Computing Overview – Reception				
Half termly topic	Curriculum Focus	Ideas	Skills	Rationale
Autumn 1 Magical Marvellous Me	Understanding the World	Drawing pictures using 2Paint Reading stories together on the IWB	• Show an interest in ICT • Know how to operate simple equipment • Perform simple functions on ICT equipment • Complete a simple program on the Computer	Children will already be familiar with using a paintbrush/the colours so this introduces a simple function on the computer, which they can easily accomplish. Reading together on IWB gives children an application of what ICT can be used for in a guided setting.
Autumn 2 Space	Understanding the World	Creating firework pictures on 2Simple Paint	• Show an interest in ICT • Know how to operate simple equipment • Perform simple functions on ICT equipment • Complete a simple program on the Computer	Children will build upon their skills with paint gradually and have this linked to their topic learning – simple introduction to completing a function for purpose and being creative – links to their Year 1 work on programming for purpose.
		Name simple Computer parts	• Find out about identify uses of everyday technology • Use information and communication toys to support their learning	Children will gain a basic understanding of parts of computers, which will benefit them as they move through the school.
Spring 1 Fairytales	Understanding the World	Code-a-pillars Children explore as part of child initiated learning, prompt questions from adults available.	• Show an interest in ICT • Know how to operate simple equipment • Perform simple functions on ICT equipment • Complete a simple program on the Computer -	Work with these toys will support children when they begin to use BeeBots in the Summer term and in Year 1 – rather than have to remember the algorithm it is on the body of the code a pillar and they can watch it be carried out. They are also musical and flash – engaging for younger children.
Spring 2 Farmer Duck	Understanding the World	Programme Bee Bots around farm and use remote control toys	• Use information and communication toys to support their learning	Progression from previous work with Code-a-pillars – preparing for them to work on the BeeBots in a more structured way in Year 1.
		Illustrate different parts of 'Farmer Duck' story	• Show an interest in ICT	Children will build upon their skills with paint gradually and have this linked to

		using Revelation Natural Art program	• Know how to operate simple equipment • Perform simple functions on ICT equipment • Complete a simple program on the Computer	their topic learning – simple introduction to completing a function for purpose and being creative – links to their Year 1 work on programming for purpose.
Summer 1 Safari and Jungles	Understanding the World	Use 2simple paint to create own Jungle animal		Children will build upon their skills with paint gradually and have this linked to their topic learning – simple introduction to completing a function for purpose and being creative – links to their Year 1 work on programming for purpose.
Summer 2 Minibeasts	Understanding the World	ICT art programme to create own minibeast	• Show an interest in ICT • Know how to operate simple equipment • Perform simple functions on ICT equipment • Complete a simple program on the Computer	Continuing with children's knowledge of using paint programs from earlier in the year.
		ICT insects in the style of aboriginal drawings		Continuing with children's knowledge of using paint programs from earlier in the year.
		ICT mixed up creatures/minibeasts		Children continuing to consolidate their basic knowledge of operating simple ICT equipment in correlation with their topic to ensure engagement and relevance.

Computing Overview – Year 1 Once Upon a Time, Dinosaurs, Kings and Queens				
Term and topic	Content	NC Statement	Skills and ideas	Rationale
Autumn Once Upon a Time	**Online Safety** Children will participate in class discussions about different ways to use technology and when they might come across it. They will talk about friendly and unfriendly interactions. This will be based around the stimulus of 'Digiduck's big decision'	*Uses of IT beyond school:* *Pupils should be taught to recognise common uses of information technology beyond school* *Safe use:* *Pupils should be taught to 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*	•Understand that there are different uses for the internet beyond school (social media, online games, business) •Understand how to safely switch on and switch off a laptop, computer or Ipad. •Understand the difference between a friendly and unfriendly interaction •Discuss how to behave online and begin to understand the implications of not doing so. •Understand the SMART rules of Online Safety.	Digiduck has been developed by Childnet as a way of discussing friendship, critical thinking online and responsibility to 3-7 year olds. This will begin and stimulate discussion about online safety in a child-friendly and positive way. This builds upon previous use of a character to relate to from Reception (Smartie the Penguin). This is supplemented throughout the year with a Digiduck poster in each Year 1 classroom and in shared areas.
	BeeBots Children will be introduced to the BeeBots and the key vocabulary of 'algorithm' and 'debug' and taught how to carry out instructions using a BeeBot. They will be given simple problem solving activities.	*Algorithms:* *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 programs:* *Pupils should be taught to create and debug simple programs* *Reasoning:* *Pupils should be taught to use logical reasoning to predict the behaviour of simple programs*	•Begin to understand what an algorithm does •Consider how it can be implemented on a digital device •Understand that programs need precise instructions. •Carry out and debug simple programs on a Bee Bot •Carry out and debug simple programs on Ipad using Scratch JR •Use reasoning skills to predict the behaviour of a program, using Scratch JR and Bee Bots.	Children build upon their understanding of instructions developed in Reception by using Bee Bots, which require precise instructions and can be used to carry out specific tasks. Children develop their knowledge of the vocabulary they will use throughout the school in a concrete, engaging way. Use of themed mats and costumes for Beebots links effectively to topics.
Spring Dinosaurs	**Online Safety** Children will participate in class discussions about different ways to use technology and when they might come across it. They will talk about friendly and	*Uses of IT beyond school:* *Pupils should be taught to recognise common uses of information technology beyond school* *Safe use:*	•Understand that there are different uses for the internet beyond school (social media, online games, business) •Understand how to safely switch on and switch off a laptop, computer or Ipad. •Understand the difference between a friendly and unfriendly interaction	Children will build upon their previous learning working towards advising others and creating posters. They will use their knowledge to apply to role-play scenarios.

