



St. Thomas'
CofE PRIMARY ACADEMY
Learning for life with Jesus



Computing Learning Journey
2026/2027

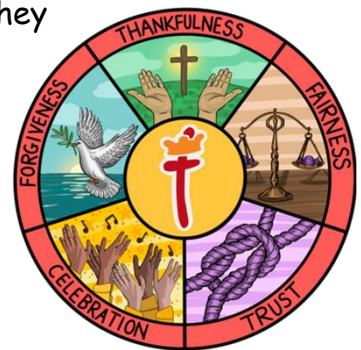
Intent, Implementation and Impact

Learning for life with Jesus

Intent

All areas of our curriculum are underpinned by our Christian values and we ensure that our curriculum makes links to these values. At the heart of each subject is a set of core skills which form a subject learning journey, this journey is built from EYFS through to year 6 and the skills progressive as you move through the school. Knowledge is communicated to ensure coverage of National curriculum and it is through this knowledge that children apply their skills. Children at St Thomas' leave with a secure knowledge of both the academic knowledge and skills needed for the next stage of their education. They will have developed a clear set Christian and moral values which they can apply in all areas of their lives and will have taken part in real-life experiences which will have raised their aspirations and given them a thirst for wisdom and knowledge.

The intention of the St Thomas' Computing learning journey is first and foremost to provide children with the skills and knowledge they need to embrace new technologies and flourish, both responsibly and safely, in an increasingly digital world. To achieve this, we focus on developing the skills, knowledge and understanding that children need in order to become autonomous, independent users of computing technologies, and gain confidence through active learning and enjoyable activities.



Our History lead in school is Miss E Horwell

Implementation

In line with the National Curriculum, St Thomas' Computing learning journey identifies five key areas, which stem from the key strands of computing: **Computer Science, Information Technology and Digital Literacy**. These key areas are woven together to create an engaging and enriching learning experience.

- **Computer systems and networks**
- **Programming**
- **Creating media**
- **Data handling**
- **Online safety**

These areas create a cyclical route via a spiral curriculum model, through which pupils can develop their computing knowledge and skills by revisiting and building on previous learning.

The implementation of this curriculum ensures a broad and balanced coverage of National Curriculum requirements, and our curriculum provides pupils with the opportunity to learn and apply transferable skills. Where appropriate, units have been created to link to other subjects, such as art, science and music to enable the development of further transferable skills, and genuine cross-curricular learning.

Computing is taught for 1 hour each week. Each new unit of learning is introduced through an 'explore' activity which summarises previous knowledge and skills shared by the children. Children are then introduced to the key vocabulary which will be shared during the unit. During the lesson, activities are scaffolded where appropriate, and assessment and feedback will focus on misconceptions and next steps for learning. At the end of each unit of learning, children will complete an end of unit 'review' which will feed into future planning.

Computing Lesson Journey



Online Safety is taught throughout each unit and every half term.

In Computing, work is recorded in a class computing journal, with any additional work on the network's Pupil Share channel in year group folders for monitoring and sharing purposes

EYFS

Computing is taught as part of the Personal, Social and Emotional Development and Expressive Arts and Design area of the EYFS learning and development. Children in Reception will explore a range of computational skills and questions through their theme for the half term. Where appropriate, lessons will take the same form as the rest of the school: explore, teach, practise, apply and review. There will then be an independent activity relating to the input. All classrooms have an investigation station. As part of this, computing based enhanced provision will be planned for. Children also have access to computing-based resources which they are free to use as part of the child-initiated provision. Evidence of these lessons and other learning around computing can be found on Evidence Me linked to the appropriate statements and ELG.



Reception Theme Subject Journey



Explore

Children have the opportunity to explore the topic and subject area through tuff trays and child led learning. KWL grids and mind maps used to identify prior learning.

Teach

Input and carpet sessions, in the moment teaching opportunities, concrete materials, teaching of new topic specific vocabulary.

Practise

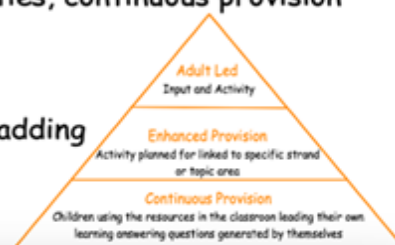
Group work, teacher guided sessions, tuff tray activities after input, key questions for children to explore and investigate on their own after being taught skills.

Apply

Independent tasks, some enhanced provision opportunities, continuous provision opportunities, child-led learning

Review

Mini input on previous learning, KWL revisit, mind map adding repeating 'explore' activities.



ELG	Personal, Social and Emotional Development	Managing Self	• Be confident to try new activities and show independence, resilience and perseverance in the face of challenge. • Explain the reasons for rules, know right from wrong and try to behave accordingly.
	Expressive Arts and Design	Creating with Materials	• Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.

Impact

In addition to the outcomes shown on our curriculum tree, the specific impact of the St Thomas' Computing Learning Journey is that children will:

- ✓ Be critical thinkers and able to understand how to make informed and appropriate digital choices in the future.
- ✓ Understand the importance that computing will have going forward in both their educational and working life and in their social and personal futures.
- ✓ Understand how to balance time spent on technology and time spent away from it in a healthy and appropriate manner.
- ✓ Understand that technology helps to showcase their ideas and creativity. They will know that different types of software and hardware can help them achieve a broad variety of artistic and practical aims.
- ✓ Show a clear progression of technical skills across all areas of the National curriculum - computer science, information technology and digital literacy.
- ✓ Be able to use technology both individually and as part of a collaborative team.
- ✓ Be aware of online safety issues and protocols and be able to deal with any problems in a responsible and appropriate manner.
- ✓ Have an awareness of developments in technology and have an idea of how current technologies work and relate to one another.
- ✓ Meet the end of key stage expectations outlined in the National curriculum for Computing.

Formative assessment takes part in each lesson and misconception and next steps of the focus for feedback. Summative assessment is completed for each child at the end of each unit of teaching using the assessment overviews at the end of this document. A best fit approach to statements achieved results in an end of year summative grade.

Adaptive Teaching Strategies

Cognition and Learning	Communication and Interaction	SEMH	Physical and Sensory
• Alternative methods of recording (talking tins, laptops, creative tasks) • Differentiated tasks • Visual supports • Word banks/phonic maps • Pre-teaching of vocabulary • Teaching of key skills • <u>Coloured overlays</u> • Timers and chunked activities • Use of practical apparatus • Sit close to the board • Allow extra time	• Talking tins • Pre-teaching language • Visuals to support • Social stories • Now/Next • Increased focus on Oracy and developing talk opportunities • Thinking time • Explicit instructions • Makaton signs • Steps to success (one task at a time)	• Brain and movement breaks • <u>Calmbrain</u> • Reward time • Reflection areas (weighted blankets) • Sensory/fidget toys • Sit near to the teacher • Steps to success (one task at a time) • Peer buddies	• Own learning space (workstation) • Brain breaks • Appropriate seating • Fidget toys • Adapted resources (scissors, rulers <u>etc</u>) • Sloping board • Alternative methods of recording • Wobble cushions • Use of a sensory areas (tent) • Chew buddies • Pencil grips/sloping boards

Lowest 20% offer

Attendance	Pastoral	Healthy Mind and Body	Academic
• Encouraging text messages • Parenting drop-ins • School to collect children • Rewards for parents • Reward charts for children • Relationship building with families • Attendance action plans • Free additional hours in the Nursery • Free access to before and after school club • Meet and Greet at the Hive	• Additional transition • Pastoral plans for children • Pastoral coffee and catch-up sessions for parents • ELSA therapy • Providing uniform and school supplies • Funding of trips, clubs and before and after school care • Individual invites for parents to events • Enrichment opportunities • Referrals and signposting to external services • Pastoral support unit access. • Individual whole school roles to boost self esteem • Reduced timetable if needed to support pastoral needs • Sensory circuits and access to the sensory room	• School foodbank • Food vouchers • Parent workshops • School nurse referral for healthy living programme • Free school meals • Breakfast provision • After school sports clubs- personal invites • Budgeting support for families • Medical care plans • Invites to sports camps in the school holidays	• Before and after school clubs with personal invites • Teacher targeting in every lesson • National Tutoring Programme • In school interventions • Aspirational targets • Parenting workshops • Individual daily reading • Pre and post teaching • Scaffolding for aspiration • Access to technology • Metacognitive learning • Reward time with school dog • Targeted clubs including homework club • Home access to phonics subscription and magazine subscriptions • School funded instrumental lessons • Breakfast and books

