Pimperne Primary School – Computing Curriculum

Termly Overview

		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Early Years	Reception	Technology inside and outside school	Use of technology	Use of technology	Finding answers to simple questions	Beebots	Beebots
Key Stage 1	Year 1	Technology outside school	Online Safety	Maze Explorers	Animated Story Books	Coding	
	Year 2	Online Safety	Effective Searching	Coding	Spreadsheets	Creating Pictures	Making Music
Key Stage 2	Year 3	Online Safety	Touch Typing	Email	Presenting	Coding	
	Year 4	Online Safety	Effective Searching	Coding		Animation	Logo
	Year 5	Online Safety	Databases	Coding		Game Creator	
	Year 6	Online Safety	Spreadsheets	Coding		Blogging	Quizzing

Computer Science
Information Technology
Digital Literacy

Online safety is key. It will be taught at the beginning of every year discretely as part of the computing curriculum. It will then be revisited throughout the year in PSHE and in the foundation subjects e.g. online research projects etc.

Presenting – Once taught in Year 3, this is a skill that is used throughout the following years in foundation subjects e.g research projects.

Top of the Document

Long Term Plan by Subject Area

Digital Literacy:

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Online Safety		• **Know how to log on safely.** • Know that a password is a secret word or phrase that allows user access. • An avatar is a picture you create digitally to represent you. • Understand the idea of 'ownership' of their creative work. • Know that work can be 'saved' for future use. • **Know how to find saved work in the online work area.** • **Know how to search to find resources.** • **Know how to add pictures and text to work.** • **Know the common icons used e.g. save, print, open and new.** • **Know the importance of logging out when they have finished**	• **Know how searches can be refined using the search tool.** • Know that the search bar helps users to quickly find resources. • Know that digitally created work can be shared with others • Know that digital material can be shared globally using the Internet. • Know that email is a type of communication tool. • Know how to open and send simple email e.g. 2Email (virtual email client). • **Know that there is an appropriate way to communicate with others in an online situation.**	• **Knows what makes a safe password.** A password is a secret word or phrase that allows access. • **Identify methods for keeping passwords safe.** • Knows how the internet can be used in effective communication. • Knows how a blog can be used to communicate with a wider audience. • **Knows to consider the truth of the content of websites. Just because it's on the internet, doesn't mean it's true.** • **Understands the meaning of age restrictions symbols on digital media and devices.** PEGI ratings will show you how old you	• **Be able to explain that information put online leaves a digital footprint or trail.** • **Identify ways that children can protect themselves from online identity theft.** • Know that information posted online can be used by fraudsters for identity theft. • **Know the main risks and benefits of installing software (including apps)** • Explain the term, plagiarism (copying the work of others and presenting it as their own). • **Identify appropriate/ inappropriate behaviour when participating or contributing to**	• Recap and expand on the impact that sharing digital content can have • **Know how to think critically about the information they share online.** • **Know the responsibilities they have for themselves and other regarding online behaviour.** • Know and have developed knowledge from prior years about maintaining secure passwords. • **Know about image manipulation using software and the advantages or disadvantages of this when shared online.** • **Know what is meant by appropriate/ inappropriate text, photographs and videos online**	• **Know the benefits and risks of mobile devices broadcasting the location of the user/device, e.g. apps accessing location.** • **Know what secure sites are.** • **Know that secure sites will have industry standard seals of approval.** • **Build on knowledge of digital footprints. e.g. know how and why people use their information.** • **Build on knowledge of appropriate online behaviours and how this can protect themselves and others from possible online**

