

Computing and ICT

	Autumn Experiences	Spring Experiences	Summer Experiences
Reception Enhanced provision	Termly focus: Produce images in relation to topic work Familiarise self with PC hardware Develop mouse skills	Termly focus: produce typed text in relation to topic work Familiarise self with keyboard	Termly focus: combine text and graphics in simple ways to produce work in relation to topic focus. Make choices about presentation
Continuous provision (children in Reception will do)	Continuous provision where ICT could be used		
PSED - Build constructive and respectful relationships. Identify and moderate their own feelings socially and emotionally. Show resilience and perseverance in the face of challenge	Role play. ICT lessons – draw self, add mouths to faces to show emotions. Taking turns to use IAW, iPads, laptops. Select program to play independently.		
CL – learn and use new vocabulary throughout the day. Ask questions to find out more and to check they understand what has been said to them. Listen to and talk about stories to build familiarity and understanding.	Listening area – cd stories, songs – chn independently work buttons & change cds. Watch, listen and read ebooks on IAW, ipads, laptops. Bee bots. Ipads to record voice/video another child explaining something. Easy mobile phones – chn communicate with each other outside.		
PD - Develop their small motor skills so that they can use a range of tools competently, safely and confidently	Using technical equipment respectfully – ipads, laptops, pc, cd player, bee bots. Develop mouse control when using pc, finger control when using ipad & laptops. Using technical equipment respectfully – ipads, laptops, pc, cd player, bee bots.		
L - Read individual letters by saying the sounds for them. Spell words by identifying the sounds and then writing the sound with letter/s.	Watch, listen & read ebooks on IAW, ipads, laptops. Variety of phonics programs on IAW, ipads. Use google search engine to find answers to our questions. Navigate and read given web pages to find information. 2simple drawing program. 2 simple Typing skills for writing.		
M - Count objects, actions and sounds. Link the number symbol (numeral) with its cardinal number value.	Number/shape hunt using ipads to take pictures of numbers/shapes they find. Use bee bot on number line. Experiment with calculators. Use stop watches to measure time. Use weighing scales in cooking. Maths programs on ipads, pc – maths base, bingo.		
KUW - Comment on images of familiar situations in the past. Draw information from a simple map. Recognise some similarities and differences between life in this country and life in other countries. Recognise some environments that are different from the one in which they live.	Classroom – ipad, laptop, pc, cd player, bee bot, IAW. Cooking – whisk, juicer. Use google search engine to find answers to our questions. Navigate and read given web pages to find information. Locate letters on keyboard. Continue developing mouse control. Use metal detectors		
EAD - Listen attentively, move to and talk about music, expressing their feelings and responses. Watch and talk about dance and performance art, expressing their feelings and responses.	Cd players & selection of music from different countries. 2simple music program. 2simple 2 paint – pc, IAW. Ipads – camera, video, sound clips.		

SUBJECT: Computing	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	Computer Art				Labelling and Typing	
	<p><u>Content:</u> Demonstrate some ability to control mouse smoothly. Use technology to purposefully create organise, manipulate and retrieve digital content. Recognise common uses of information technology beyond school.</p> <p><u>Skills:</u> Use mouse to select and move drawing tools. Use programme to create a picture. Create a picture using shape, line, pen and pencil tools. Developed mouse control – include some finer detail in pictures. Create a picture using a variety of tools.: Basic mouse control to create a picture. Begin to use picture processing tools (with guidance.) Create a picture using processing software. Show competent mouse control. Create pictures based on specific criteria (e.g. recreating an artist’s work. Some details in pictures drawn (evidence of fine mouse control.) Begin copy</p>				<p><u>Content:</u> Shows some familiarity with keyboard, unsure of letter location. Recognises key buttons with prompts.</p> <p><u>Skills:</u> Demonstrate basic familiarity with keyboard (space bar, return, backspace, delete.) Enter text using keyboard. Correct and edit errors. Assemble text using a word bank. Demonstrate familiarity with keyboard (confident key recognition.) Using different fingers for different letters. Extended familiarity with Word operations.</p>	
Key Vocabulary	Graph, pictogram, picture, conclusion, data.		Copy, paste, label, type, keyboard, space bar, return, enter, backspace, delete.		Software, undo, eraser, paint, right click.	
E Safety Project Evolve	TOPIC Self-Image and Identity Online Relationships		TOPIC Online Reputation Online Bullying Managing Online Information		TOPIC Privacy and Security Copyright and Ownership	
	Can I create, name and date my digital creative work? Can I search for images safely?		Can I recognise that information can stay online and could be copied? Can I describe how to behave online in ways that do not upset others and can give examples?		Can explain why work I create using technology belongs to me? Can explain how passwords are used to protect information, accounts and devices?	
Year 2	Writing Stories		Data Handling		Logo Turtles	
	<p><u>Content:</u> Use technology to purposefully create organise, manipulate and retrieve digital content.</p> <p><u>Skills:</u> Begin to use word processor to create sentences. Unfamiliar with typing. Use word processor to create sentences that communicate meaning. Use space bar, shift key, return/enter and line breaks. Edit text using insert, delete and backspace. Change font, size and colour of text. Publish a written story. Begin showing typing with correct fingers. Start showing some speed with typing (start of touch typing skills.) Change font for effect. Insert paragraphs using the enter key.</p>		<p><u>Content:</u> Use technology to purposefully create organise, manipulate and retrieve digital content.</p> <p><u>Skills:</u> Enter data in to graph following clear instructions. Begin to answer simple questions about data. Enter data in to graphing application. Create graph and make simple comparisons. Answer simple questions about data. Create a pictogram. Draw conclusions from graphs. Create a pictogram 1 picture = 2 people. Ask questions about data.</p>		<p><u>Content:</u> Understand what algorithms are Understand how they are implemented as programs Understand that they follow precise language</p> <p><u>Skills:</u> Use forward/back/right/left commands Use pen up/down tool. Create shapes using logo turtle Copy and paste commands Create repeating patterns using copy and paste. Use degrees to create regular shapes. Experiment creating mazes using pen up/down tool.</p>	
Key Vocabulary	cut, paste, fill, edit, fine mouse control, text curser, return, enter, shift, backspace.		Insert, delete, backspace, space, enter, font, full stops, text, touch typing.		Algorithms, programs, degrees, forward, right, lift, 45 90 180 360 degrees.	