2026/2027 Computing Overview

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	Computing systems & networks - Technology around us.	Creating Media - Digital Painting	Programming A - Moving a robot	Data and information - grouping data	Creating Media - Digital writing	Programming B - Programming animations
Year 2	Computing systems & networks - Technology around us.	Creating Media - Digital photography	Programming A - Robot algorithms	Data and information - pictograms	Creating Media - Digital music	Programming B - Programming quizzes
Year 3	Computing systems & networks - Connecting Computers	Creating Media - Stop frame animation	Programming A - sequencing sound	Data and information - Branching databases	Creating Media - Desktop publishing	Programming B - Events and actions in programmes
Year 4	Computing systems & networks - the internet	Creating Media - Audio production	Programming A - Repetition in shapes	Data and information - Data logging	Creating Media - Photo editing	Programming B - repetition in games
Year 5	Computing systems & networks - systems and searching	Creating Media - Video production	Programming A - Selection in physical computing	Data and information - Flat file data bases	Creating Media - introduction to Vector Graphics	Programming B - Selection in quizzes
Year 6	Computing systems & networks - Communication and Collaboration	Creating Media - Web page creation	Programming A - Variables in games	Data and information - Introduction to spreadsheets	Creating Media - 3D modelling	Programming B - Sensing movement

2025/2026 Computing Curriculum

Computing Curriculum Overview 2026-2027

Autumn 1						
Year 1 - Technology around us						
WC 7.9.2026	WC 14.9.26	WC 21.9.26	WC 25.9.26	WC 5.10.26	WC 12.10.26	WC 19.10.26
Technology around us	AI unit - What is technology.	Using technology	Developing mouse skills	Using a computer keyboard	Developing keyboard skills	Using a computer responsibly
Year 2 - Information technology around us						
What is IT?	AI unit - How does technology help us? An introduction to AI	IT in school	IT in the world	The benefits of IT	Using IT safely	Using IT in different ways
Year 3 - Connecting Computers						
How does a digital device work?	What parts make up a digital device?	How do digital devices help us?	How am I connected?	How are computers connected?	AI unit - How is AI different from a computer?	What does our school network look like?
Year 4 - The Internet						
Connecting Networks	AI unit - Are computers really clever - or just following instructions?	What is the internet?	Sharing Information	What is a website?	Who owns the web?	Can I believe what I read?
Year 5 - Systems and searching						
Systems	Computer systems	AI Unit - What is AI and where do we see it in our everyday lives?	Searching the web	Selecting search results	How search results are ranked.	How are searches influenced?
Year 6 - Communication and collaboration						
AI unit 1 - What is AI and how is it	Internet Addresses	Data packets	Working together	Shared working	AI unit 2 - What is AI and what are	Communicating responsibly

AI unit - How is AI trained?	What makes a good website?	Becoming a web designer	Copyright or copywrong?	How does it look?	Follow the breadcrumbs	Think before you link!
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Spring 1					
WC 4.1.27	WC 11.1.27	WC 18.1.27	WC 25.1.27	WC 1.2.27	WC 8.2.27
Year 1 - Programming A - Moving a Robot					
AI unit - How has technology changed over time?	Lesson 1 and 2 - Buttons and Directions	Forwards and Backwards	Four directions	Getting there	Routes
Year 2 - Programming A - Robot algorithms					
AI unit - How are humans and computers different	Lesson 1 and 2 - Giving instructions and same but different.	Making predictions	Mats and routes	Algorithm design	Break it down
Year 3 - Programming A - Sequencing sounds					
AI unit - Can a computer be unfair?	Introduction to scratch	Programming sprites	Lesson 3 and 4. Sequences and ordering commands	Looking good	Making an instrument
Year 4 - Programming A - Repetition in shapes					
AI unit - How should we use smart devices kindly, responsibly and fairly.	Lesson 1 and 2 - Programming a screen turtle and programming letters	Patterns and repeats	Using loops to create shapes	Breaking things down	Creating a program
Year 5 - Programming A - Selection in physical computing					
AI unit - How can AI help us learn and why should we be careful using it?	Lesson 1 and 2. Connecting crumbles and combining output components	Controlling with conditions	Starting with selection	Drawing designs	Writing and testing algorithms
Year 6 - Programming A - Variables in games					
AI unit - Can AI ever be unfair?	Lesson 1 and 2. Introducing variables and Variables in programming	Improving a game	Becoming a game designer	Design to code	Improving and sharing

Spring 2 Summer 1)						(Last lesson to be done in
WC 22.2.27	WC 1.3.27	WC 8.3.27	WC 15.3.27	WC 22.3.27	WC 12.4.27	
Year 1 - Data and information - Grouping Data						
AI unit - Who is in control of technology?	Lesson 1 and 2. Label and match and group and count.	Describe an object	Making different groups	Comparing groups	Answering questions	
Year 2 - Data and information - Data Pictograms						
AI unit - How do computers follow instructions?	Counting and comparing	Enter the data	Creating pictograms	Lesson 4 and 5. What is an attribute and comparing people	Presenting information.	
Year 3 - Data and Information - Branching Databases						
AI unit - How do we know if something online is true?	Lesson 1 and 2. Yes or no questions and Making groups.	Creating a branching database	Structuring a branching database	Planning a branching database	Making a dinosaur identifier	
Year 4 - Data and information - Data logging						
AI unit - What is personal information and how can I keep it safe online?	Lesson 1 and 2. Answering questions and Data collection	Logging	Analysing data	Data for answers	Answering my question	
Year 5 - Data and information - Flat-file Databases						
AI unit - Can AI be unfair and how can we make it fairer?	Creating a paper-based database	Computer databases	Lesson 3 and 4. Using a database and Using search tools.	Comparing data visually	Databases in real life.	
Year 6 - Data and information - Introduction to spreadsheets						
AI unit - Who's behind the screen	Collecting Data	Lesson 2 and 3. Formatting a spreadsheet and What's the formula?	Calculating and duplicating	Event planning	Presenting data	

Summer 1					
WC 19.4.27	WC 26.4.27	WC 3.5.27	WC 10.5.27	WC 17.5.27	WC 24.5.27
Year 1 - Creating Media - Digital writing					

AI unit - How can we stay safe when using technology and the internet?	Lesson 1 and 2. Exploring the keyboard and adding and removing text.	Exploring the toolbar	Making changes to text	Explaining my choices	Pencil or keyboard?
Year 2 - Creating Media - Digital music					
AI unit - How can we spot unsafe situations online and know what to do?	Lesson 1 and 2. How music makes us feel and Rhythms and patterns.	How music can be used	Notes and tempo	Creating digital music	Reviewing and editing music.
Year 3 - Creating Media - Desktop publishing					
AI unit - Should we always use AI when we can?	Lesson 1 and 2. Words and pictures and Can you edit it?	Great template!	Becoming a designer	Lay it out	Why desktop publishing?
Year 4 - Creating Media - Photo editing					
AI unit - How can algorithms choose what we see online and how can we tell if content is informed or influencing us?	Changing digital images	Recolouring	Lesson 3 and 4. Cloning and combining	Creating	Evaluating
Year 5 - Creating Media - Introduction to vector drawings					
AI unit - How does AI use our data and how can we protect ourselves?	Lesson 1 and 2. The drawing tools and creating images	Making effective drawings	Layers and objects	Manipulating objects	Becoming a graphic designer.
Year 6 - Creating Media - 3D Modelling					
AI unit - How can AI chatbots affect our ideas of friendship?	AI unit - How is AI changing what we see and believe online?	Lesson 1 and 2 - Introduction to 3D modelling and Modifying 3D objects	Lesson 3 - Make your own name badge	Lesson 4 and 5. Making a desk tidy and planning a 3D model.	Make your own 3D model
Summer 2					
WC 7.6.27	WC 14.6.27	WC21.6.27	WC 28.6.27	WC 5.7.27	WC 12.7.27

