objects onto the slide, creating hyperlinks in the action settings and adding audio and video.</p>	<p>Theme, transition, animation, slide, link, file format, hyperlink, button, shape, action settings, audio, video, embed, evaluate, branching story, image, text, text box, title, colour</p>	<p>Plan a branching story.</p> <p>Create slides, add theme, transitions and animation to a presentation.</p> <p>Create a slide with hyperlinks.</p> <p>Use action settings.</p> <p>Insert audio and video to a presentation.</p>	<p>Students will be assessed on the key skills in the National Curriculum through showing they can answer the Key Questions. On-going formative assessment by class teacher.</p>

<p>Summer 1 – Year A</p> <p>Using and Applying Y3 and 4</p>	<p>The purpose of the 'Using & Applying' unit is to provide an engaging, open-ended project for pupils to apply the skills they have developed by working on other units within the year group.</p> <p>Designed to be completed by pupils in groups working over a number of lessons (such as a final half-term), the project incorporates software, skills and aims that have been covered in previous units.</p> <p>Pupils should be encouraged to plan activities thoroughly before dividing up the separate tasks required to complete the whole project. Different elements of the project can be completed by different children, who will combine their work at the end, but must communicate and work together as a team throughout.</p> <p>Ideally, there should be an opportunity for children to present their finished projects. This could be either to the rest of the class or a wider school audience.</p>	<p>Character, cartoon, animate, research, story, plan, design, create, draw, narrate, evaluate, present, personality, description</p>	<p>Use and combine a variety of software to design a range of programs, systems and content.</p> <p>Design, create and move their own cartoon characters.</p> <p>Create additional description or other materials linked to my character.</p> <p>Create and present a presentation.</p>	<p>Students will be assessed on the key skills in the National Curriculum through showing they can answer the Key Questions. On-going formative assessment by class teacher.</p>
<p>Summer 2 – Year A</p> <p>Online Safety</p>	<p>In this unit, children are introduced to email and other forms of online communication. They will look at how to write and send emails, as well as how to decide if an email is safe to open. They will build on their existing knowledge of cyberbullying and how to deal with unkind</p>	<p>Online, internet, cyberbullying, email, password, device, digital, safety, technology, social media, website, advertisement, privacy settings, secure, digital citizen, digital footprint, community, inbox, forum, comments</p>	<p>Know what cyberbullying is.</p> <p>How to detect and address cyberbullying.</p>	<p>Students will be assessed on the key skills in the National Curriculum through showing they can answer the Key Questions. On-going formative assessment by class teacher.</p>

	behaviour online. The use and importance of privacy settings is introduced and children will discuss the types of information we should not share online. They will build on the idea of a digital footprint by thinking about how the adverts they see online are targeted at them. Children will finish the unit by using the knowledge they have gained to plan a party using online communication methods.		<p>Understand the use of advertisement, to promote products.</p> <p>How to create a strong password.</p> <p>How to safely receive emails.</p> <p>Explore different ways children can communicate online.</p>	
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Year B

Year 3/4	What are we learning? (Key Questions)	Vocabulary	What knowledge and understanding will we gain?	How will these be assessed?
Autumn 1 – Year B Scratch Questions and Quizzes	This unit follows up the earlier units on programming Scratch on a computer/tablet or Pyonkee with iPads. In this unit the children write quizzes by combining questions. While specific skills in Scratch are taught, the unit aims to teach children the wider programming skills of solving problems, testing, debugging, improving and evaluating.	Algorithm, costume, quiz, effects, sprite, scratch library sounds, variable, blocks, back drop, question	<p>Compare and decompose a problem into smaller parts.</p> <p>Write and debug a program.</p> <p>Use sequence and selection.</p> <p>Write and use programs that use sequences and repetition.</p> <p>Work with variables.</p>	Students will be assessed on the key skills in the National Curriculum through showing they can answer the Key Questions. On-going formative assessment by class teacher.
Autumn 2 – Year B Programming Turtle Logo	This Programming Turtle Logo unit will teach children how to create an algorithm to program a procedure. Lessons are designed to be	Algorithm, forward, clear screen, left, right, procedure, random, fill, arc, label, commands, setops setxy, setx, sety, sepsize, setcolour,	<p>Create and debug an algorithm to create a procedure.</p> <p>Create and debug an algorithm that uses setops to draw shapes.</p>	Students will be assessed on the key skills in the National Curriculum through showing they can answer the Key Questions.