	unfriendly interactions online creating basic posters about 'being a good friend' and 'being kind' and taking part in simple role play scenarios.	*Pupils should be taught to 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*	•Discuss how to behave online and begin to understand the implications of not doing so. •Understand the SMART rules of Online Safety.	
	Typing Children will develop a basic understanding of how to type, what several symbols mean on word and how to 'undo' and 'redo' actions online. They will begin to look at how to change colours of font.	*Using Technology:* *Pupils should be taught to use technology purposefully to create, organise, store, manipulate and retrieve digital content*	•Begin to use technology to share information through typing using two hands	Children will begin to develop their keyboard skills, building upon their understanding of what they are used for during role-play in Reception. This will be supported during their unit on typing in Year 2.
Summer Kings and Queens	**Online Safety** Children will participate in class discussions about different ways to use technology and when they might come across it. They will talk about friendly and unfriendly interactions online and taking part in simple role-play scenarios. This will be based around the stimulus of 'Digiduck's famous friend'	*Uses of IT beyond school:* *Pupils should be taught to recognise common uses of information technology beyond school* *Safe use:* *Pupils should be taught to 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*	•Understand that there are different uses for the internet beyond school (social media, online games, business) •Understand how to safely switch on and switch off a laptop, computer or Ipad. •Understand the difference between a friendly and unfriendly interaction •Discuss how to behave online and begin to understand the implications of not doing so. •Understand the SMART rules of Online Safety.	Children will have experienced the character of Digiduck in the Autumn term and will continue to develop their understanding of online behaviours at an age appropriate level.
	Paint Children will work on using paint to create images, experimenting with changing colours and brush types, 'fill' symbols and how to redo and undo work. Children will use ipads to take photographs of a specific object or item,	*Using Technology:* *Pupils should be taught to use technology purposefully to create, organise, store, manipulate and retrieve digital content*	•Know how to use Paint with different colours and brushes to create an image •Understand how to take and record simple images using an Ipad	Children develop their work on 2Simple paint software in Reception to use paint with a variety of tools to create their image. This begins their understanding of using technology for purpose linking to their topics.

	commenting on each other's photography.			
	Scratch JR Children will be introduced to Scratch Jr using the ipads, and apply the vocabulary of sprite, backdrop and algorithm. They will be asked to perform simple programs such as moving a sprite.	*Algorithms:* *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 programs:* *Pupils should be taught to create and debug simple programs* *Reasoning:* *Pupils should be taught to use logical reasoning to predict the behaviour of simple programs*	•Understand that programs need precise instructions. •Carry out and debug simple programs on Ipad using Scratch JR •Use reasoning skills to predict the behaviour of a program, using Scratch JR	In Years 2-6, children use Scratch on the Computers in order to develop a clear skillset in coding. Scratch JR builds a basic understanding of the features of Scratch, the vocabulary of 'Sprite' and the use of blocks to develop algorithms.

Computing Overview – Year 2
Superheroes, All Around the World, Cracking Contraptions