Year 1 - Programming B - Programming animations					
AI unit - How do tools, technology and AI help us at home?	Comparing tools	Lesson 2 and 3. Joining blocks and making a change.	Adding sprites	Project design	Following my design
Year 2 - Programming B - Programming quizzes					
AI unit - How can we tell whether information is correct?	Lesson 1 and 2. Scratch Jr recap and outcomes	Using a design	Changing a design	Designing and creating a program	Evaluating
Year 3 - Programming B - Events and actions in programs					
Moving a sprite	Maze movement	Drawing lines	Adding features	Debugging movement	Making a project
Year 4 - Programming B - Repetition in games					
Using loops to create shapes	Different loops	Animate your name	Modifying a game	Designing a game	Creating your game.
Year 5 - Programming B - Selection in Quizzes					
AI unit - How does AI change what we see and believe online?	Lesson 1 and 2. Exploring conditions and selecting outcomes.	Asking questions	Designing a quiz	Testing a quiz	Evaluating a quiz
Year 6 - Programming B - Sensing movement					
AI unit - What do apps know about me and how can I stay in control of my data?	AI unit - How does Google translate work and is it always right?	Lesson 1 and 2. The micro:bit and Go with the flow.	Lesson 3 and 4. Sensing your way and Finding your way.	Design a step counter	Making a step counter

Computing Progression - Key Stage 1

Autumn 1 - Computer systems and networks

Year 1	Year 2
Learning Outcomes	Learning Outcomes
Lesson 1 - To identify technology Lesson 2 - To identify a computer and its main parts Lesson 3 - To use a mouse in different ways Lesson 4 - To use a keyboard to type on a computer Lesson 5 - To use the keyboard to edit text Lesson 6 - To create rules for using technology responsibly	Lesson 1 - To recognise the uses and features of information technology Lesson 2 - To identify the uses of information technology in the school Lesson 3 - To identify information technology beyond school Lesson 4 - To explain how information technology helps us Lesson 5 - To explain how to use information technology safely Lesson 6 - To recognise that choices are made when using information technology
Success Criteria	Success Criteria
Lesson 1: - They can explain technology as something that helps us - They can locate examples of technology in the classroom - They can explain how these technology examples help us Lesson 2: - They can name the main parts of a computer - They can switch on and log into a computer - They can use a mouse to click and drag Lesson 3: - They can use a mouse to open a program - They can click and drag to make objects on a screen - They can use a mouse to create a picture Lesson 4: - They can say what a keyboard is for - They can type my name on a computer - They can save my work to a file Lesson 5:	Lesson 1: - They can identify examples of computers - They can describe some uses of computers - They can identify that a computer is a part of IT Lesson 2: - They can identify examples of IT - They can sort school IT by what it's used for - They can identify that some IT can be used in more than one way Lesson 3: - They can find examples of information technology - They can sort IT by where it is found - They can talk about uses of information technology Lesson 4: - They can recognise common types of technology - They can demonstrate how IT devices work together - They can say why we use IT Lesson 5:

- They can open my work from a file
- They can use the arrow keys to move the cursor
- They can delete letters

Lesson 6:

- They can identify rules to keep us safe and healthy when we are using technology in and beyond the home
- They can give examples of some of these rules
- They can discuss how we benefit from these rules

- They can list different uses of information technology
- They can talk about different rules for using IT
- They can say how rules can help keep me safe

Lesson 6:

- They can identify the choices that I make when using IT
- They can use IT for different types of activities
- They can explain the need to use IT in different ways

Autumn 2 - Creating Media

Year 1	Year 2
Learning Outcomes	Learning Outcomes
Lesson 1 - To describe what different freehand tools do Lesson 2 - To use the shape tool and the line tools Lesson 3 - To make careful choices when painting a digital picture Lesson 4 - To explain why I chose the tools I used Lesson 5 - To use a computer on my own to paint a picture Lesson 6 - To compare painting a picture on a computer and on paper	Lesson 1 - To use a digital device to take a photograph Lesson 2 - To make choices when taking a photograph Lesson 3 - To describe what makes a good photograph Lesson 4 - To decide how photographs can be improved Lesson 5 - To use tools to change an image Lesson 6 - To recognise that photos can be changed
Success Criteria	Success Criteria
Lesson 1: - They can make marks on a screen and explain which tools I used - They can draw lines on a screen and explain which tools I used - They can use the paint tools to draw a picture Lesson 2: - They can make marks with the square and line tools - They can use the shape and line tools effectively - They can use the shape and line tools to recreate the work of an artist Lesson 3: - They can choose appropriate shapes - They can make appropriate colour choices - They can create a picture in the style of an artist Lesson 4: - They can explain that different paint tools do different jobs - They can choose appropriate paint tools and colours to recreate the work of an artist - They can say which tools were helpful and why Lesson 5: - They can make dots of colour on the page - They can change the colour and brush sizes - They can use dots of colour to create a picture in the style of an artist on my own Lesson 6: - They can explain that pictures can be made in lots of different ways	Lesson 1: - They can recognise what devices can be used to take photographs - They can talk about how to take a photograph - They can explain what I did to capture a digital photo Lesson 2: - They can explain the process of taking a good photograph - They can take photos in both landscape and portrait format - They can explain why a photo looks better in portrait or landscape format Lesson 3: - They can identify what is wrong with a photograph - They can discuss how to take a good photograph - They can improve a photograph by retaking it Lesson 4: - They can explore the effect that light has on a photo - They can experiment with different light sources - They can explain why a picture may be unclear Lesson 5: - They can recognise that images can be changed - They can use a tool to achieve a desired effect - They can explain my choices Lesson 6: - They can apply a range of photography skills to capture a photo - They can recognise which photos have been changed

- They can spot the differences between painting on a computer and on paper
- They can say whether I prefer painting using a computer or using paper

- They can identify which photos are real and which have been changed

Spring 1 - Programming A

Year 1	Year 2
Learning Outcomes	Learning Outcomes
Lesson 1 - To explain what a given command will do Lesson 2 - To act out a given word Lesson 3 - To combine 'forwards' and 'backwards' commands to make a sequence Lesson 4 - To combine four direction commands to make sequences Lesson 5 - To plan a simple program Lesson 6 - To find more than one solution to a problem	Lesson 1 - To describe a series of instructions as a sequence Lesson 2 - To explain what happens when we change the order of instructions Lesson 3 - To use logical reasoning to predict the outcome of a program Lesson 4 - To explain that programming projects can have code and artwork Lesson 5 - To design an algorithm Lesson 6 - To create and debug a program that I have written
Success Criteria	Success Criteria
Lesson 1: - They can predict the outcome of a command on a device - They can match a command to an outcome - They can run a command on a device Lesson 2: - They can follow an instruction - They can recall words that can be acted out - They can give directions Lesson 3: - They can compare forward and backward movements - They can start a sequence from the same place - They can predict the outcome of a sequence involving 'forwards' and 'backwards' commands Lesson 4: - They can compare left and right turns - They can experiment with 'turn' and 'move' commands to move a robot - They can predict the outcome of a sequence involving up to four commands Lesson 5: - They can explain what my program should do - They can choose the order of commands in a sequence - They can debug my program Lesson 6: - They can identify several possible solutions	Lesson 1: - They can follow instructions given by someone else - They can choose a series of words that can be acted out as a sequence - They can give clear instructions Lesson 2: - They can use the same instructions to create different algorithms - They can use an algorithm to program a sequence on a floor robot - They can show the difference in outcomes between two sequences that consist of the same instructions Lesson 3: - They can follow a sequence - They can predict the outcome of a sequence - They can compare my prediction to the program outcome Lesson 4: - They can explain the choices that I made for my mat design - They can identify different routes around my mat - They can test my mat to make sure that it is usable Lesson 5: - They can explain what my algorithm should achieve - They can create an algorithm to meet my goal - They can use my algorithm to create a program Lesson 6: - They can test and debug each part of the program