	<p>used with online programs such as Turtle Logo/Logo Interpreter or MSWLogo. Children are reminded of the basic commands and how to repeat alongside a variable. The children are then shown how to program their own procedures, use colour and set the position of the turtle using coordinates. In the concluding lesson they use the arc command to create patterns using different shapes and randomly selected colours, which they are encouraged to share with the rest of the class.</p>	<p>setpencolour, setfloorcolour, setscreencolour, setlabelheight</p>	<p>Use different colors.</p> <p>Create and fill areas of color.</p>	<p>On-going formative assessment by class teacher.</p>
<p>Spring 1 – Year B Word Processing</p>	<p>This is the fourth word processing unit, following the units in year 1, 2 and 3 aimed at teaching basic and word processing and text formatting skills. In this unit children will learn about formatting images and organising content into an effective layout. The unit contains six lesson packs, each with its own lesson presentation, alongside a home learning task, challenge cards, display posters and help cards. The first lesson focuses on formatting images and making them suitable for a poster advertising a cake sale. Throughout the rest of the unit, children will learn new skills and techniques and apply them to creating a range of different word documents (posters, letters to parents, job rotas, recipe cards and e-vouchers) which they will use during the cake sale project.</p>	<p>Hyperlink, Insert, toolbar, text, format, edit, font type, font colour, font size, align, paste, copy, bullet, text box, wrap, save, spellcheck, review, highlight, cursor</p>	<p>Format images for a purpose.</p> <p>Can use formatting tools to create an effective layout.</p> <p>Use spellcheck tools.</p> <p>I can change a page layout for a purpose.</p> <p>Create and use hyperlinks.</p>	<p>Students will be assessed on the key skills in the National Curriculum through showing they can answer the Key Questions. On-going formative assessment by class teacher.</p>

<p>Spring 2 – Year B</p> <p>Animation</p>	<p>This unit teaches children the basic principles and techniques of simple animation. Beginning with the history of animation, children research some of the early animation techniques used before the use of computers. The lessons then compare a range of free animation software and children incorporate the different techniques into their own animation. After experimenting, children are then given the opportunity to evaluate their experiences in the final lesson.</p>	<p>Frame rate, play, stop, record, onion skinning, animation, thaumatrope, zoetrope, flip book, zoopraxiscope, stereotype, loop, still image, analyse, evaluate, stop motion</p>	<p>Describe early forms of animation before computers and how computers have made a difference.</p> <p>Create a short computer animation.</p> <p>Create and record animations using a number of moving characters.</p> <p>Use a camera to create a short stop motion animation film.</p>	<p>Students will be assessed on the key skills in the National Curriculum through showing they can answer the Key Questions. On-going formative assessment by class teacher.</p>
<p>Summer 1 – Year B</p> <p>Internet research and communication</p>	<p>This unit focuses on how to effectively search using key words and how to safely communicate online. The lessons focused on Internet research will demonstrate the importance of word order when searching. They will also start to examine the results returned and how to distinguish between a reliable and unreliable website or webpage. Children will learn to save webpages in a browser, as well as in a file or folder. They will also understand how this can be shared with others. Children will identify ways of communicating online, how they can keep safe and the importance of being responsible while communicating online with others.</p>	<p>Internet, World Wide Web (WWW), search, search engine, results, Google, Bing, Yahoo, browser, key words, multiple, trustworthy, spam, Facebook, Twitter, email, tweet, attachment, Instagram, Snapchat, Skype, Facetime, Flickr</p>	<p>Identify how word order affects search results.</p> <p>Explain how searches return results.</p> <p>Save and share webpages.</p> <p>Identify the ways and investigate how we communicate online.</p> <p>Explain why we need to be responsible online.</p>	<p>Students will be assessed on the key skills in the National Curriculum through showing they can answer the Key Questions. On-going formative assessment by class teacher.</p>