E Safety Project Evolve	TOPIC Self-Image and Identity Online Relationships	TOPIC Online Reputation Online Bullying Managing Online Information	TOPIC Privacy and Security Copyright and Ownership
	Can I explain how passwords can be used to protect information, accounts and devices? Can I explain what bullying is, how people may bully others and how bullying can make someone feel? Can I recognise that content on the internet may belong to other people?	Can I give examples of how someone might use technology to communicate with others they don't also know offline and explain why this might be risky. (e.g. email, online gaming, a pen-pal in another school / country)? Can I explain simple guidance for using technology in different environments and settings e.g. accessing online technologies in public places and the home environment? Can I explain how information put online about someone can last for a long time?	Can I explain how passwords can be used to protect information, accounts and devices? Can I explain what bullying is, how people may bully others and how bullying can make someone feel? Can I recognise that content on the internet may belong to other people?
Year 3	Texts and Graphics <u>Content</u> 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 <u>Skills</u> Resize, move and combine text and graphics. Use effects, alter font size, type colour. Review, edit and amend text. Use shift key. Insert graphics from clipart. Communicate meaning by combining texts and graphics. Amend text for effect. Adjust text alignment. Change backgrounds, borders, WordArt, text boxes. Begin to show fluent typing skills.	Scratch <u>Content</u> Design, write and debug programs that accomplish specific goals, 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 <u>Skills</u> Create moving characters using drop box code. Use repeat/forever loops. Broadcast basic messages. Create sprites that interact with background and other sprites. Add a simple variable. Show confidence in creating variables Create a basic game that has interaction between sprite and user.	PowerPoint <u>Content</u> Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information <u>Skills</u> Create PowerPoint presentation on different slides. Copy and paste pictures in to PowerPoint. Insert, move and edit text boxes on slides. Insert, move and edit pictures from the internet. Add animation to text boxes and pictures. Change orientation of text/text boxes. Add sound effects. Create PowerPoint for different audiences. Add timings to animations and slides. Create PowerPoint to move between slides with timing function not click function.
Key Vocabulary	Edit, past from the internet, text box, fill, gradient, format, line, dash style, width.	Loop, variable, block, code, Boolean, sprite, background, move, follow.	Orientation, format, fill, slideshow, timing, custom,
E Safety Project Evolve	TOPIC Self-Image and Identity Online Relationships	TOPIC Online Reputation Online Bullying Managing Online Information	TOPIC Privacy and Security Copyright and Ownership
	Can I explain what is meant by the term 'identity?' Can I describe ways people who have similar likes and interests can get together online?	Can I <i>explain</i> who someone can ask if they are unsure about putting something online? Can I give examples of how bullying behaviour could appear online and how someone can get support?	Can I describe how some online services may seek consent to store information about me; I know how to respond appropriately and who I can ask if I am not sure? Can I can demonstrate the use of search tools to find and access online content which can be reused by others?
Year 4	Data Handling <u>Content</u> 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. <u>Skills</u> Create pictograms, bar charts and line graphs on Excel. Collect and input data in to a database. Present results and draw conclusions from them. Evaluate and choose the most effective graph for different results. Amend axis of graphs for better presentation.	Advanced Scratch <u>Content</u> Design, write and debug programs that accomplish specific goals, 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 <u>Skills</u> Use repeat/forever loops. Broadcast messages that interact with other sprites.	Animation <u>Content</u> 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 <u>Skills</u> Create a basic moving animation. Create a constant backdrop for an animation on the computer and physically. Create a storyboard of an animation.