- They can plan two programs
- They can use two different programs to get to the same place

- They can plan algorithms for different parts of a task
- They can put together the different parts of my program

Spring 2 - Data and Information

Year 1	Year 2
Learning Outcomes	Learning Outcomes
Lesson 1 - To label objects Lesson 2 - To identify that objects can be counted Lesson 3 - To describe objects in different ways Lesson 4 - To count objects with the same properties Lesson 5 - To compare groups of objects Lesson 6 - To answer questions about groups of objects	Lesson 1 - To recognise that we can count and compare objects using tally charts Lesson 2 - To recognise that objects can be represented as pictures Lesson 3 - To create a pictogram Lesson 4 - To select objects by attribute and make comparisons Lesson 5 - To recognise that people can be described by attributes Lesson 6 - To explain that we can present information using a computer
Success Criteria	Success Criteria
Lesson 1: - They can describe objects using labels - They can match objects to groups - They can identify the label for a group of objects Lesson 2: - They can count objects - They can group objects - They can count a group of objects Lesson 3: - They can describe an object - They can describe a property of an object - They can find objects with similar properties Lesson 4: - They can group similar objects - They can group objects in more than one way - They can count how many objects share a property Lesson 5: - They can choose how to group objects - They can describe groups of objects - They can record how many objects are in a group Lesson 6: - They can decide how to group objects to answer a question	Lesson 1: - They can record data in a tally chart - They can represent a tally count as a total - They can compare totals in a tally chart Lesson 2: - They can enter data onto a computer - They can use a computer to view data in a different format - They can use pictograms to answer simple questions about objects Lesson 3: - They can organise data in a tally chart - They can use a tally chart to create a pictogram - They can explain what the pictogram shows Lesson 4: - They can tally objects using a common attribute - They can create a pictogram to arrange objects by an attribute - They can answer 'more than'/'less than' and 'most/least' questions Lesson 5: - They can choose a suitable attribute to compare people - They can collect the data I need - They can create a pictogram and draw conclusions from it Lesson 6: - They can use a computer program to present information in different ways

- They can compare groups of objects
- They can record and share what I have found

- They can share what I have found out using a computer
- They can give simple examples of why information should not be shared

Summer 1 - Creating Media

Year 1	Year 2
Learning Outcomes	Learning Outcomes
Lesson 1 - To use a computer to write Lesson 2 - To add and remove text on a computer Lesson 3 - To identify that the look of text can be changed on a computer Lesson 4 - To make careful choices when changing text Lesson 5 - To explain why I used the tools that I chose Lesson 6 - To compare typing on a computer to writing on paper	Lesson 1 - To say how music can make us feel Lesson 2 - To identify that there are patterns in music Lesson 3 - To experiment with sound using a computer Lesson 4 - To use a computer to create a musical pattern Lesson 5 - To create music for a purpose Lesson 6 - To review and refine our computer work
Success Criteria	Success Criteria
Lesson 1: - They can open a word processor - They can recognise keys on a keyboard - They can identify and find keys on a keyboard Lesson 2: - They can enter text into a computer - They can use letter, number, and Space keys - They can use Backspace to remove text Lesson 3: - They can type capital letters - They can explain what the keys that I have already learnt about do - They can identify the toolbar and use bold, italic, and underline Lesson 4: - They can select a word by double-clicking - They can select all of the text by clicking and dragging - They can change the font Lesson 5: - They can say what tool I used to change the text - They can decide if my changes have improved my writing - They can use 'Undo' to remove changes Lesson 6: - They can make changes to text on a computer	Lesson 1: - They can identify simple differences in pieces of music - They can describe music using adjectives - They can say what I do and don't like about a piece of music Lesson 2: - They can create a rhythm pattern - They can play an instrument following a rhythm pattern - They can explain that music is created and played by humans Lesson 3: - They can connect images with sounds - They can use a computer to experiment with pitch - They can relate an idea to a piece of music Lesson 4: - They can identify that music is a sequence of notes - They can explain how my music can be played in different ways - They can refine my musical pattern on a computer Lesson 5: - They can create a rhythm which represents an animal I've chosen - They can create my animal's rhythm on a computer - They can add a sequence of notes to my rhythm Lesson 6: - They can review my work

- They can explain the differences between typing and writing
- They can say why I prefer typing or writing

- They can explain how I changed my work
- They can listen to music and describe how it makes me feel

Summer 2 - Programming B

Year 1	Year 2
Learning Outcomes	Learning Outcomes
Lesson 1 - To choose a command for a given purpose Lesson 2 - To show that a series of commands can be joined together Lesson 3 - To identify the effect of changing a value Lesson 4 - To explain that each sprite has its own instructions Lesson 5 - To design the parts of a project Lesson 6 - To use my algorithm to create a program	Lesson 1 - To explain that a sequence of commands has a start Lesson 2 - To explain that a sequence of commands has an outcome Lesson 3 - To create a program using a given design Lesson 4 - To change a given design Lesson 5 - To create a program using my own design Lesson 6 - To decide how my project can be improved
Success Criteria	Success Criteria
Lesson 1: - They can find the commands to move a sprite - They can use commands to move a sprite - They can compare different programming tools Lesson 2: - They can use more than one block by joining them together - They can use a Start block in a program - They can run my program Lesson 3: - They can find blocks that have numbers - They can change the value - They can say what happens when I change a value Lesson 4: - They can show that a project can include more than one sprite - They can delete a sprite - They can add blocks to each of my sprites Lesson 5: - They can choose appropriate artwork for my project - They can decide how each sprite will move They can create an algorithm for each sprite Lesson 6: - They can use sprites that match my design	Lesson 1: - They can identify the start of a sequence - They can identify that a program needs to be started - They can show how to run my program Lesson 2: - They can predict the outcome of a sequence of commands - They can match two sequences with the same outcome - They can change the outcome of a sequence of commands Lesson 3: - They can work out the actions of a sprite in an algorithm - They can decide which blocks to use to meet the design - They can build the sequences of blocks I need Lesson 4: - They can choose backgrounds for the design - They can choose characters for the design - They can create a program based on the new design Lesson 5: - They can choose the images for my own design - They can create an algorithm - They can build sequences of blocks to match my design Lesson 6: - They can compare my project to my design

- They can add programming blocks based on my algorithm
- They can test the programs I have created

- They can improve my project by adding features
- They can debug my program

Computing Progression - Key Stage 2

Autumn 1 - Computer Systems and Networks

Year 3	Year 4	Year 5	Year 6
Learning Outcomes	Learning Outcomes	Learning Outcomes	Learning Outcomes
Lesson 1 - To explain how digital devices function Lesson 2 - To identify input and output devices Lesson 3 - To recognise how digital devices can change the way that we work Lesson 4 - To explain how a computer network can be used to share information Lesson 5 - To explore how digital devices can be connected Lesson 6 - To recognise the physical components of a network	Lesson 1 - To describe how networks physically connect to other networks Lesson 2 - To recognise how networked devices make up the internet Lesson 3 - To outline how websites can be shared via the World Wide Web (WWW) Lesson 4 - To describe how content can be added and accessed on the World Wide Web (WWW) Lesson 5 - To recognise how the content of the WWW is created by people Lesson 6 - To evaluate the consequences of unreliable content	Lesson 1 - To explain that computers can be connected together to form systems Lesson 2 - To recognise the role of computer systems in our lives Lesson 3 - To identify how to use a search engine Lesson 4 - To describe how search engines select results Lesson 5 - To explain how search results are ranked Lesson 6 - To recognise why the order of results is important, and to whom	Lesson 1 - To explain the importance of internet addresses Lesson 2 - To recognise how data is transferred across the internet Lesson 3 - To explain how sharing information online can help people to work together Lesson 4 - To evaluate different ways of working together online Lesson 5 - To recognise how we communicate using technology Lesson 6 - To evaluate different methods of online communication
Success Criteria	Success Criteria	Success Criteria	Success Criteria
Lesson 1: - They can explain that digital devices accept inputs - They can explain that digital devices produce outputs - They can follow a process - They can explain what makes a secure password Lesson 2:	Lesson 1 - - They can describe the internet as a network of networks - They can demonstrate how information is shared across the internet - They can discuss why a network needs protecting Lesson 2 - - They can describe networked devices and how they connect	Lesson 1: - They can explain that systems are built using a number of parts - They can describe the input, process, and output of a digital system - They can explain that computer systems communicate with other devices Lesson 2:	Lesson 1: - They can recognise that data is transferred using agreed methods - They can explain that internet devices have addresses - They can describe how computers use addresses to access websites Lesson 2: - They can identify and explain the main parts of a data packet