Summer 2 – Year B Online Safety Y4	In this unit, children learn about preventing and dealing with cyberbullying; how to use search engines efficiently; how to avoid plagiarism online; and how to be a good digital citizen. The unit ends with children applying their new knowledge to design a character to be displayed around school to promote online safety.	Cyberbullying, reporting, anonymous, victim, secure, https, site, domain, website, browser, address bar, fraud/fraudulent, policy, private/personal, instant messaging, stereotype, SMART, gender, media, online media, security, attachments, secure, acronym, privacy, personal information.	I can identify how a message can hurt someone’s feelings. How I should respond to a hurtful message. Can use a search engine. Understand the term plagiarism. Explain how to be a responsible digital citizen. Create a safe online profile.	Students will be assessed on the key skills in the National Curriculum through showing they can answer the Key Questions. On-going formative assessment by class teacher.

		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 5 / 6	Year A	Scratch Developing Games	Flowol	Radio Station	Using and Applying Y5 and 6	Online Safety 6	Film Making
	Year B	Scratch: Animated Stories	Spreadsheets	Kodu Programming	3D Modelling: Sketch Up	Online Safety 5	FilmMaking

Year A				
Year 5 / 6	What are we learning? (Key Questions)	Vocabulary	What knowledge and understanding will we gain?	How will these be assessed?
Autumn 1 – Year A Scratch: Developing Games	This unit builds on the previous unit in Year 4 (Questions and Quizzes) using Scratch to build and edit algorithms for simple games. The unit is designed to help children develop their skills in writing their own algorithms as	Repeat, score, variable, block, level, costume, sprite, commentary, backdrop, code, debug, events, scripts, algorithm	Design and program a character game. Design an original character or backdrop for a game. Add features or effects to enhance a game.	Students will be assessed on the key skills in the National Curriculum through showing they can answer the Key Questions. On-going formative assessment by class teacher.

	well as editing and debugging existing codes.		Create an original animated game with a specific goal.	
Autumn 2 – Year A Flowol	This unit introduces children to flowcharts and how they are used to program and control devices. Lessons are designed to be used with Flowol software (version 4.0), which includes simulations of real life automatic computer systems. Children are taught to build sequences of instructions, control multiple outputs and structure algorithms with decisions and inputs. Although many external hardware interfaces can be attached and linked to a computer using Flowol, this unit is designed as an introduction to the software and the concepts of flowchart programming. Further learning can be extended by using external devices.	Flowol, delay, output, flowchart, start, stop, subroutine, decision, loop, symbol, input, mimic	Draw and interpret a flow chart with the correct symbols. Create and edit a flowchart to control a simulated device. Control multiple outputs at the same time. I can create a flowchart program containing a subroutine. Create, design, write and debug a flow chart for a given task.	Students will be assessed on the key skills in the National Curriculum through showing they can answer the Key Questions. On-going formative assessment by class teacher.
Spring 1 – Year A Radio station	This unit allows children to use software and digital devices for recording sound. Based around the theme of a Radio Station, it is designed to encourage a creative approach that includes interviewing, making adverts and using jingles. Other software is incorporated where children write scripts and design additional advertising for their Radio Station. Opportunities are included for children to present, listen, review and evaluate their own content as	Play, stop, record, skip, digital content, mute, gain, podcast, output, input, sound, download, jingle, audio, waveform, edit, voiceover.	Use software to create sounds by recording, editing and playing. Combine audio effects to create an original radio jingle. Create and present digital content for a radio podcast. Design and create a persuasive radio advertisement.	Students will be assessed on the key skills in the National Curriculum through showing they can answer the Key Questions. On-going formative assessment by class teacher.