Term and topic	Content	NC Statement	Skills and ideas	Rationale
Autumn Superheroes	**Online Safety** Children watch a Lee and Kim video and think about appropriate screen names to share online. They also watch a Jessie and Friends video	*Uses of IT beyond school:* *Pupils should be taught to recognise common uses of information technology beyond school* *Safe use:* *Pupils should be taught to 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*	•Have an understanding of the role of ICT in the wider world Understand and begin to explain uses for the internet beyond school •Know where to go for help and support online •Understand the difference between a friendly and unfriendly interaction, applying these effectively to their own interactions •Confidently discuss how to behave online and the implications of not doing so •Understand the SMART rules of Online Safety	Both video stimulus have been produced for use by schools in online safety and are approved by CEOP. They are deemed appropriate for this age level and talk about online safety in a way that is engaging and appropriate for children of this age. This reinforces Online safety concepts covered previously in Reception and Year 1 and these characters are revisited in the next two terms of Year 2.
	Scratch (Shapes) Children are introduced to the Scratch program for the first time. They will work on using the 'pen' function to move their sprite and draw lines and shapes in different colours.	*Algorithms:* *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 programs:* *Pupils should be taught to create and debug simple programs* *Reasoning:* *Pupils should be taught to use logical reasoning to predict the behaviour of simple programs*	•Understand what an algorithm does •Consider how algorithms are implemented digitally •Carry out simple programs using Scratch •Debug simple programs on Scratch •Create sprites on Scratch, ensuring they are unique in appearance and movement •Understand that programs operate by responding to specific, unambiguous instructions •Use reasoning skills to predict the behaviour of programs on Scratch	The children will have been introduced to basic programming language during Year 1 and have used Scratch JR on the ipads. This will introduce them to the coding language they will use throughout the rest of their time in school. They will develop a basic knowledge of the different coding blocks and how to use the system correctly.
Spring All Around the World	**Online Safety** Children use the same characters they looked at in Autumn to talk about online manipulation and the outcomes of sharing photos of one	*Uses of IT beyond school:* *Pupils should be taught to recognise common uses of information technology beyond school* *Safe use:* *Pupils should be taught to use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content*	•Have an understanding of the role of ICT in the wider world Understand and begin to explain uses for the internet beyond school •Know where to go for help and support online •Understand the difference between a friendly and unfriendly interaction, applying these effectively to their own interactions	Children enjoy revisiting the same characters as the previous term. these are sensitive topics covered in an appropriate way at a child's level. Children continue to develop online safety topics throughout school.

	another without permission.	or contact on the internet or other online technologies	•Confidently discuss how to behave online and the implications of not doing so •Understand the SMART rules of Online Safety	
	Typing Children use dance mat typing and 2type to learn to touch type using two hands. They work with Microsoft word to look at how to change the colour and size of their font, writing simple sentences about a topic.	*Using Technology:* *Pupils should be taught to use technology purposefully to create, organise, store, manipulate and retrieve digital content*	•Use technology to share information through typing •Be able to alter font by changing colour and size •Type using two hands with increasing accuracy •Start up and shut down a laptop, computer or iPad effectively	Children will type throughout school and this is embedded during many ICT lessons. This unit covers the basics of touch typing and gives children the chance to have in depth specific teaching of a skill they will develop through the rest of school in their ICT work. They are also exposed to using different features of Microsoft word, again which they will consolidate throughout school and will apply to their work on powerpoint in Year 3.
Summer Cracking Contraptions	**Online Safety**	*Uses of IT beyond school:* *Pupils should be taught to recognise common uses of information technology beyond school* *Safe use:* *Pupils should be taught to 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*	•Have an understanding of the role of ICT in the wider world Understand and begin to explain uses for the internet beyond school •Know where to go for help and support online •Understand the difference between a friendly and unfriendly interaction, applying these effectively to their own interactions •Confidently discuss how to behave online and the implications of not doing so •Understand the SMART rules of Online Safety	Children continue to develop online safety topics throughout school using resources pitched at their appropriate age level.
	Posters Children use the internet to do basic research on a topic, before inserting relevant pictures into documents. These are either from the internet or taken by the children using ipads.	*Using Technology:* *Pupils should be taught to use technology purposefully to create, organise, store, manipulate and retrieve digital content*	•Use the internet to gain simple information safely •Know how to insert images to present information in a document •Understand how to select and insert an appropriate image into a document •Understand how to take and record simple images and audio recordings	Children consolidate the learning they did using Microsoft Word during their typing unit to apply to posters and they can then use these skills for purpose. Familiarity with photographs/voice notes through the ipads will give them a good basic understanding of these when they create their own media in KS2.

	Children also look at how to create voice notes about specific topics.			
	Data Handling Children use Microsoft Excel's graph tool to create simple bar charts from data worked on in Maths.	*Using Technology:* *Pupils should be taught to use technology purposefully to create, organise, store, manipulate and retrieve digital content*	•Be able to use technology effectively to support working with data	This cross curricular opportunity gives children the chance to display data they have worked on in class. This is a good introduction to Microsoft Excel, which will be revisited in KS2 and particularly in UKS2 when they use a range of media to develop their own projects.