- They can classify input and output devices - They can describe a simple process - They can design a digital device Lesson 3: - They can explain how I use digital devices for different activities - They can recognise similarities between using digital devices and using non-digital tools - They can suggest differences between using digital devices and using non-digital tools Lesson 4: - They can recognise different connections - They can explain how messages are passed through multiple connections - They can discuss why we need a network switch Lesson 5: - They can recognise that a computer network is made up of a number of devices - They can demonstrate how information can be passed between devices - They can explain the role of a switch, server, and wireless access point in a network Lesson 6: - They can identify how devices in a network are connected together - They can identify networked devices around me - They can identify the benefits of computer networks	- They can explain that the internet is used to provide many services - They can recognise that the World Wide Web contains websites and web pages Lesson 3 - - They can explain the types of media that can be shared on the WWW - They can describe where websites are stored when uploaded to the WWW - They can describe how to access websites on the WWW Lesson 4 - - They can explain what media can be found on websites - They can recognise that I can add content to the WWW - They can explain that internet services can be used to create content online Lesson 5 - - They can explain that websites and their content are created by people - They can suggest who owns the content on websites - They can explain that there are rules to protect content Lesson 6 - - They can explain that not everything on the World Wide Web is true - They can explain why some information, I find online may not be honest, accurate, or legal - They can explain why I need to think carefully before I share or reshare content	- They can identify tasks that are managed by computer systems - They can identify the human elements of a computer system - They can explain the benefits of a given computer system - They can explain how to keep my personal information safe online Lesson 3: - They can make use of a web search to find specific information - They can refine my web search - They can compare results from different search engines - They can recognise trustworthy websites Lesson 4: - They can explain why we need tools to find things online - They can recognise the role of web crawlers in creating an index - They can relate a search term to the search engine's index Lesson 5: - They can order a list by rank - They can explain that a search engine follows rules to rank results - They can give examples of criteria used by search engines to rank results Lesson 6: - They can describe some of the ways that search results can be influenced - They can recognise some of the limitations of search engines - They can explain how search engines make money	- They can explain that data is transferred over networks in packets - They can explain that all data transferred over the internet is in packets Lesson 3: - They can recognise how to access shared files stored online - They can send information over the internet in different ways - They can explain that the internet allows different media to be shared Lesson 4: - They can identify different ways of working together online - They can recognise that working together on the internet can be public or private - They can explain how the internet enables effective collaboration Lesson 5: - They can explain the different ways in which people communicate - They can identify that there are a variety of ways to communicate over the internet - They can choose methods of communication to suit particular purposes Lesson 6: - They can compare different methods of communicating on the internet - They can decide when I should and should not share information online - They can explain that communication on the internet may not be private - They can explain how to report inappropriate content online
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Autumn 2 - Creating Media

Year 3	Year 4	Year 5	Year 6
Learning Outcome	Learning Outcome	Learning Outcome	Learning Outcome
Lesson 1 - To explain that animation is a sequence of drawings or photographs Lesson 2 - To relate animated movement with a sequence of images Lesson 3 - To plan an animation Lesson 4 - To identify the need to work consistently and carefully Lesson 5 - To review and improve an animation Lesson 6 - To evaluate the impact of adding other media to an animation	Lesson 1 - To identify that sound can be recorded Lesson 2 - To explain that audio recordings can be edited Lesson 3 - To recognise the different parts of creating a podcast project Lesson 4 - To apply audio editing skills independently Lesson 5 - To combine audio to enhance my podcast project Lesson 6 - To evaluate the effective use of audio	Lesson 1 - To explain what makes a video effective Lesson 2 - To use a digital device to record video Lesson 3 - To capture video using a range of techniques Lesson 4 - To create a storyboard Lesson 5 - To identify that video can be improved through reshooting and editing Lesson 6 - To consider the impact of the choices made when making and sharing a video	Lesson 1 - To review an existing website and consider its structure Lesson 2 - To plan the features of a web page Lesson 3 - To consider the ownership and use of images (copyright) Lesson 4 - To recognise the need to preview pages Lesson 5 - To outline the need for a navigation path Lesson 6 - To recognise the implications of linking to content owned by other people
Success Criteria	Success Criteria	Success Criteria	Success Criteria
Lesson 1: - They can draw a sequence of pictures - They can create an effective flip book—style animation - They can explain how an animation/flip book works Lesson 2: - They can predict what an animation will look like - They can explain why little changes are needed for each frame - They can create an effective stop-frame animation Lesson 3:	Lesson 1: - They can identify the input and output devices used to record and play sound - They can use a computer to record audio - They can explain that the person who records the sound can say who is allowed to use it Lesson 2: - They can re-record my voice to improve my recording - They can inspect the soundwave view to know where to trim my recording - They can discuss what sounds can be added to a podcast	Lesson 1: - They can explain that video is a visual media format - They can identify features of videos - They can compare features in different videos - They can know what to do if they see any content online that makes me feel uncomfortable Lesson 2: - They can identify and find features on a digital video recording device - They can experiment with different camera angles - They can make use of a microphone	Lesson 1: - They can explore a website - They can discuss the different types of media used on websites - They can know that websites are written in HTML Lesson 2: - They can recognise the common features of a web page - They can suggest media to include on my page - They can draw a web page layout that suits my purpose Lesson 3:

- They can break down a story into settings, characters and events - They can describe an animation that is achievable on screen - They can create a storyboard Lesson 4: - They can explain ways to make my animation better - They can evaluate another learner's animation - They can improve my animation based on feedback - They can use onion skinning to help me make small changes between frames - They can review a sequence of frames to check my work - They can evaluate the quality of my animation Lesson 5: - They can explain ways to make my animation better - They can evaluate another learner's animation - They can improve my animation based on feedback Lesson 6: - They can add other media to my animation - They can explain why I added other media to my animation - They can evaluate my final film	Lesson 3: - They can explain how sounds can be combined to make a podcast more engaging - They can save my project so the different parts remain editable - They can plan appropriate content for a podcast Lesson 4: - They can record content following my plan - They can review the quality of my recordings - They can improve my voice recordings Lesson 5: - They can open a project to continue working on it - They can arrange multiple sounds to create the effect I want - They can explain the difference between saving a project and exporting an audio file Lesson 6: - They can listen to an audio recording to identify its strengths - They can suggest improvements to an audio recording - They can choose appropriate edits to improve my podcast	Lesson 3: - They can suggest filming techniques for a given purpose - They can capture video using a range of filming techniques - They can review how effective my video is Lesson 4: - They can outline the scenes of my video - They can decide which filming techniques, they will use - They can create and save video content Lesson 5: - They can store, retrieve, and export my recording to a computer - They can explain how to improve a video by reshooting and editing - They can select the correct tools to make edits to my video Lesson 6: - They can make edits to my video and improve the final outcome - They can recognise that my choices when making a video will impact the quality of the final outcome - They can evaluate my video and share my opinions	- They can say why they should use copyright-free images - They can find copyright-free images - They can describe what is meant by the term 'fair use' - They know how to use technology respectfully and responsibly when online- - They can say why they should use copyright-free images Lesson 4: - They can add content to my own web page - They can preview what my web page looks like - They can evaluate what a web page looks like on different devices and suggest/make edits. Lesson 5: - They can explain what a navigation path is - They can describe why navigation paths are useful - They can make multiple web pages and link them using hyperlinks Lesson 6: - They can explain the implication of linking to content owned by others - They can create hyperlinks to link to other people's work - They can evaluate the user experience of a website
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Spring 1 - Programming A