	well as professional and commercial examples, plus those created by their peers.			
<p>Spring 2 – Year A</p> <p>Using and Applying Y5 and Y6</p>	<p>The purpose of the ‘Using & Applying’ unit is to provide an engaging open-ended project for pupils to apply the skills they have developed by working on other units within the year group.</p> <p>Designed to be completed by pupils in groups working over a number of lessons (such as a final half-term), the project incorporates software, skills and aims that have been covered in previous units.</p> <p>Pupils should be encouraged to plan thoroughly first, before dividing up the separate tasks required to complete the whole project. Different elements of the project can be completed by different children, combining at the end but communicating and working together as a team throughout.</p> <p>Ideally, there should be an opportunity for children in their groups to present their finished projects at the end, either to the rest of the class or even a wider school audience.</p>	<p>Research, plan, design, create, promote, evaluate, present</p>	<p>Research and design a new bedroom using appropriate software.</p> <p>Design a new game using appropriate software.</p> <p>Use scratch or kodu to create a simple game.</p> <p>Design appropriate advertisement for the game.</p>	<p>Students will be assessed on the key skills in the National Curriculum through showing they can answer the Key Questions.</p> <p>On-going formative assessment by class teacher.</p>
<p>Summer 1 – Year A</p> <p>Online Safety Y6</p>	<p>In this unit, children will learn about email safety with a focus on preventing and dealing with spam. They will consider the importance of strong passwords and learn how to create them. Children will</p>	<p>Spam, email, link, attachment, junk, inbox, research, password, secure, photo, social media, personal information, filter, cite, source, citation,</p>	<p>Identify spam emails and what to do with them.</p> <p>Write citations for websites I use for research.</p>	<p>Students will be assessed on the key skills in the National Curriculum through showing they can answer the Key Questions.</p> <p>On-going formative assessment by class teacher.</p>

	<p>build on their knowledge of plagiarism and fair use of people's work by learning how to write citations and references for websites they may use. They will scrutinise photographs that they see online and learn how easy it is to manipulate pictures and present them as reality.</p>	<p>plagiarism, edit, bibliography, digital citizen</p>	<p>Create a strong password.</p> <p>Recognise when, why and how photographs online may have been edited.</p> <p>Apply the online safety rules to a real life situation.</p>	
<p>Summer 2 – Year A</p> <p>Film Making</p>	<p>Introduction This aim of this unit is to allow children to explore various aspects of film-making. In doing so, they must choose and use appropriate software in order to complete tasks such as writing a script, researching information, filming and editing. As well as using digital devices for recording (video camera or tablet), children work through pre- and post-production stages, planning good-quality interviews for a documentary and completing the process with use of video editing software such as Windows Movie Maker. You may like to complete the unit with a special screening or awards ceremony for the budding young film-makers!</p>	<p>Documentary, film-making, film, production, pre-production, interview, location, prop, shot, angle, close-up, frame, pan, zoom, subject, background, interviewer, interviewee, improvise, frame, low-angle, high-angle, side-view, split, post-production, edit, import, trim, publish, convert, file, edit, project, evaluation, screening, ceremony, upload.</p>	<p>Use appropriate software and other tools to effectively write a film script.</p> <p>Locate and check appropriate digital content.</p> <p>Use digital recording devices to film and import video editing software.</p> <p>Play, import and conduct video interviews.</p> <p>Create a short film.</p> <p>Use video editing software to turn a film into a finished movie and resent it.</p>	<p>Students will be assessed on the key skills in the National Curriculum through showing they can answer the Key Questions. On-going formative assessment by class teacher.</p>
<p>Year B</p>				