Computing Overview – Year 3
Egyptians, James and the Giant Peach, The Tudors

Term and topic	Content	NC Statement	Skills and ideas	Rationale
Autumn – The Egyptians	**Online Safety** Children look at Hector's World stimuli to discuss online behaviours and talk about cyber bullying.	*Networks* *Pupils should be taught to 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* *Safe use* *Pupils should be taught to use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact*	•Start to consider the implications of the internet and a network of computers •Understand the impact of the internet in a positive and negative way and discuss this with others •Know what procedures are in place to protect content online •Understand the concept of unfriendly content online and 'cyber bullying'	Hector's World is a resource recommended by CEOP and not used in other year groups to ensure it is new and engaging. Children continue to develop online safety topics throughout school using resources pitched at their appropriate age level.
	Boat race Scratch based game Children will create a game, designing their own backdrop and challenging a player to guide a sprite through a maze they create.	*Create programs* *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* *Develop programs* *Pupils should be taught to use sequence, selection, and repetition in programs; work with variables and various forms of input and output* *Reasoning* *Pupils should be taught to use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs*	•Design and write simple programs for purpose •Use sequencing effectively when creating algorithms •Add selection and simple variables in programs •Come up with simple debugging solutions when considering programming •Explain simple errors in programs	Children have the opportunity to use the skills they developed at a basic level in Year 2 to create a game and have some opportunity to be creative – they follow the same sequence as the rest of the class but can personalise their games by creating different mazes and backdrops and sprites. Very engaging for the children to create a computer game and compete against one another. They will become familiar with sequencing and selection, which will be revisited in Year 4, 5 and 6.
Spring James and the Giant Peach	**Online Safety** Children will continue work on Hector's world and look at what they can do if they need help online.	*Networks* *Pupils should be taught to 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* *Safe use*	•Start to consider the implications of the internet and a network of computers •Understand the impact of the internet in a positive and negative way and discuss this with others •Know what procedures are in place to protect content online	Children continue to develop online safety topics throughout school using resources pitched at their appropriate age level. Children enjoy continued focus on the same characters they looked at in the Autumn term.

			|Understand the concept of unfriendly content online and 'cyber bullying'|
	Microsoft Word & Microsoft Powerpoint Children will create a poster using Microsoft word, then a presentation on an element of their topic work. They will use Kiddle safely to research.	*Using programs* *Pupils should be taught to 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 Microsoft word to create a poster •Use powerpoint to write a presentation using relevant information	Children consolidate the work they did during Year 2 on Microsoft Word and can ensure these are more complex using the skills developed. Introduction to PPT gives children opportunity to present their work using an engaging medium – they will have an introduction to features which they will cover again in Year 5. They will work on adding transitions and animations to their slides.
Summer The Tudors	**Online Safety** Children will look at how to search on the internet appropriately and what they can do if they find websites that are inappropriate. Begin to think about how to decide if a website is reliable or not.	*Search engines* *Pupils should be taught to use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content* *Networks* *Pupils should be taught to 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* *Safe use* *Pupils should be taught to use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact*	•Understand the basics of online searching, and that there can be unhelpful, unreliable information •Be aware of how to distinguish between different websites •Learn to conduct searches that provide them with the most helpful, reliable and relevant information. •Start to consider the implications of the internet and a network of computers •Understand the impact of the internet in a positive and negative way and discuss this with others •Know what procedures are in place to protect content online •Understand the concept of unfriendly content online and 'cyber bullying'	Children continue to develop online safety topics throughout school using resources pitched at their appropriate age level. This work is very relevant to their Spring and Summer focus on internet research to complement their ICT projects.
	Creating Videos Children will create videos comparing the Tudor times to present day, filming and editing their	*Using programs* *Pupils should be taught to 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*	•Learn how to take images to enhance work Create media using Splice	Children are very engaged by the concept of creating videos as the current climate shows that many children are interested in Youtube! This gives them the oppurunity to get familiar with recording and inserting images and clips and how to create media

| | own videos using 'Splice' software. | *goals, including collecting, analysing, evaluating and presenting data and information* | | well, developing skills like centering within a frame and creating a storyline. |