Top of the Document

			• **Know that information put online leaves a digital footprint.** • Understand that a digital footprint is the online trace of yourself. • **Know some steps that can be taken to keep personal data and hardware secure.**	must be to play a game.	**online projects for learning.** • **Identify the positive and negative influences technology has on health and the environment.** • Know the importance of balancing screen time with non-screen time.	• **Know about the importance of citing content online from others and know how to do this.** • Know how to select keywords and search techniques to find relevant information to increase reliability.	**dangers. e.g. the dangers of promoting inappropriate content online.** • Have greater knowledge of how to make more informed choices of how free time is used. • **Know the effects on individual health when having too much screen time.**
Technology inside and outside school	• **Identify types of technology in home and in school e.g. computer, TV, iPads.** • **To experiment with different types of technology and understand their purpose e.g. iPad camera.**	• Know that throughout history, technology has made people lives easier. • Know that we are surrounded by technology wherever we go. • **Identify examples of where technology is used in the local community. e.g. checkout tills in supermarkets, cars, airoplanes** • **Record examples of technology outside of school.**					
Effective Searching			• **Knows the meaning of key**		• **Know how to find information from**		

Top of the Document

			Internet and searching terms. • Knows the basic parts of a web search engine page. • Google is a popular search engine however in school we use Swiggle as it is age appropriate. • Knows how to navigate a web search results page. • Knows how to search the Internet for answers to a quiz. • **Knows what effective Internet searching is.**		**a search results page** • **Know how to search effectively to find out information** • **Know how to identify if an information source is true and reliable.**		
Email				• Know that email is a method of sending electronic communication. • Know that an inbox is where new emails go into. • Know that a 'trusted contact' is someone you know and trust. • **Know different methods of communication (electronic and non-elecronic).** • **Knows how to open and respond to an email using**			

Top of the Document

				an online address book. • **Identify ways of using email safely.** • **Knows how to add an attachment to an email.** An attachment is a file that is sent with an email. • 'Save to draft' allows you to save and review later before sending.			

Top of the Document

Computer Science:

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Coding	Using beebots: • **Explain what a given command will do.** • **Combine 2 direction commands to make a sequence.** • **To plan a simple program with support.** • **Identify the effect of changing an instruction.**	• Know what coding means in computing. • **Know what instructions are.** • **Predict what might happen when instructions are followed.** • **Know what objects and actions are.** • Know that properties determine the look and size of an object. • Know what an event is. • **Be able to use an event to control an object.** • **Know what backgrounds and objects are.** • **Know how to plan and make a simple computer program.** • A programmer is a person who write computer programs. • Programmers are sometimes called 'coders'.	• **Know what an algorithm is e.g. a set of step-by-step instructions.** • **Know that algorithms follow a sequence.** • **Know how to create a computer program using a basic algorithm.** • **Know how to create a computer program from a given design.** • **Know that collision detection is an event type in coding.** • **Know how to design an algorithm that follows a timed sequence.** • **Know that different objects within the coding environment have different properties** • **Know that there are different events in coding and knows what some of these events are.** • **Know the function of buttons in the**	• **Understand what a flowchart is and how they can be used in computer programming.** • **A flowchart is a diagram which represents an algorithm.** • **A flowchart can be used to design a computer program.** • Know that a 'timer after' means after x seconds, the action will occur. • Know that a 'timer every' means the action will re-occur every x seconds on loop. • **Understand that there are different types of timer and know how to select the right type for a given purpose.** • **Know how to use the repeat command.** • A repeat command saves rewriting the code many times. • **Know the importance of nesting** i.e putting smaller blocks of	• **Know how an IF statement works. A computer uses IF to decide which bit of code to run.** • Know how to interpret an IF statement • Create a programme that uses an IF statement. • **Know how to use co-ordinates in computer programming.** • **Know what the 'repeat until' command is.** • **Know how an IF/ELSE statement works. IF/ELSE is a type of 'conditional command'** • **Know what a variable is in programming** • Know how to use variables within their programs. • **Create a playable game using block coding.**	• **Begin to know how to simplify code in order to make own programming more efficient.** • Know how to create a simple simulation using 2Code.e.g. a traffic light sequence. • **Know what decomposition and abstraction are in computer science.** • **Know the need to start coding at a basic level of abstraction to remove superfluous details from own programs.** • **Know how to use decomposition to make a plan of a real-life situation.** • Know what a function is in coding and know how to use a function in own program to make it more efficient. • **Know what different variable types are.** • **Know what strings are and how to use them.**	• **Know how to create a game which includes timers and a score.** • Know what the launch command is. • Build on knowledge of functions. • **Know how to use multiple functions in own program.** • Know how to arrange code in multiple tabs. • Know how to develop creativity when coding to generate novel effects. • Know the different options of generating user input in 2Code. • Know how to attribute variables to user input. • **Know the need to code for all possibilities when using user inputs.** • Know how 2Code can be used to make a text