Year 5 / 6	What are we learning? (Key Questions)	Vocabulary	What knowledge and understanding will we gain?	How will these be assessed?
<p>Autumn 1 – Year A</p> <p>Scratch: Animated Stories</p>	<p>This unit builds on the previous unit in Year 5 (Scratch: Developing Games) as well as prior units introducing Scratch in Year 2 and Year 4. The unit is designed to help children in continuing to develop their skills in writing their own algorithms as well as editing and debugging existing codes. New skills are introduced to structure code and animate characters and scenes, gradually building to create a short animated story. These lessons are intended for use in conjunction with Scratch 2 software installed. They can also be used with the Pyonkee App on iPads.</p>	<p>World, smooth and flatten, raise, kodu, start, finish, program, environment, acceleration, bump, obstacle, object, track, path, node, character, tool palette</p>	<p>Create appropriate animations for a story scene.</p> <p>Structure and control the timing of events.</p> <p>Control when objects need to be visible.</p> <p>Sequence events.</p> <p>Add voice sounds to enhance an animated story.</p> <p>Add interactive user features to a story.</p>	<p>Students will be assessed on the key skills in the National Curriculum through showing they can answer the Key Questions. On-going formative assessment by class teacher.</p>
<p>Autumn 2 – Year A</p> <p>Spreadsheets</p>	<p>Children are given an understanding of spreadsheets and how they can be used. In the first five lessons, a different spreadsheet template is provided in which children learn skills in formatting and entering specific formulas. Lessons 4 and 5 include investigative skills in using the spreadsheet to solve specific problems. Examples include number calculations, sports league tables, test scores, and budget planning. The final lesson allows an open-ended task for pupils to design their own</p>	<p>Spreadsheet, cell, row, column, formula, formulas, calculate, format, average, percent, edit, insert, ascending, descending, sort, graph, budget, total, cumulative</p>	<p>Enter data formulae into a spreadsheet.</p> <p>Order and present data based on calculations.</p> <p>Add, edit and calculate data.</p> <p>Use spreadsheets to solve problems.</p> <p>Plan and calculate spending budget.</p>	<p>Students will be assessed on the key skills in the National Curriculum through showing they can answer the Key Questions. On-going formative assessment by class teacher.</p>

	spreadsheet, with ideas and direction provided for particular purposes. This final lesson can also be used for some pupils to return to or complete any previous spreadsheet tasks which may not have been finished.		Design spreadsheets for a specific purpose.	
Spring 1 – Year A Kadu programming	This unit introduces children to programming with Kodu, a simple visual programming language made specifically for creating games. The distinguishing features of Kodu are visual icons that are added together like building blocks to form instructions and game environments constructed by the user in a 3D scene editor. It is designed to be accessible by children and enjoyable by anyone. As well as on PC, Kodu is also available via Xbox 360, which adds appeal for many children. If you are unfamiliar with Kodu, then a useful starting point are the sample games and tutorials that are provided as 'Built-in Worlds'. Each sample game is editable so after playing, they can be opened up to see how they work..	World, smooth and flatten, raise, Kodu, start, finish, program, environment, acceleration, bump, obstacle, object, track, path, node, character, tool palette	Investigate and evaluate the features of programming software. Program kudo using when and do instructions. Use tools and features to create an original landscape in Kodu. Analyze and deconstruct code to work out its purpose. Program a character to be controlled around a custom track to reach a goal. Program a character to follow an automated plan.	Students will be assessed on the key skills in the National Curriculum through showing they can answer the Key Questions. On-going formative assessment by class teacher.
Spring 2 – Year A 3D Modelling sketch up	In this unit the children extend their drawing skills to create 3D models based on using the software SketchUp Make. This is a free application available for download on Windows or OSX (Mac). Children will learn how to create simple and complex 3D models. They will be able to add	2D shape, 3D shape, rectangle, offset, move, pan, push/pull, orbit, eraser, inference, zoom, zoom extents, dimension, measurement, group, component, rotate	Draw 3D shapes. Add detail to 3D drawings. Manipulate 3D drawings.	Students will be assessed on the key skills in the National Curriculum through showing they can answer the Key Questions. On-going formative assessment by class teacher.