Computing Overview – Year 4
Stone Age, What a Wonderful World, the Romans

Term and topic	Content	NC Statement	Skills and ideas	Rationale
Autumn The Stone Age	**Online Safety** Children look at the popcorn wizards stimuli – based on children who form a band and get 'likes'. Focused on social media and responses to behaviour online.	***Networks*** *Pupils should be taught to 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* ***Safe use*** *Pupils should be taught to use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact*	•Understand and consider the implications of the internet and a network of computers •Understand the positive and negative impact of the internet, and discuss •Be able to discuss the implications of their online content, and steps they can take to protect this.	Play like share is a resource recommended by CEOP and not used in other year groups to ensure it is new and engaging. The strong links with social media, likes and sharing content are very relevant to Year 4 and will be good concepts for them to cover before Year 5 and 6. The videos are age appropriate and interesting. Children continue to develop online safety topics throughout school using resources pitched at their appropriate age level.
	Making quizzes Scratch based game Children learn to create a quiz game on Scratch where the sprite interacts with the player, then personalise these to their own topics.	***Create programs*** *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* ***Develop programs*** *Pupils should be taught to use sequence, selection, and repetition in programs; work with variables and various forms of input and output* ***Reasoning*** *Pupils should be taught to use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs*	•Design and write programs for purpose •Use sequencing effectively when creating algorithms •Add selection, variables and repetition to programs •Understand and explain debugging solutions when considering programming •Explain and solve errors in programs	Children revisit the skills developed using Scratch in Years 2 and 3 to create a quiz – they will enjoy having the chance to select what is asked and personalise their quizzes in this way. Year 4 is where children work on the times tables check so this is a great option for teachers to start their quizzes on and encourage children to use as part of their work – cross curriculur Maths opportunity. They will become familiar with repetition, which will be revisited during their Scratch games in Year 5.
Spring What a Wonderful World	**Online Safety** Children continue to focus on the popcorn wizards, this time with an element of looking	***Networks*** *Pupils should be taught to 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*	•Understand and consider the implications of the internet and a network of computers •Understand the positive and negative impact of the internet, and discuss	The children enjoy revisiting the play like share characters and the popcorn wizards. It is important to cover the dangers of meeting people you don't know from the internet as this age group and above are

	at strangers as one of the children goes to meet someone they've spoken to online.	**Safe use** *Pupils should be taught to use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact*	•Be able to discuss the implications of their online content, and steps they can take to protect this.	more likely to go online and be at risk for these dangers. Children continue to develop online safety topics throughout school using resources pitched at their appropriate age level.
	Publisher and Excel Children look at different animals and plants during their topic – they create a poster either about one of these are to advise others against deforestation – they include graphs created on Excel.	**Networks** *Pupils should be taught to 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* **Search engines** *Pupils should be taught to use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content* **Using programs** *Pupils should be taught to 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*	•Be aware of how to distinguish between different websites and discuss their merits •Know how to conduct searches to provide them with reliable, helpful information. •Use Microsoft Publisher to create a poster, article or brochure •Write and deliver a presentation using relevant and interesting information •Take adapt and create images to enhance their work •Record and edit media to create a sequence •Learn to search through, sort and graph out information	Children use the skills they developed in Year 2 on Microsoft Excel to create graphs for purpose to inform and persuade an audience . Children use an apply their skills of the Microsoft programs to create work within Microsoft Publisher. They have more opportunity for creativity with the tools available on publisher and can use their knowledge of research/collecting pictures and data online developed in Year 2 and 3.
Summer **The Romans**	**Online Safety** Children read the book 'Troll stinks' with their teacher and work with this as a stimulus to discuss social media and unfriendly comments	**Networks** *Pupils should be taught to 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* **Safe use** *Pupils should be taught to use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact*	•Understand and consider the implications of the internet and a network of computers •Understand the positive and negative impact of the internet, and discuss •Be able to discuss the implications of their online content, and steps they can take to protect this.	Children continue to develop online safety topics throughout school using resources pitched at their appropriate age level. The chance to include a story encourages a positive attitude towards reading and can be easily embedded in the teachers English and grammar lessons. Children apply skills and knowledge from previous terms to contribute to work on this text.
	Archery	**Create programs**	•Design and write programs for purpose	Children use their knowledge of Scratch developed earlier in the year and during

Scratch based game – children learn to create a game where they have to aim and shoot arrows at a target.	*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* ***Develop programs*** *Pupils should be taught to use sequence, selection, and repetition in programs; work with variables and various forms of input and output* ***Reasoning*** *Pupils should be taught to use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs*	•Use sequencing effectively when creating algorithms •Add selection, variables and repetition to programs •Understand and explain debugging solutions when considering programming •Explain and solve errors in programs	Year 3 to create a Scratch game based on Archery, which relates to their topic of The Romans. They will become familiar with broadcasting, which is revisited in Year 6.