Top of the Document

			coding environment. • **Know how to interpret and debug simple programs.** • All coders need to be able to debug to make sure their code work correctly. • As code gets more complex, debugging gets even more important.	code inside larger blocks of code. • **Design and create an interactive scene.**		• **Know how to set and change variable values in code.** • Know some of the common ways that text variables can be used in programming. • Know and use concatenation in own programs.	based adventure game. • Know with improving understanding of how they can alter existing programs to reflect their own ideas. • Building on existing knowledge of debugging, children know how to debug more effectively
Other		**<u>Maze Explorers</u>** • **Know the function of the basic direction keys.** • Direction is the path that something travels. • Know that if we make a mistake, we can use the 'undo' button. • A route is a path an object or thing takes to get somewhere • **Know how to create a set of instructions (algorithm).** • **An algorithm is a precise, step by step set of instructions.** • **Know that debugging is when you find and**			**<u>Logo</u>** • Know that Logo is a text based coding language used to control a turtle. • Know that Logo supports 'pen up' and 'pen down' commands. • Know that Logo supports 'repeat' commands. • Know that Logo can create mathematical patterns. • **Know the structure of the coding language of Logo. E.g. FD, RT, LT and BK** • **Know how to input simple instructions in 2Logo.**	**<u>Game Creator</u>** • **Know what the main elements are that make a successful game.** • **Know how to plan a playable game** • **Know how to incorporate media such as images and sound.** • Know how to manipulate media including adding animation. • Know how to successfully evaluate games	

Top of the Document

		remove errors from code. • **Know how to debug an algorithm.** • **Know how to use the additional direction keys as part of an algorithm.**			• Create letters using 2Logo. • Use the repeat command in 2Logo to create shapes. **Use and build procedures in 2Logo.**		

Top of the Document

Information Technology:

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Creating Pictures • **Can turn on a tablet and choose relevant icons on the screen to open a given programme.** • **Can use technology to create pictures** • **Can use technology to produce writing/mark making.** • **To be able to talk about what has been produced and to say what went well and how it could be even better.**	**Animated Story Books** • **Know what an e-book is.(A book that can be read digitally i.e. on a device).** • Know what the '2Create a Story' tool is. • Know that an animation is an object that moves on screen. • **Know how to add animation to a story.** • **Know how to add sound to a story e.g. voice recording, music.** • Know that a background is an image that sits behind text or objects. • Know that clip-art is a place in software with a library of images. • **Know how to add backgrounds to a story. Know how to copy and paste pages.** • Know that font is the style of text used on a computer or tablet.	**Spreadsheets** • **Knos what a spreadsheet looks like e.g. a grid made up of cells, organised into horizontal rows and vertical columns.** • Know what a basic spreadsheet program can help do. E.g. calculate totals, averages, means. • Know how to enter data into spreadsheet cells. • Know how to add images to cells. • **Know how to use 2Calulate to lock cell, move cell, speak and count.** • **Know how to copy, cut and paste in 2Calculate.** • Know what totalling tools are and how to use them. • **Know how to use a spreadsheet to perform adding and totalling money.** • **Know how to use some tools within a spreadsheet to**	**Touch Typing** • Keys are the buttons that are pressed on a keyboard. • A keyboard is an 'input' device. • **Know basic typing terminology e.g. names of fingers, home, top row, bottom row.** • **Know the correct way to sit at the keyboard.** A good posture is important to help avoid injuries • **Know how to use the home, top and bottom row keys.** Using specific fingers for each key allows you to type quicker. • **Knows how to type with the left and right hands (developing the skill).** **Presenting using MS Powerpoint** • **Identify the main uses of Powerpoint.** Powerpoint is an	**Animation** • Know that animation gives the illusion of movement to drawings. • **Be able to discuss what makes a good animated film or cartoon. e.g what is their favourite animation?** • Know how animations are created by hand. • Know that 2Animate animations can be created in a similar way using technology. • **Know that animations can be enhanced using features in software such as background and sounds.** • **Know what 'stop motion' animation is.**	**Databases** • **Know what a database is.** • **Know how to search for information in a database.** • **Know how to add information into a shared database.** • Know how to create a database • Know how to add new records. • Know what fields are. • Know how to add information to fields • **Know how to phrase questions so that they can be correctly answered using a search of the database.**	**Spreadsheets** • Know how to create a spreadsheet to help answer a mathematical question relating to probability. • **Know how to take 'copy' and 'paste' shortcuts.** • **Know how to problem solve during mathematical investigations when using spreadsheets by using tools such as the 'Count tool'.** • Know how to create a spreadsheet to produce computational models. e.g. creating a spreadsheet that works out discounts and final price sales. • **Know how to use some advanced formula.** • Know how to use a spreadsheet to help plan actions. e.g. create a