	detail and manipulate 3D models using a variety of tools.		<p>Create a complex 3D model.</p> <p>Create a 3D model of my own design.</p>	
<p>Summer 1 – Year A</p> <p>Online Safety Y6</p>	<p>In this unit about online safety, children will be taking a more in depth look at a variety of online safety issues, most of which they will have been familiarized with in previous years. They will be introduced to the idea of the internet, as a type of media, and how it can shape our ideas about boys and girls through stereotypes. Children will be given ways to deal with online content that they find worrying or even believe to be dangerous.</p>	<p>Cyberbullying, reporting, anonymous, victim, secure, https, site, domain, website, browser, address bar, fraud/fraudulent, policy, private/personal, instant messaging, stereotype, SMART, gender, media, online media, security, attachments, secure, acronym, privacy, personal information.</p>	<p>Find similarities and differences between in-person and cyberbullying.</p> <p>Identify secure websites by identifying privacy seals.</p> <p>Understand benefits and pitfalls of online relationships.</p> <p>Identify information I should never share.</p> <p>How the media play a powerful role in shaping ideas about girls and boys.</p> <p>Apply my online safety knowledge to my online activities.</p>	<p>Students will be assessed on the key skills in the National Curriculum through showing they can answer the Key Questions. On-going formative assessment by class teacher.</p>
<p>Summer 2 – Year A</p> <p>Film Making</p>	<p>Introduction This aim of this unit is to allow children to explore various aspects of film-making. In doing so, they must choose and use appropriate software in order to complete tasks such as writing a script, researching information, filming and editing. As well as using digital devices for recording (video camera or tablet), children</p>	<p>Documentary, film-making, film, production, pre-production, interview, location, prop, shot, angle, close-up, frame, pan, zoom, subject, background, interviewer, interviewee, improvise, frame, low-angle, high-angle, side-</p>	<p>Use appropriate software and other tools to effectively write a film script.</p> <p>Locate and check appropriate digital content.</p>	<p>Students will be assessed on the key skills in the National Curriculum through showing they can answer the Key Questions. On-going formative assessment by class teacher.</p>

	<p>work through pre- and post-production stages, planning good-quality interviews for a documentary and completing the process with use of video editing software such as Windows Movie Maker. You may like to complete the unit with a special screening or awards ceremony for the budding young film-makers!</p>	<p>view, split, post-production, edit, import, trim, publish, convert, file, edit, project, evaluation, screening, ceremony, upload.</p>	<p>Use digital recording devices to film and import video editing software.</p> <p>Play, import and conduct video interviews.</p> <p>Create a short film.</p> <p>Use video editing software to turn a film into a finished movie and resent it.</p>	
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Impact

End points are set by the National Curriculum. By the end of each key stage, pupils are expected to know, apply and understand the knowledge, skills and competencies as specified in the programme of study.

In order to achieve the Intent of the Computing curriculum, assessment for learning is continuous throughout the planning, teaching and learning cycle. Assessments are made in order to improve. They are used to identify where there are gaps in learning for particular pupils. Planning is adjusted as a result in order to ensure that identified pupils catch up or close the gap. All pupils are individual and will be assessed in this way to ensure that they fulfil their individual potential. The founding assumption is that all pupils can achieve mastery (breadth and depth) if they are supported to do so.

Pupils' progress is continually monitored throughout their time at the school and is used to inform future learning and teaching. Teaching staff will assess the children's knowledge at the end of each unit by asking the Key Questions identified on the Computing Knowledge Organisers. The children will be able to answer them, showing that they know more, remember more and are able to do more.

Subject leader monitoring will include the following aspects:

- Work sampling to ensure development of key learning and key vocabulary;
- Discussing and checking understanding of learning and work with pupils, including effective challenge for more able pupils;

- Monitoring planning to ensure full coverage of the curriculum;
- Checking that there are opportunities to use and apply reading and writing skills in each subject area, consistent with quality in Literacy books.
- Monitoring language skills – ensuring pupils understand key vocabulary;
- Climate walks;
- Lesson visits;
- Gathering and responding to stakeholder's views, including pupils;
- Links to other areas of the curriculum including PSHE, Relationships, Healthy Schools, Behaviours for Learning, British Values and Equality;

Subject leaders will:

- Work with teachers to ensure pupils are supported to achieve at least sufficient progress and expected attainment.
- Produce an annual Action Plan to work on key development points.