Computing Overview – Year 5
The Victorians, Destination: Outer Space!, Island Invasion

Term and topic	Content	NC Statement	Skills and ideas	Rationale
Autumn **The Victorians**	**Online Safety** Children look at what information is safe to share online via social media and the impact this can have. They look specifically at the vocabulary of 'phishing' and examples of this. Children will look at passwords used for social media and how to create a strong and effective one.	**Networks** *Pupils should be taught to 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* **Safe use** *Pupils should be taught to use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact*	•Be able to compare the positive and negative impact of the internet •Be able to explain the differences in behaviour that will be displayed and the consequences of this •Be able to explain the implications of their 'digital footprint' •Know where to go for support online •Understand the procedures in place to protect their content.	Ofcom's Children and Parents Media Use and Attitudes report found that 46% of 11-year-olds, 51% of 12-year-olds and 28% of 10-year-olds now have a social media profile. This number is constantly rising with the development of social media. In Year 5, children start to turn 10 and therefore it is important to specifically discuss social media and their own online content. This continues from the work done in Year 4 (termly) on the difference between friendly and unfriendly interactions online and the impact this can have. The concept of their 'digital footprint' is further developed in Year 6, when they look at the impact this can have on their future.
	Catch The Sprite (Scratch based game) Children design their own game where the idea of the game is to click on a sprite, which appears randomly across the screen, and receive points for doing so. Children customise their game independently, and use their skills to make their game more challenging and interesting – by allowing shorter time limits and receiving (or losing) different amounts of points for different sprites.	**Create programs** *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* **Develop programs** *Pupils should be taught to use sequence, selection, and repetition in programs; work with variables and various forms of input and output* **Reasoning** *Pupils should be taught to use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs*	•Effectively design, write and debug programs for a clear purpose using Scratch •Use sequence, selection and repetition within their programs •Work with variables effectively within Scratch •Use logical reasoning to locate and explain errors in programs they have designed	During Year 4, children are developing their understanding of sequencing, variables and repetition in their coding when they create quizzes using Scratch (Autumn). These skills are used for effect when developing games in Year 5. They make creative decisions about customisation in their games for purpose. For example, use of a 'score' variable. Year 5 builds on children's understanding of how variables work to use these to make their games easier or more challenging. Games can be themed toward current events – such as Christmas, Halloween or New Year.
Spring	**Online Safety**	**Networks**	•Be able to compare the positive and negative impact of the internet	This continues to develop the work started on social media during the Autumn term where

Destination: Outer Space!	Children look specifically at the Terms and Conditions of social media sites and consider the implications of these on their online content. They will discuss their rights online and what they can do to support themselves.	*Pupils should be taught to 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* *Safe use* *Pupils should be taught to use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact*	•Be able to explain the differences in behaviour that will be displayed and the consequences of this •Be able to explain the implications of their 'digital footprint' •Know where to go for support online •Understand the procedures in place to protect their content.	they will look at specific websites. The social media sites identified here are the ones that we have decided as a school will be most likely to have impact on this cohort. Children's understanding of their 'rights' online links into our school focus of British values and following laws made to protect them.
	Stop Motion Animation Children use Pivot Stick figure on the Computers to understand the basics of stop motion	*Using programs* *Pupils should be taught to 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*	•Write and deliver a presentation with a range of media •Take adapt and create images to enhance their work •Develop a storyboard, create, and edit an animation using Stop Motion.	Children have worked on creating a video in Year 3 when they looked at using Splice. They further this knowledge by learning to create an animation using pictures. They have to work on planning what they would like to create and creating a storyboard, a skill they will further develop during their work on their haunted house stories in Year 6. Children get used to the vocabulary of frame rate and further develop how to finesse their videos by centering frames. They need to ensure that their work looks professional and effective by developing their techniques – things like having to make sure their hands aren't in the frame! Children are extremely engaged and excited by this topic and really enjoy it.
	Space Invaders Children create an old style arcade game where they create a space ship that fires lightening bolts at hippos.	*Create programs* *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* *Develop programs* *Pupils should be taught to use sequence, selection, and repetition in*	•Effectively design, write and debug programs for a clear purpose using Scratch •Use sequence, selection and repetition within their programs •Work with variables effectively within Scratch •Use logical reasoning to locate and explain errors in programs they have designed	Children further develop the skills on Scratch that they have worked on in Year 3, 4 and the Autumn term. They have worked on variables in Year 3 and 4 to further develop their games and they have to use two variables in this game – the speed of their hippos (the opponent) and the time limit of their game. This game relates to their topic of working on Space and relates well to an old fashioned arcade game – this is recognisable for children