Top of the Document

		• **Know how to share e-books on the class interactive whiteboard.**	**support calculations. e.g. using the equals tool in 2Calculate to check calculations.** • Know how to collect data and create a graph within a spreadsheet **<u>Creating Pictures</u>** • Know that graphics are visual images produced by computer processing • Know that the palette is the range of colours or shapes available to the user. • Know that a template is a model for others to copy. • Know that the 'paint bucket' tool is used to fill a selected area with a colour. • Know that 'thickness is an example' property' that can be changed. • **Know the purpose and benefits of painting software tools such as 2Paint a Picture.**	example of a presentation program. • **Knows how to create a page in a presentation.** • **Knows how to add media to a presentation.** Presenations can be made more engaging by adding media. • Knows how to add timings to a presentation. • **Use all the learned skills to create an engaging presentation.**			spreadsheet to plan how to spend pocket money and demonstrate the effect of saving. **<u>Quizzing</u>** • **Know how to use create activities for younger children using software such as 2DIY.** • **Know about different question types within quizzing software tools such as 2Quiz.** • Know how to give and respond to feedback based on quizzes made. • Know how to create their own grammar games. • Know how to use multiple pieces of software to enhance a quiz. e.g. create a quiz that requires children to look up information on a database.

Top of the Document

			• **Know how to recreate Impressionism (Monet)** • **Know how to recreate Pointillism (Seurat).** **Know how to reproduce the style of William Morris.** **<u>Music Making</u>** • Digital music is made using a computer or other device. • **Know how to make forms of music (digitally) using 2Sequence.** • **Know how to edit and combine sounds using 2Sequence.** • **Know how to edit and refine composed music.** • Tempo is measured in BPM, or beats per minute. • **Know how to upload a sound from a bank of sounds.** • **Know how to upload/import and record sounds beyond the software environment.**				

Top of the Document

Top of the Document

Long Term Plan by Year Group

EYFS:

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Unit	Technology inside and outside school	Use of technology	Use of technology	Finding answers to simple questions	Beebots	Beebots
Small Steps	• Identify types of technology in home and in school e.g. computer, TV, iPads. • To experiment with different types of technology and understand their purpose e.g. iPad camera.	• Can turn on a tablet and choose relevant icons on the screen to open a given programme. • Can use technology to create pictures • Can use technology to produce writing/mark making. • Can talk about what has been produced and say what went well and how it could be even better.	• Can take a picture e.g. using a tablet camera		Using beebots: • Explain what a given command will do. • Combine 2 direction commands to make a sequence. • To plan a simple program with support. • Identify the effect of changing an instruction.	(See Summer 1)

Top of the Document

Key Stage 1:

National Curriculum Objectives		
Digital Literacy	Computer Science	Information Technology
• Recognise common uses of information technology beyond school. • Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.	• Understand what algorithms are; how they they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. • Create and debug simple programs. • Use logical reasoning to predict the behaviour of simple programs.	• Use technology purposefully to create, organise, store, manipulate and retrieve digital context.