	Draw detailed conclusions from graphs.	Create sprites that interact with background and other sprites. Add multiple variables. Create a game that allows user interaction. Show confidence in creating variables Create a detailed game that has interaction between sprite and user.	Create a stop motion animation of at least 50 frames. Create a consistent background on the computer using the internet to get images/media. Create a stop motion animation with a character interacting with the background. Take note of effective lighting/camera angles.
Key Vocabulary	Data, pictogram, represent, pie chart, axis, graph, line, bar, analyse, conclusion.	Algorithm, program, variables, interaction, loop, broadcast.	Stop motion, background, frame, storyboard, consistent, motion.
E Safety Project Evolve	TOPIC Self-Image and Identity Online Relationships	TOPIC Online Reputation Online Bullying Managing Online Information	TOPIC Privacy and Security Copyright and Ownership
	Can I explain how people can represent themselves in different ways online? Can I explain what it means to 'know someone' online and why this might be different from knowing someone offline?	Can I explain the differences between knowing someone online compared to offline? Can I understand that I should be careful when sharing some information about myself and about other people online?	Can I explain what to do if a password is shared, lost or stolen? Can I give examples of content that is permitted to be reused and know how this content can be found online?
Year 5	Publisher <u>Content</u> 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 <u>Skills</u> Can create basic publications Can identify the components of publisher's interface Can format text, paragraphs and apply schemes Can open and edit created documents Can create a publication for a specific audience Can apply publishing skills across the curriculum	Html Coding <u>Content</u> Design, write and debug programs that accomplish specific goals, 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 <u>Skills</u> Identify key code of html language. Create a basic html code. Create a website using <DOC!TYPE> Change the font colour on html. Copy and paste code for images in to documents. Create an ordered/unordered list. Add borders to pictures Add a table to html code	Graphic Modelling / Sketch Up <u>Content</u> Use objects base drawing package to manipulate shapes of objects. Create, explore and amend a 3D graphical model identifying pattern and relationships. Understand the limitations/possibilities of a modelling application. <u>Skills</u> Provide explanations of decisions made in the construction of their work. Organise their work to create something that would appeal to a target audience. Create different views of the same object
Key Vocabulary	Format, publication, publish, edit, gradient, text box,	Doctype, tag, edit, format, font, style, color.	3d, graphic model, upscale, downscale, template, feet, inches, meter, product, design.
E Safety Project Evolve	TOPIC Self-Image and Identity Online Relationships	TOPIC Online Reputation Online Bullying Managing Online Information	TOPIC Privacy and Security Copyright and Ownership
	Can I explain how identity online can be copied, modified or altered? Can I explain that there are some people I communicate with online who may want to do me or my friends harm?	Can I describe ways that information about anyone online can be used by others to make judgments? Can I describe how what one person perceives as playful joking and teasing (including 'banter') might be experienced by others as bullying?	Can I describe ways that information about anyone online can be used by others to make judgments? Can I describe how what one person perceives as playful joking and teasing (including 'banter') might be experienced by others as bullying?

Year 6	<p style="text-align: center;">Spreadsheets</p> <p><u>Content</u> 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. Design, write and debug programs that accomplish specific goals.</p> <p><u>Skills</u> Use basic formula functions (= + * / -) Use spreadsheet to explore a mathematical model. Explore the effects of changing data in a spreadsheet. Create graphs from spreadsheet data Change data, variables and formulae in a spreadsheet. Answer 'what if' questions and check results.</p>	<p style="text-align: center;">Python Idle</p> <p><u>Content</u> Design, write and debug programs that accomplish specific goals, 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</p> <p><u>Skills</u> Use an idle shell to create a basic print programme. Use basic programming language. Use Idle to create equations. Set values of letters to integers. Use Turtle to create a simple shape. Create a repeating pattern Use shortcuts to type code Create a repeating pattern that alters minimally each repetition.</p>	<p style="text-align: center;">CROSS CURRICULAR</p> <p><u>Content:</u> Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</p> <p><u>Skills</u> Search a given website for information. Use a simple search engine. Find information on a given topic. Use keywords to search. Recall and use information. Refine keywords to search more closely/widely. Evaluate and show awareness of website credibility. Use this awareness to direct searches Use a search engine confidently (including back/forward buttons.)</p>
Key Vocabulary	Formula, function, data, spreadsheet, cell, graph, variable, algorithm.	Shell, print, algorithm, pattern, repeat, value, integer.	Website, search engine, reliability, evaluating, keywords.
E Safety Project Evolve	TOPIC Self-Image and Identity Online Relationships	TOPIC Online Reputation Online Bullying Managing Online Information	TOPIC Privacy and Security Copyright and Ownership
	Can I use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour? Can I identify a range of ways to report concerns about content and contact in the context of comparing cyberbullying to bullying in person and developing strategies for dealing with online bullying? Can I use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour?	Can I understand the term inappropriate, give alternatives, and understand that 'inappropriate' might mean different things to different people? Can I understand what an 'inappropriate' picture might be and give examples? Can I understand the potential impact of sharing 'inappropriate' pictures, both for the sharer and the person having pictures shared?	Can I show that I know I should try and screenshot the bullying behaviour? Can I show that I know I should reach out to responsible adults with evidence of the bullying behaviour? Can I list people who can help me with this?