				and gives them real life context to their game creation.
		programs; work with variables and various forms of input and output *Reasoning* *Pupils should be taught to use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs*		
Summer **The Vikings**	**Online Safety** Children follow the Google internet legends curriculum across Year 5 and 6.	*Networks* *Pupils should be taught to 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* *Safe use* *Pupils should be taught to use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact*	•Be able to compare the positive and negative impact of the internet •Be able to explain the differences in behaviour that will be displayed and the consequences of this •Be able to explain the implications of their 'digital footprint' •Know where to go for support online •Understand the procedures in place to protect their content.	Children continue to develop online safety topics throughout school using resources pitched at their appropriate age level. Google internet legends covers 5 different strands: Sharp, Alert, Secure, Kind and Brave. It correlates with the online game interland, which children are very engaged by and is very current.
	Flowol Children use the Flowol software to simulate controlling physical systems such as a ferris wheel and a lamppost.	*Create programs* *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* *Develop programs* *Pupils should be taught to use sequence, selection, and repetition in programs; work with variables and various forms of input and output* *Reasoning* *Pupils should be taught to use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs*	•Effectively design, write and debug programs for a clear purpose using Scratch •Control and simulate physical systems for purpose using software such as Flowol •Use sequence, selection and repetition within their programs •Work with variables effectively within Scratch •Use logical reasoning to locate and explain errors in programs they have designed	During KS2 children need to work on controlling physical systems to give them a clear understanding of how computer networking and programming relate to the real world. They have a go at creating an algorithm to control systems such as a lamp post and a circus. This gives them a real life context for their programming skills developed in Year 2, 3 and 4.

| | **Viking Presentations**
Children create presentations on the information they've learnt about the Vikings so far in class to present to one another. | *Search engines*
Pupils should be taught to use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
Using programs
Pupils should be taught to 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 | •Select information appropriately online for use in a project.
•Learn to use software to create a brochure or a poster on a given subject, interpreting a range of media
•Write and deliver a presentation with a range of media
•Take adapt and create images to enhance their work
•Develop a storyboard, create, and edit an animation using Stop Motion. | Children have worked on using PPT and developing their skills in Year 3 and have continued to develop their skills using Microsoft programs during Year 3 and 4. They worked on transitions and animations during Year 3 and will now work on using these for purpose and them looking effective in their presentations. They will also look at timings in their presentations to make them more effective. They have worked on inputting relevant photos and information from different websites in Year 3, 4 and 5 whichh are skills they will use here. These will inform their work on developing their own projects in Year 6. |

Computing Overview – Year 6
WW1, The Greeks, On Top of the World

Term and topic	Content	NC Statement	Skills and ideas	Rationale
Autumn WW1	**Online Safety** Children follow the Google internet legends curriculum across Year 5 and 6. Children work specficially on plagiarism and adapting information online to be used appropriately in their work. They look at a variety of websites.	**Networks** *Pupils should be taught to 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* **Safe use** *Pupils should be taught to use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact*	•Have a clear understanding of a computer 'network' and be able to succinctly explain the implications of this. •Compare and contrast positive and negatives of the internet •Explain the differences between behaviours online, and the implications of these •Know where they can go for support •Be clear on the absolute permanency of online content.	Children continue to develop online safety topics throughout school using resources pitched at their appropriate age level. Google internet legends covers 5 different strands: Sharp, Alert, Secure, Kind and Brave. It correlates with the online game interland, which children are very engaged by and is very current. Plagiarism will become an important topic and concept for children to be familiar with as they move to secondary school and take more autonomy on their own projects later in the year.
	Haunted Houses Scratch based game where children create a story based in a haunted house then create a timed animation to tell that story	**Create programs** *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* **Develop programs** *Pupils should be taught to use sequence, selection, and repetition in programs; work with variables and various forms of input and output* **Reasoning** *Pupils should be taught to use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs*	•Effectively design, write and debug programs for a clear purpose using Scratch and Kodu •Use sequence, selection and repetition in programs •Work with variables effectively to enhance their programs •Use logical reasoning to locate and explain errors in programs they have designed	Children have previously worked in Year 4 on broadcasting within their archery project. They continue to develop this in creating their haunted house stories. They worked on creating a storyboard and knowing what they would want to include in their videos during their work on stop motion in Year 5. They continue to personalise their work as they have done in Scratch projects in Year 3 (Boat race) Year 4 (Quizzes) and Year 5 (Catch the Sprite).
	Remembrance PPT Children create powerpoint presentations based around	**Networks** *Pupils should be taught to understand computer networks including the internet; how they can provide multiple services, such as the world*	•Learn the 'dos and don'ts' about copying and pasting information to avoid plagiarism •Learn how to avoid plagiarism by putting information into their own words	Children work on WW1 as their topic and do a lot of work on the history of the war and the importance of remembrance. This gives them the opportunity to use skills they have developed in Year 3 and 5 and create a