Top of the Document

Year 1:

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Unit	Technology outside school (2)	Online Safety (4)	Maze Explorers (3)	Animated Story Books (5)	Coding (3)	Coding (3)
Small Steps	• Know that throughout history, technology has made people lives easier. • Know that we are surrounded by technology wherever we go. • **Identify examples of where technology is used in the local community. e.g. checkout tills in supermarkets, cars, aeroplanes.** • **Record examples of technology outside of school.**	• **To be able to logon and logoff a computer.** • **To be able to use a mouse to accurately move a cursor around the screen.** • **To be able to use a keyboard to type.** • **Know how to log on safely.** • Know that a password is a secret word or phrase that allows user access. • An avatar is a picture you create digitally to represent you. • Understand the idea of 'ownership' of their creative work. • Know that work can be 'saved' for future use. • **Know how to find saved work in the online work area.** • **Know how to search to find resources.** • **Know how to add pictures and text to work.** • **Know the common icons used e.g.**	• **Know the function of the basic direction keys.** • Direction is the path that something travels. • Know that if we make a mistake, we can use the 'undo' button. • A route is a path an object or thing takes to get somewhere • **Know how to create a set of instructions (algorithm).** • **An algorithm is a precise, step by step set of instructions.** • **Know that debugging is when you find and remove errors from code.** • **Know how to debug an algorithm.** • **Know how to use the additional direction keys as part of an algorithm.**	**Animated Story Books** • **Know what an e-book is.(A book that can be read digitally i.e. on a device).** • Know what the '2Create a Story' tool is. • Know that an animation is an object that moves on screen. • **Know how to add animation to a story.** • **Know how to add sound to a story e.g. voice recording, music.** • Know that a background is an image that sits behind text or objects. • Know that clip-art is a place in software with a library of images. • **Know how to add backgrounds to a story. Know how to copy and paste pages.** • Know that font is the style of text used on a computer or tablet.	• Know what coding means in computing. • **Know what instructions are.** • **Predict what might happen when instructions are followed.** • **Know what objects and actions are.** • Know that properties determine the look and size of an object. • Know what an event is. • **Be able to use an event to control an object.** • **Know what backgrounds and objects are.** • **Know how to plan and make a simple computer program.** • A programmer is a person who write computer programs. • Programmers are sometimes called 'coders'.	(see Summer 1)

Top of the Document

		save, print, open and new. • **Know the importance of logging out when they have finished**		• **Know how to share e-books on the class interactive whiteboard.**		
Key Vocabulary	computer technology	alert avatar button device file name icon log in log out menu my work area notification private password	algorithm command direction down instruction left right route undo unit up	animation background clip-art gallery e-book edit font sound sound effect text	action algorithm background code coding command debug debugging event execute	

Top of the Document

Year 2:

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Unit	Online Safety (3)	Effective Searching (3)	Coding (6)	Spreadsheets (Crash Course) (4)	Creating Pictures (5)	Making Music (3)
Small Steps	• **To be able to save work with an appropriate file name to a given folder.** • **To be able to retrieve saved work from a given folder.** • **Know how searches can be refined using the search tool.** • Know that the search bar helps users to quickly find resources. • Know that digitally created work can be shared with others • Know that digital material can be shared globally using the Internet. • Know that email is a type of communication tool. • Know how to open and send simple email e.g. 2Email (virtual email client). • **Know that there is an appropriate way to communicate with others in an online situation.**	• **Knows the meaning of key Internet and searching terms.** • Knows the basic parts of a web search engine page. • Google is a popular search engine however in school we use Swiggle as it is age appropriate. • Knows how to navigate a web search results page. • Knows how to search the Internet for answers to a quiz. • **Knows what effective Internet searching is.**	• **Know what an algorithm is e.g. a set of step-by-step instructions.** • **Know that algorithms follow a sequence.** • **Know how to create a computer program using a basic algorithm.** • **Know how to create a computer program from a given design.** • **Know that collision detection is an event type in coding.** • **Know how to design an algorithm that follows a timed sequence.** • **Know that different objects within the coding environment have different properties** • **Know that there are different events in coding and knows what some of these events are.** • **Know the function of buttons in the coding environment.**	• **Know what a spreadsheet looks like e.g. a grid made up of cells, organised into horizontal rows and vertical columns.** • Know what a basic spreadsheet program can help do. E.g. calculate totals, averages, means. • Know how to enter data into spreadsheet cells. • Know how to add images to cells. • **Know how to use 2Calulate to lock cell, move cell, speak and count.** • **Know how to copy, cut and paste in 2Calculate.** • Know what totalling tools are and how to use them. • **Know how to use a spreadsheet to perform adding and totalling money.** • **Know how to use some tools within a spreadsheet to support calculations. e.g. using the equals**	• Know that graphics are visual images produced by computer processing • Know that the palette is the range of colours or shapes available to the user. • Know that a template is a model for others to copy. • Know that the 'paint bucket' tool is used to fill a selected area with a colour. • Know that 'thickness is an example' property' that can be changed. • **Know the purpose and benefits of painting software tools such as 2Paint a Picture.** • **Know how to recreate Impressionism (Monet)** • **Know how to recreate Pointillism (Seurat).** • **Know how to reproduce the style of William Morris.**	• Digital music is made using a computer or other device. • **Know how to make forms of music (digitally) using 2Sequence.** • **Know how to edit and combine sounds using 2Sequence.** • **Know how to edit and refine composed music.** • Tempo is measured in BPM, or beats per minute. • **Know how to upload a sound from a bank of sounds.** • **Know how to upload/import and record sounds beyond the software environment.**

Top of the Document

	• **Know that information put online leaves a digital footprint.** • Understand that a digital footprint is the online trace of yourself. • **Know some steps that can be taken to keep personal data and hardware secure.**		• **Know how to interpret and debug simple programs.** • All coders need to be able to debug to make sure their code work correctly. • As code gets more complex, debugging gets even more important.	**tool in 2Calculate to check calculations.** • Know how to collect data and create a graph within a spreadsheet.		
Key Vocabulary	attachment digital footprint email filter internet personal information private information search secure sharing	domain internet network search engine web address web page world wide web website	action algorithm background bug button click events collision detection command debug debugging event execute	cell column copy count tool data drag equals equals tool graph label row speak tool table total	art fill impressionism palette pointillism style surrealism	beat compose note tune sound effect soundtrack speed tempo volume

Top of the Document

Key Stage 2:

National Curriculum Objectives		
Digital Literacy	Computer Science	Information Technology
• Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration. • Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. • Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	• Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. • Use sequence, selection and repetition in programs; work with variables and various forms of input and output. • Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	• Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.

Top of the Document

Year 3:

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Unit	Online safety (3)	Touch Typing (4)	Email (6)	Presenting (with Microsoft Powerpoint) (5)	Coding (3)	Coding cont… (3)
Small Steps	• **Knows what makes a safe password.** A password is a secret word or phrase that allows access. • **Identify methods for keeping passwords safe.** • Knows how the internet can be used in effective communication. • Knows how a blog can be used to communicate with a wider audience. • **Knows to consider the truth of the content of websites. Just because it's on the internet, doesn't mean it's true.** • **Understands the meaning of age restrictions symbols on digital media and devices.** PEGI ratings will show you how old you must be to play a game.	• Keys are the buttons that are pressed on a keyboard. • A keyboard is an 'input' device. • **Know basic typing terminology e.g. names of fingers, home, top row, bottom row.** • **Know the correct way to sit at the keyboard.** A good posture is important to help avoid injuries • **Know how to use the home, top and bottom row keys.** Using specific fingers for each key allows you to type quicker. • **Knows how to type with the left and right hands (developing the skill).** •	• Know that email is a method of sending electronic communication. • Know that an inbox is where new emails go into. • Know that a 'trusted contact' is someone you know and trust. • **Know different methods of communication (electronic and non-elecronic).** • **Knows how to open and respond to an email using an online address book.** • **Identify ways of using email safely.** • **Knows how to add an attachment to an email.** An attachment is a file that is sent with an email. • 'Save to draft' allows you to save and review later before sending.	• **Identify the main uses of Powerpoint.** Powerpoint is an example of a presentation program. • **Knows how to create a page in a presentation.** • **Knows how to add media to a presentation.** Presenations can be made more engaging by adding media. • Knows how to add timings to a presentation. • **Use all the learned skills to create an engaging presentation.**	• **Understand what a flowchart is and how they can be used in computer programming.** • **A flowchart is a diagram which represents an algorithm.** • **A flowchart can be used to design a computer program.** • Know that a 'timer after' means after x seconds, the action will occur. • Know that a 'timer every' means the action will re-occur every x seconds on loop. • **Understand that there are different types of timer and know how to select the right type for a given purpose.** • **Know how to use the repeat command.** • A repeat command saves rewriting the code many times. • **Know the importance of nesting** i.e putting smaller blocks of	(See Summer 1)