Year 3	Year 4	Year 5	Year 6
Learning Outcomes	Learning Outcomes	Learning Outcomes	Learning Outcomes
Lesson 1 - To explore a new programming environment Lesson 2 - To identify that commands have an outcome Lesson 3 - To explain that a program has a start Lesson 4 - To recognise that a sequence of commands can have an order Lesson 5 - To change the appearance of my project Lesson 6 - To create a project from a task description	Lesson 1 - To identify that accuracy in programming is important Lesson 2 - To create a program in a text-based language Lesson 3 - To explain what 'repeat' means Lesson 4 - To modify a count-controlled loop to produce a given outcome Lesson 5 - To decompose a task into small steps Lesson 6 - To create a program that uses count-controlled loops to produce a given outcome	Lesson 1 - To control a simple circuit connected to a computer Lesson 2 - To write a program that includes count-controlled loops Lesson 3 - To explain that a loop can stop when a condition is met Lesson 4 - To explain that a loop can be used to repeatedly check whether a condition has been met Lesson 5 - To design a physical project that includes selection Lesson 6 - To create a program that controls a physical computing project	Lesson 1 - To define a 'variable' as something that is changeable Lesson 2 - To explain why a variable is used in a program Lesson 3 - To choose how to improve a game by using variables Lesson 4 - To design a project that builds on a given example Lesson 5 - To use my design to create a project Lesson 6 - To evaluate my project
Success Criteria	Success Criteria	Success Criteria	Success Criteria
Lesson 1: - They can identify the objects in a Scratch project (sprites, backdrops) - They can explain that objects in Scratch have attributes (linked to) - They can recognise that commands in Scratch are represented as blocks Lesson 2: - They can create a program following a design and understand that each sprite is controlled by the commands they choose - They can predict the coding blocks used to move a sprite	Lesson 1: - They can program a computer by typing commands - They can explain the effect of changing a value of a command - They can create a code snippet for a given purpose Lesson 2: - They can use a template to draw what I want my program to do - They can write an algorithm to produce a given outcome - They can test my algorithm in a text-based language Lesson 3:	Lesson 1: - They can create a simple circuit and connect it to a microcontroller - They can program a microcontroller to make an LED switch on - They can explain what an infinite loop does Lesson 2: - They can connect more than one output component to a microcontroller - They can use a count-controlled loop to control outputs - They can design sequences that use count-controlled loops Lesson 3:	Lesson 1: - They can identify examples of information that is variable - They can explain that the way a variable changes can be defined - They can identify that variables can hold numbers or letters Lesson 2: - They can identify a program variable as a placeholder in memory for a single value - They can explain that a variable has a name and a value - They can recognise that the value of a variable can be changed

- They can match coding blocks to their actions Lesson 3: - They can start a program in different ways - They can create a sequence of connected commands - They can explain that the objects in my project will respond exactly to the code Lesson 4: - They can explain what a sequence is - They can combine sound commands - They can order notes into a sequence Lesson 5: - They can build a sequence of commands - They can decide the actions for each sprite in a program - They can make design choices for my artwork Lesson 6: - They can identify and name the objects I will need for a project - They can relate a task description to a design - They can implement my algorithm as code	- They can identify repetition in everyday tasks - They can identify patterns in a sequence - They can use a count-controlled loop to produce a given outcome Lesson 4: - They can identify the effect of changing the number of times a task is repeated - They can predict the outcome of a program containing a count-controlled loop - They can choose which values to change in a loop Lesson 5: - They can identify 'chunks' of actions in the real world - They can use a procedure in a program - They can explain that a computer can repeatedly call a procedure Lesson 6: - They can design a program that includes count-controlled loops - They can make use of a design to write a program - They can develop a program by debugging it	- They can explain that a condition is either true or false - They can design a conditional loop - They can program a microcontroller to respond to an input Lesson 4: - They can explain that a condition being met can start an action - They can identify a condition and an action in my project - They can use selection (an 'if...then...' statement) to direct the flow of a program Lesson 5: - They can identify a real-world example of a condition starting an action - They can describe what a project will do - They can create a detailed drawing of a project Lesson 6: - They can write an algorithm that describes what a model will do - They can use selection to produce an intended outcome - They can test and debug a project	Lesson 3: - They can decide where in a program to change a variable - They can make use of an event in a program to set a variable - They can recognise that the value of a variable can be used by a program Lesson 4: - They can choose the artwork for their project - They can create algorithms for their project - They can explain their design choices Lesson 5: - They can create the artwork for their project - They can choose a name that identifies the role of a variable - They can test the code that they have written Lesson 6: - They can identify ways that their game could be improved - They can use variables to extend their game - They can share their game with others
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Spring 2 - Data and Information

Year 3	Year 4	Year 5	Year 6
Learning outcome	Learning outcome	Learning outcome	Learning outcome
Lesson 1 - To create questions with yes/no answers Lesson 2 - To identify the attributes needed to collect data about an object Lesson 3 - To create a branching database Lesson 4 - To explain why it is helpful for a database to be well structured Lesson 5 - To plan the structure of a branching database Lesson 6 - To independently create an identification tool	Lesson 1 - To explain that data gathered over time can be used to answer questions Lesson 2 - To use a digital device to collect data automatically Lesson 3 - To explain that a data logger collects 'data points' from sensors over time Lesson 4 - To recognise how a computer can help us analyse data Lesson 5 - To identify the data needed to answer questions Lesson 6 - To use data from sensors to answer questions	Lesson 1 - To use a form to record information Lesson 2 - To compare paper and computer-based databases Lesson 3 - To outline how you can answer questions by grouping and then sorting data Lesson 4 - To explain that tools can be used to select specific data Lesson 5 - To explain that computer programs can be used to compare data visually Lesson 6 - To use a real-world database to answer questions	Lesson 1 - To create a data set in a spreadsheet Lesson 2 - To build a data set in a spreadsheet Lesson 3 - To explain that formulas can be used to produce calculated data Lesson 4 - To apply formulas to data Lesson 5 - To create a spreadsheet to plan an event Lesson 6 - To choose suitable ways to present data
Success Criteria	Success Criteria	Success Criteria	Success Criteria
Lesson 1: - They can investigate questions with yes/no answers - They can make up a yes/no question about a collection of objects - They can create two groups of objects separated by one attribute Lesson 2: - They can select an attribute to separate objects into groups - They can create a group of objects within an existing group - They can arrange objects into a tree structure	Lesson 1: - They can choose a data set to answer a given question - They can suggest questions that can be answered using a given data set - They can identify data that can be gathered over time Lesson 2: - They can explain what data can be collected using sensors - They can use data from a sensor to answer a given question - They can identify that data from sensors can be recorded	Lesson 1: - They can create a database using cards - They can explain how information can be recorded - They can order, sort, and group their data cards Lesson 2: - They can explain what a field and a record is in a database - They can navigate a flat-file database to compare different views of information - They can choose which field to sort data by to answer a given question Lesson 3:	Lesson 1: - They can collect data - They can suggest how to structure my data - They can enter data into a spreadsheet Lesson 2: - They can explain what an item of data is - They can choose an appropriate format for a cell - They can apply an appropriate format to a cell Lesson 3:

Lesson 3: - They can select objects to arrange in a branching database - They can group objects using my own yes/no questions - They can test my branching database to see if it works Lesson 4: - They can create yes/no questions using given attributes - They can compare two branching database structures - They can explain that questions need to be ordered carefully to split objects into similarly sized groups Lesson 5: - They can independently create questions to use in a branching database - They can create questions that will enable objects to be uniquely identified - They can create a physical version of a branching database Lesson 6: - They can create a branching database that reflects my plan - They can work with a partner to test my identification tool - They can suggest real-world uses for branching databases	Lesson 3: - They can recognise that a data logger collects data at given points - They can identify the intervals used to collect data - They can talk about the data that I have captured Lesson 4: - They can view data at different levels of detail - They can sort data to find information - They can explain that there are different ways to view data Lesson 5: - They can propose a question that can be answered using logged data - They can plan how to collect data using a data logger - They can use a data logger to collect data Lesson 6: - They can interpret data that has been collected using a data logger - They can draw conclusions from the data that I have collected - They can explain the benefits of using a data logger	- They can explain that data can be grouped using chosen values - They can group information using a database - They can combine grouping and sorting to answer specific questions Lesson 4: - They can choose which field and value are required to answer a given question - They can outline how 'AND' and 'OR' can be used to refine data selection - They can choose multiple criteria to answer a given question Lesson 5: - They can select an appropriate chart to visually compare data - They can refine a chart by selecting a particular filter - They can explain the benefits of using a computer to create charts Lesson 6: - They can ask questions that will need more than one field to answer - They can refine a search in a real-world context - They can present their findings to a group	- They can explain which data types can be used in calculations - They can construct a formula in a spreadsheet - They can identify that changing inputs changes outputs Lesson 4: - They can calculate data using different operations - They can create a formula which includes a range of cells - They can apply a formula to multiple cells by duplicating it Lesson 5: - They can use a spreadsheet to answer questions - They can explain why data should be organised - They can apply a formula to calculate the data I need to answer questions Lesson 6: - They can produce a chart - They can use a chart to show the answer to a question - They can suggest when to use a table or chart
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Summer 1 - Creating Media

Year 3	Year 4	Year 5	Year 6
Learning Outcome	Learning Outcome	Learning Outcome	Learning Outcome
Lesson 1 - To recognise how text and images convey information Lesson 2 - To recognise that text and layout can be edited Lesson 3 - To choose appropriate page setting Lesson 4 - To add content to a desktop publishing publication Lesson 5 - To consider how different layouts can suit different purposes Lesson 6 - To consider the benefits of desktop publishing	Lesson 1 - To explain that the composition of digital images can be changed Lesson 2 - To explain that colours can be changed in digital images Lesson 3 - To explain how cloning can be used in photo editing Lesson 4 - To explain that images can be combined Lesson 5 - To combine images for a purpose Lesson 6 - To evaluate how changes can improve an image	Lesson 1 - To identify that drawing tools can be used to produce different outcomes Lesson 2 - To create a vector drawing by combining shapes Lesson 3 - To use tools to achieve a desired effect Lesson 4 - To recognise that vector drawings consist of layers Lesson 5 - To group objects to make them easier to work with Lesson 6 - To apply what I have learned about vector drawings	Lesson 1 - To recognise that you can work in three dimensions on a computer Lesson 2 - To identify that digital 3D objects can be modified Lesson 3 - To recognise that objects can be combined in a 3D model Lesson 4 - To create a 3D model for a given purpose Lesson 5 - To plan my own 3D model Lesson 6 - To create my own digital 3D model
Success Criteria	Success Criteria	Success Criteria	Success Criteria
Lesson 1: - They can explain the difference between text and images - They can recognise that text and images can communicate messages clearly - They can identify the advantages and disadvantages of using text and images - They can understand how to use emojis respectfully online Lesson 2: - They can change font style, size, and colours for a given purpose - They can edit text - They can explain that text can be changed to communicate more clearly Lesson 3:	Lesson 1: - They can improve an image by rotating it - They can explain why I might crop an image - They can use photo editing software to crop an image - They understand that editing images can be unethical Lesson 2: - They can explain that different colour effects make you think and feel different things - They can experiment with different colour effects - They can explain why I chose certain colour effects	Lesson 1: - They can recognise that vector drawings are made using shapes - They can experiment with the shape and line tools - They can discuss how vector drawings are different from paper-based drawings Lesson 2: - They can identify the shapes used to make a vector drawing - They can explain that each element added to a vector drawing is an object - They can move, resize, and rotate objects I have duplicated Lesson 3:	Lesson 1: - They can add 3D shapes to a project - They can view 3D shapes from different perspectives - They can move 3D shapes relative to one another Lesson 2: - They can resize an object in three dimensions - They can lift/lower 3D objects - They can recolour a 3D object Lesson 3: - They can rotate objects in three dimensions - They can duplicate 3D objects - They can group 3D objects Lesson 4:

- They can explain what 'page orientation' means - They can recognise placeholders and say why they are important - They can create a template for a particular purpose Lesson 4: - They can choose the best locations for my content - They can paste text and images to create a magazine cover - They can make changes to content after I've added it Lesson 5: - They can identify different layouts - They can match a layout to a purpose - They can choose a suitable layout for a given purpose Lesson 6: - They can identify the uses of desktop publishing in the real world - They can say why desktop publishing might be helpful - They can compare work made on desktop publishing to work created by hand	Lesson 3: - They can add to the composition of an image by cloning - They can identify how a photo edit can be improved - They can remove parts of an image using cloning Lesson 4: - They can experiment with tools to select and copy part of an image - They can use a range of tools to copy between images - They can explain why photos might be edited Lesson 5: - They can describe the image I want to create - They can choose suitable images for my project - They can create a project that is a combination of other images Lesson 6: - They can review images against a given criteria - They can use feedback to guide making changes - They can combine text and my image to complete the project	- They can use the zoom tool to help me add detail to my drawings - They can explain how alignment grids and resize handles can be used to improve consistency - They can modify objects to create a new image Lesson 4: - They can identify that each added object creates a new layer in the drawing - They can change the order of layers in a vector drawing - They can use layering to create an image Lesson 5: - They can copy part of a drawing by duplicating several objects - They can recognise when I need to group and ungroup objects - They can reuse a group of objects to further develop my vector drawing Lesson 6: - They can create a vector drawing for a specific purpose - They can reflect on the skills I have used and why I have used them - They can compare vector drawings to freehand paint drawings	- They can accurately size 3D objects - They can show that placeholders can create holes in 3D objects - They can combine a number of 3D objects Lesson 5: - They can analyse a 3D model - They can choose objects to use in a 3D model - They can combine objects in a design Lesson 6: - They can construct a 3D model based on a design - They can explain how my 3D model could be improved - They can modify my 3D model to improve it
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Summer 2 - Programming B