	remembrance to be shown in an assembly to the whole school.	*wide web; and the opportunities they offer for communication and collaboration* ***Search engines*** *Pupils should be taught to use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content* ***Using programs*** *Pupils should be taught to 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 software to create a brochure or poster on a given subject, using a range of media and evaluating their effectiveness •Write and deliver a presentation, using a range of media •Take, adapt and create images to enhance and develop their own work •Create an animation or project using video editing software such as Splice	powerpoint for a specific purpose. These are then displayed in an assembly for the school which gives the children great purpose and a nice creative outlet to work towards.
Spring **The Greeks**	**Online Safety** Children follow the Google internet legends curriculum across Year 5 and 6.	***Networks*** *Pupils should be taught to 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* ***Safe use*** *Pupils should be taught to use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact*	•Have a clear understanding of a computer 'network' and be able to succinctly explain the implications of this. •Compare and contrast positive and negatives of the internet •Explain the differences between behaviours online, and the implications of these •Know where they can go for support •Be clear on the absolute permanency of online content.	Children continue to develop online safety topics throughout school using resources pitched at their appropriate age level. Google internet legends covers 5 different strands: Sharp, Alert, Secure, Kind and Brave. It correlates with the online game interland, which children are very engaged by and is very current.
	Kodu Children apply the skills they have developed throughout KS2 to a brand new coding platform of Kodu and create games within the world.	***Create programs*** *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* ***Develop programs*** *Pupils should be taught to use sequence, selection, and repetition in programs; work with variables and various forms of input and output* ***Reasoning*** *Pupils should be taught to use logical reasoning to explain how some simple algorithms work and*	•Effectively design, write and debug programs for a clear purpose using Scratch and Kodu •Use sequence, selection and repetition in programs •Work with variables effectively to enhance their programs •Use logical reasoning to locate and explain errors in programs they have designed	Children enjoy using the platform of Kodu as it looks very similar to a computer game and is interactive. They can apply their skills and knowledge of algorithms, sequence, selection and repetition that they worked on in Year 2 – 5 and their Autumn term.

		to detect and correct errors in algorithms and programs		
	God projects Children are given time to present information on one of the greek gods using any technology that they like to present to their classes.	**Networks** *Pupils should be taught to 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* **Search engines** *Pupils should be taught to use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content* **Using programs** *Pupils should be taught to 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*	•Learn the 'dos and don'ts' about copying and pasting information to avoid plagiarism •Learn how to avoid plagiarism by putting information into their own words •Use software to create a brochure or poster on a given subject, using a range of media and evaluating their effectiveness •Write and deliver a presentation, using a range of media •Take, adapt and create images to enhance and develop their own work •Create an animation or project using video editing software such as Splice	Children are offered the creativity to complete their projects in any way they like using combinations of the skills they have developed over their time in school. This shows them as masters of technology, using their knowledge and skills creatively to move towards a purposed outcome.
Summer **On Top of the World**	**Online Safety** Children follow the Google internet legends curriculum across Year 5 and 6.	**Networks** *Pupils should be taught to 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* **Safe use** *Pupils should be taught to use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact*	•Have a clear understanding of a computer 'network' and be able to succinctly explain the implications of this. •Compare and contrast positive and negatives of the internet •Explain the differences between behaviours online, and the implications of these •Know where they can go for support •Be clear on the absolute permanency of online content.	Children continue to develop online safety topics throughout school using resources pitched at their appropriate age level. Google internet legends covers 5 different strands: Sharp, Alert, Secure, Kind and Brave. It correlates with the online game interland, which children are very engaged by and is very current.
	Scoring the goal Scratch based game based on aiming a football at a goal and scoring different points.	**Create programs** *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* **Develop programs**	•Effectively design, write and debug programs for a clear purpose using Scratch and Kodu •Use sequence, selection and repetition in programs •Work with variables effectively to enhance their programs	Children are at a time in school where they are very focused on their end of year work and this project pulls together skills using variables, sequence, selection and repetition earlier in the term and in Year 3, 4 and 5. This game is engaging for all the children as it relates to football and can be related

		Pupils should be taught to use sequence, selection, and repetition in programs; work with variables and various forms of input and output ***Reasoning*** *Pupils should be taught to use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs*	•Use logical reasoning to locate and explain errors in programs they have designed	topically to sports that are on at this time of year.
	Graduation Videos Children use Splice software to put together	***Networks*** *Pupils should be taught to 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* ***Search engines*** *Pupils should be taught to use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content* ***Using programs*** *Pupils should be taught to 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*	•Learn the 'dos and don'ts' about copying and pasting information to avoid plagiarism •Learn how to avoid plagiarism by putting information into their own words •Use software to create a brochure or poster on a given subject, using a range of media and evaluating their effectiveness •Write and deliver a presentation, using a range of media •Take, adapt and create images to enhance and develop their own work •Create an animation or project using video editing software such as Splice	Children are coming to the end of their time at Westfield and are able to pull together their work on creating videos (Year 3 and 5) and inserting relevant photographs (Year 2, 3, 4 and 5) and clips to their work. They have complete creative autonomy to decide what their video is about and how to organsie it to be shown to the school, their parents and peers during the end of term assembly and their graduation ceremony.