Top of the Document

					code inside larger blocks of code. • **Design and create an interactive scene.**	
Key Vocabulary		home keys posture space bar typing	address book attachment	font formatting layer media presentation slide slideshow text box transition word art	background bug button click event code collision detection event command debug debugging	

Year 4:

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Unit	Online Safety (4)	Effective Searching (3)	Coding (3)	Coding (3)	Animation (3)	Logo (4)
Small Steps	• **Be able to explain that information put online leaves a digital footprint or trail.** • **Identify ways that children can protect themselves from online identity theft.** • Know that information posted online can be used by fraudsters for identity theft. • **Know the main risks and benefits of installing software (including apps)**	• **Know how to find information from a search results page** • **Know how to search effectively to find out information** • **Know how to identify if an information source is true and reliable.**	• **Know how an IF statement works. A computer uses IF to decide which bit of code to run.** • Know how to interpret an IF statement • Create a programme that uses an IF statement. • **Know how to use co-ordinates in computer programming.** • **Know what the 'repeat until' command is.**	(See Spring 1)	• Know that animation gives the illusion of movement to drawings. • **Be able to discuss what makes a good animated film or cartoon. e.g what is their favourite animation?** • Know how animations are created by hand. • Know that 2Animate animations can be created in a similar way using technology. • **Know that animations can be enhanced using features in**	• Know that Logo is a text based coding language used to control a turtle. • Know that Logo supports 'pen up' and 'pen down' commands. • Know that Logo supports 'repeat' commands. • Know that Logo can create mathematical patterns. • **Know the structure of the coding language of Logo. E.g. FD, RT, LT and BK**

Top of the Document

	• Explain the term, plagiarism (copying the work of others and presenting it as their own). • **Identify appropriate/ inappropriate behaviour when participating or contributing to online projects for learning.** • **Identify the positive and negative influences technology has on health and the environment.** • Know the importance of balancing screen time with non-screen time.		• **Know how an IF/ELSE statement works. IF/ELSE is a type of 'conditional command'** • **Know what a variable is in programming** • Know how to use variables within their programs. • **Create a playable game using block coding.**		**software such as background and sounds.** • **Know what 'stop motion' animation is.**	• **Know how to input simple instructions in 2Logo.** • Create letters using 2Logo. • Use the repeat command in 2Logo to create shapes. • **Use and build procedures in 2Logo.**
Key Vocabulary	ad fly citation copyright collaborate cookies digital footprint malware password phishing ransomware SMART rules spam virus watermark	balanced view internet key words reliability results search engine	action alert algorithm background button code blocks command debug design execute event flowchart IF/ELSE statement IF statement implement input nest object output		animation frame pause stop motion	debugging grid procedure repeat run speed

Top of the Document

			repeat until prompt repeat run			

Top of the Document

Year 5:

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Unit	Online Safety (3)	Databases (4)	Coding (3)	Coding cont… (3)	Game Creator (2)	Game Creator cont… (3)
Small Steps	• More detail about the impact that sharing digital content can have • **Know how to think critically about the information they share online.** • **Know the responsibilities they have for themselves and other regarding online behaviour.** • Know and have developed knowledge from prior years about maintaining secure passwords. • **Know about image manipulation using software and the advantages or disadvantages of this when shared online.** • **Know what is meant by appropriate/ inappropriate text, photographs and videos online**	• **Know what a database is.** • **Know how to search for information in a database.** • **Know how to add information into a shared database.** • Know how to create a database • Know how to add new records. • Know what fields are. • Know how to add information to fields • **Know how to phrase questions so that they can be correctly answered using a search of the database.**	• **Begin to know how to simplify code in order to make own programming more efficient.** • Know how to create a simple simulation using 2Code.e.g. a traffic light sequence. • **Know what decomposition and abstraction are in computer science.** • **Know the need to start coding at a basic level of abstraction to remove superfluous details from own programs.** • **Know how to use decomposition to make a plan of a real-life situation.** • Know what a function is in coding and know how to use a function in own program to make it more efficient. • **Know what different variable types are.** • **Know what strings are and how to use them.** • **Know how to set and change variable values in code.**	(See Spring 1)	• **Know what the main elements are that make a successful game.** • **Know how to plan a playable game** • **Know how to incorporate media such as images and sound.** • Know how to manipulate media including adding animation. • Know how to successfully evaluate games.	(See Summer 1)

Top of the Document

	• **Know about the importance of citing content online from others and know how to do this.** • Know how to select keywords and search techniques to find relevant information to increase reliability.		• Know some of the common ways that text variables can be used in programming. • Know and use concatenation in own programs.			
Key Vocabulary						

Top of the Document

Year 6:

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Unit	Online Safety (2)	Spreadsheets (Microsoft Excel) (8)	Coding (3)	Coding cont… (3)	Quizzing (3)	Quizzing cont… (3)
Small Steps	• **Know the benefits and risks of mobile devices broadcasting the location of the user/device, e.g. apps accessing location.** • **Know what secure sites are.** • **Know that secure sites will have industry standard seals of approval.** • **Build on knowledge of digital footprints. e.g. know how and why people use their information.** • **Build on knowledge of appropriate online behaviours and how this can protect themselves and others from possible online dangers. e.g. the dangers of promoting inappropriate content online.** • Have greater knowledge of how to make more informed choices of how free time is used.	• **Know how to create a spreadsheet to help answer a mathematical question relating to probability.** • **Know how to take 'copy' and 'paste' shortcuts.** • **Know how to problem solve during mathematical investigations when using spreadsheets by using tools such as the 'Count tool'.** • Know how to create a spreadsheet to produce computational models. e.g. creating a spreadsheet that works out discounts and final price sales. • **Know how to use advanced formula.** • Know how to use a spreadsheet to	• **Know how to create a game which includes timers and a score.** • Know what the launch command is. • Build on knowledge of functions. • **Know how to use multiple functions in own program.** • Know how to arrange code in multiple tabs. • Know how to develop creativity when coding to generate novel effects. • Know the different options of generating user input in 2Code. • Know how to attribute variables to user input. • **Know the need to code for all possibilities when using user inputs.** • Know how 2Code can be used to make a text based adventure game. • Know with improving understanding of how they can alter existing programs to reflect their own ideas.	(See Spring 1)	• **Know how to use create activities for younger children using software such as 2DIY.** • **Know about different question types within quizzing software tools such as 2Quiz.** • Know how to give and respond to feedback based on quizzes made. • Know how to create their own grammar games. • Know how to use multiple pieces of software to enhance a quiz. e.g. create a quiz that requires children to look up information on a database.	(See Summer 1)

Top of the Document

	• **Know the effects on individual health when having too much screen time.**	help plan actions. e.g. create a spreadsheet to plan how to spend pocket money and demonstrate the effect of saving.	• Building on existing knowledge of debugging, children know how to debug more effectively			
Key Vocabulary						

Top of the Document