Year 3	Year 4	Year 5	Year 6
Learning Outcome	Learning Outcome	Learning Outcome	Learning Outcome
Lesson 1 - To explain how a sprite moves in an existing project Lesson 2 - To create a program to move a sprite in four directions Lesson 3 - To adapt a program to a new context Lesson 4 - To develop my program by adding features Lesson 5 - To identify and fix bugs in a program Lesson 6 - To design and create a maze-based challenge	Lesson 1 - To develop the use of count-controlled loops in a different programming environment Lesson 2 - To explain that in programming there are infinite loops and count-controlled loops Lesson 3 - To develop a design that includes two or more loops which run at the same time Lesson 4 - To modify an infinite loop in a given program Lesson 5 - To design a project that includes repetition Lesson 6 - To create a project that includes repetition	Lesson 1 - To explain how selection is used in computer programs Lesson 2 - To relate that a conditional statement connects a condition to an outcome Lesson 3 - To explain how selection directs the flow of a program Lesson 4 - To design a program that uses selection Lesson 5 - To create a program that uses selection Lesson 6 - To evaluate my program	Lesson 1 - To create a program to run on a controllable device Lesson 2 - To explain that selection can control the flow of a program Lesson 3 - To update a variable with a user input Lesson 4 - To use an conditional statement to compare a variable to a value Lesson 5 - To design a project that uses inputs and outputs on a controllable device Lesson 6 - To develop a program to use inputs and outputs on a controllable device
Success Criteria	Success Criteria	Success Criteria	Success Criteria
Lesson 1: - They can explain the relationship between an event and an action - They can choose which keys to use for actions and explain my choices - They can identify a way to improve a program Lesson 2: - They can choose a character for my project - They can choose a suitable size for a character in a maze - They can program movement Lesson 3:	Lesson 1: - They can list an everyday task as a set of instructions including repetition - They can predict the outcome of a snippet of code - They can modify a snippet of code to create a given outcome Lesson 2: - They can modify loops to produce a given outcome - They can choose when to use a count-controlled and an infinite loop	Lesson 1: - They can recall how conditions are used in selection - They can identify conditions in a program - They can modify a condition in a program Lesson 2: - They can use selection in an infinite loop to check a condition - They can identify the condition and outcomes in an 'if... then... else...' statement	Lesson 1: - They can apply my knowledge of programming to a new environment - They can test my program on an emulator - They can transfer my program to a controllable device Lesson 2: - They can identify examples of conditions in the real world - They can use a variable in an if, then, else statement to select the flow of a program

- They can use a programming extension - They can consider the real world when making design choices - They can choose blocks to set up my program. Lesson 4: - They can identify additional features (from a given set of blocks) - They can choose suitable keys to turn on additional features - They can build more sequences of commands to make my design work Lesson 5: - They can test a program against a given design - They can match a piece of code to an outcome - They can modify a program using a design Lesson 6: - They can make design choices and justify them - They can implement my design - They can evaluate my project	- They can recognise that some programming languages enable more than one process to be run at once Lesson 3: - They can choose which action will be repeated for each object - They can explain what the outcome of the repeated action should be - They can evaluate the effectiveness of the repeated sequences used in my program Lesson 4: - They can identify which parts of a loop can be changed - They can explain the effect of my changes - They can re-use existing code snippets on new sprites Lesson 5: - They can evaluate the use of repetition in a project - They can select key parts of a given project to use in my own design - They can develop my own design explaining what my project will do Lesson 6: - They can refine the algorithm in my design - They can build a program that follows my design - They can evaluate the steps I followed when building my project	- They can create a program that uses selection to produce different outcomes Lesson 3: - They can explain that program flow can branch according to a condition - They can design the flow of a program that contains 'if... then... else...' - They can show that a condition can direct program flow in one of two ways Lesson 4: - They can outline a given task - They can use a design format to outline my project - They can identify the outcome of user input in an algorithm Lesson 5: - They can implement my algorithm to create the first section of my program - They can test my program - They can share my program with others Lesson 6: - They can identify ways the program could be improved - They can identify the setup code I need in my program - They can extend my program further	- They can determine the flow of a program using selection Lesson 3: - They can use a condition to change a variable - They can experiment with different physical inputs - They can explain that checking a variable doesn't change its value Lesson 4: - They can use an operand (e.g. <=>) in an if, then statement - They can explain the importance of the order of conditions in else, if statements - They can modify a program to achieve a different outcome Lesson 5: - They can decide what variables to include in a project - They can design the algorithm for my project - They can design the program flow for my project Lesson 6: - They can create a program based on my design - They can test my program against my design - They can use a range of approaches to find and fix bugs
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Computing National Curriculum Coverage Years 1-6

Area of curriculum	KS1	LKS2	UKS2
Computing systems and networks	Recognise common uses of information technology beyond school.	Understand computer networks including the internet. How they can provide multiple services, such as the world wide web and the opportunities they offer for communication and collaboration. Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programmes, systems and content that accomplish given goals, including collecting, analysing evaluating and presenting data and information.	Understand computer networks including the internet. How they can provide multiple services, such as the world wide web and the opportunities they offer for communication and collaboration. Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programmes, systems and content that accomplish given goals, including collecting, analysing evaluating and presenting data and information.
Programming	Understand what algorithms are, how they are implemented as programmes on digital devices and that programmes execute by following precise and unambiguous instructions.	Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programmes.	Design, write and debug programmes that accomplish specific goals, including controlling or simulating physical systems, solve problems by decomposing them into smaller parts.

	Create and debug simple programmes. Use logical reasoning to predict the behaviour of simple programmes.	Use sequence, selection and repetition in programmes. Work with variables and various forms of input and output.	Use logical reasoning to explain how some simple algorithms work to detect and correct errors in algorithms and programmes.
Creating Media	Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	Design, write and debug programmes that accomplish specific goals, including controlling or simulating physical systems, solve problems by decomposing them into smaller parts.	Use sequence, selection and repetition in programmes, work with variables and various forms of input and output.
Data Handling	Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	Use search technologies effectively, appreciate how results are selected and ranked and be discerning in evaluating digital content.	Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.
Online Safety	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.	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.	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.

Computing Skills and Knowledge

Y1 - Y6

Computing Systems and Networks	KS1	LKS2	UKS2
Knowledge	To know that buttons are a form of input that give a computer an instruction about what to do (output). To know the difference between a desktop and laptop computer. To know that when we create something on a computer it can be more easily saved and shared than a paper version. To know the different parts of a computer.	To know the roles that inputs and outputs play on computers. To know what a tablet is and how it is different from a laptop/desktop computer. To understand the basic concept of a network (both wired and wireless), and how the internet uses networks to share files (inc. the role of packets and how they are transferred). To know what the different components of a computer do and how they work together	To know the roles that more complex inputs and outputs play on computers. To understand what data packets are and why it is important for website data transfer. To know that external devices can be programmed by a separate computer. To know that computer networks provide multiple services and opportunity for communication and collaboration.

Skills	To debug instructions when things go wrong, including in unplugged activities. To create a clear, precise algorithm. To use logical thinking to predict the behaviour of simple programmes.	To develop a more systematic approach to debugging code. To create algorithms for a specific purpose and coding a simple game independently. Using logical thinking to explore more software predicting, testing and explaining what it does. To use decomposition to solve a problem by finding out what code was used. Incorporating variables to make code more efficient. Using abstraction and pattern recognition to modify code.	To debug quickly and effectively to make a program more efficient. To write increasingly complex code to create a desired effect, developing their programming as they work. Evaluating code to understand its purpose and adapting it to a chosen purpose. Decompose a program into an algorithm. Using a range of programming commands, including repetition.
Creating Media Knowledge	To know how to operate a camera correctly (considering angles and light) or tablet to take good photos and videos. To know that you can edit, crop and filter photographs.	To know that different types of camera shots can make my photos or videos look more effective. To know that I can edit photos and videos using film editing software, including the addition of transitions and text.	To understand that stop motion animation is an animation filmed on frame at a time using models, with tiny changes between each photograph. To know that editing is an important feature of making and improving a stop motion animation.
Skills	Use a basic range of tools within graphic editing software. Creating and labelling images.	Using software to edit and enhance images and videos (adding music, sounds and text on screen with transitions). Using online software to create a website.	Identify ways to improve and edit programs, videos and images and using video editing software to animate. Use AI to create presentations.

	To understand that not everything I see or read is true. To know that passwords are important for security.	To know what social media is and that age restrictions apply. Understanding why some results come before others when searching. To understand the importance of having a secure password. To know possible dangers online and to stay safe and use an online community safely.	Developing searching skills to help find relevant information on the internet and showing an understanding of how search engines work. To understand the importance of using different passwords for different online services, and to know some effective strategies for managing those passwords. To know the positive and negative impacts of sharing online.
Skills	Logging in and out and saving work on their own account. To explain how actions on the internet can affect others. To recognise that people you do not know on the internet are strangers and are not always who they say they are.	Learning how to create a strong password. To identify respectful and disrespectful online behaviour. To reflect on the positives and negatives of time spent online.	Understanding the importance of secure passwords and how to create them. To explain what to do if they experience bullying online. Evaluating the pros and cons of online communication.

