TEAM Curriculum Development

Bridging document EYFS, KS1 & KS2 – Model Village Primary School

Core Curriculum Strands

Strand 1: Online Education (Safety)
Strand 2: Creating Media
Strand 3: Computers & Networking
Strand 4: Data & Information
Strand 5: Computational Thinking & Programming

Feedback

In class feedback	Formative feedback	Summative feedback
In class feedback takes place every lesson to shape the learning of students and the journey the teacher takes This feedback includes: • Self-assessment of retrieval practice (sticky knowledge) • AFL and HPQs • White boards • Circulating • Questioning • Talking partners • Self-assessment of their progress in lessons (thumbs up, middle, down) against the learning outcomes This will be seen in lessons and in students work booklets	During a strand whole class feedback will be given using the feedback stickers. This will be completed at least once a term so students can assess how they are performing against set criteria Purple pen activities will be used throughout the work that is completed for each of the strands so the student gets the opportunity to get that instant feedback during the lesson	Centralised tracking used to generate a picture of how a student is progressing on each strand. This will be recorded as Entering (E), Developing (D) or Secure (S) in relation to the learning intentions. This data can then be used to support interventions for the student or as the tracking system identifies how students have performed in each concept as a percentage it can inform whether changes to planning need to happen or a particular concept needs revisiting

Strand Mapping

Designed as a spiral curriculum with the following key principles in mind:

- **Cyclical:** Pupils revisit the five key Strands throughout EYFS, KS1 and KS2
- **Increasing depth:** Each time a key Strand is revisited, it is covered with greater complexity
- **Prior knowledge:** Upon returning to each key Strand, prior knowledge is utilised so pupils can build on previous foundations, rather than starting again

The table below maps out where the core Strands are developed across the curriculum – using the colour coding from the core curriculum strands above

Year	Autumn 1		Autumn 2		Spring			Summer	
EYFS	Using a computer	Staying safe on the internet	Introduction to data		Using hardware to create media	Digital wellbeing		All about instructions	
1	Technology all around us	1. Using the internet safely	Grouping data	2. Online emotions	Digital painting	3. Always be kind and considerate		Moving a robot	4. Posting and sharing online
2	IT around us	1. What happens when I post online	Pictograms	2. How do I keep my things safe online?	Digital photography	3. Who should I ask?	4. It's my choice	Robot algorithms	5. Is it true?
3	Connecting computers	1. Beliefs, opinions and facts	Branching databases	2. When being online makes me upset	Stop-frame animation	3. Sharing of information		Sequencing sound	4. Rules of social media platforms

		on the internet								
4	The Internet	1. What happens when I search online	Investigating weather	2. How do companies encourage us to buy online	Photo editing	3. Fact, opinion or belief?	4. What is a bot?	Repetition in games	5. What is my #TechTimetable like?	
5	Systems & searching	1. Online protection	Flat-file databases	2. Online communication	Vector graphics	3. Online reputation	4. Online bullying	Selection in quizzes	5. Online heath	
6	Communication & collaboration	1. Life online	Introduction to spreadsheets	2. Sharing online	3D modelling	3. Creating a positive online reputation	4. Capturing evidence	Sensing Movement – Micro:bit	5. Password protection	6. Think before you click

Medium Term Planning (all Years)

EYFS

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Scheme of Learning Title	Using a computer	Introduction to data	Using hardware to create media		All about instructions	
Lessons	• Keyboards • Logging in and out • Mouse control clicking • Mouse control dragging and dropping **(4 lessons)**	• Loose parts play • Sorting ourselves • Yes or no • Creating a branching database • Exploring pictograms **(5 lessons)**	• Exploring hardware tinker tray • Pictures of play • Picture walk • Class photo album **(4 lessons)**		• Following instructions • Giving instructions • Dressing up instructions • Debugging instructions (washing hands) • Predictions **(5 lessons)**	
Knowledge & Skills (end points)	• To learn what a keyboard is and how to locate relevant keys • To understand why we need to log in and out • To learn what a mouse is and to develop basic mouse skills (clicking) • To learn what a mouse is and to develop basic mouse skills (moving and dropping)	• To understand how to sort and categorise objects • To explain how items have been sorted and categorised • To learn to answer yes or no questions • To explore and understand the concept of branch databases • To understand how to represent and read simple pictograms	• To learn how to explore and tinker with hardware to develop familiarity and introduce relevant vocabulary • To learn how to operate a camera and/or iPad and use it to take photographs within the classroom • To learn how to operate a camera and/or iPad and use it to take photographs when out and about • To learn how to operate a camera and/or iPad and use it to take photograph of themselves		• To follow instructions as part of practical activity • To learn to give simple instructions • To follow more complex instructions as part of practical activity • To learn that an algorithm is a set of instructions to carry out a task, in a specific order • To learn how to explore and tinker with hardware to develop familiarity and introduce relevant vocabulary	
Key Vocabulary	Computer, Keyboard, Locate, Log in/out, Username, Password, Mouse, Clicking, Cursor, Moving, Dropping, Control	Objects, Sort, Categorise, Group, Problems, Together, Question, Respond, Data, Branch database, Create, Answer, Pictogram, Recognise, Produce	Hardware, Explore, Tinker, Photograph, Camera, Operate, Careful, Correctly, More than, Safely, Flip, Selfie		Instruction, respond, simple, relevant, listen, follow, two-part, joining, complex, algorithm, debug, specific, predict, outcome, sequence	
Framework links (Early Learning	Literacy – Writing ELG 3b Mathematics – Number ELG 1a	C & L – Speaking ELG 2a, 2b Listening, attention and understanding ELG: 1a, 1b	C & L – Listening, attention and understanding ELG 1a, 1b		C & L – Listening, attention and understanding ELG 1a. Speaking 2a, 2b, 2c	

Goals (ELG) and Birth to 5.	Physical development – Fine motor skills ELG 2b Range 2-6 – Technology	Mathematics – Numerical patterns ELG 2a, 2b, 2c Learning DM – Playing and exploring 1a, Active learning 2a, Creating and thinking critically 3a Range 2-6 – Technology	Physical development – Fine motor skills ELG 2b Understanding the world – Past and present ELG 1a Personal, Social and Emotional Development – Self-regulation 1a Literacy – Writing ELG 3b, 3c Range 2-6 – Technology	Personal, Social and Emotional Development – Self-regulation 1c. Managing self ELG 2a, 2c Building relationships 3a Range 2-6 – Technology
Sequenced To	Y1 – Technology all around us (strand sequence) EYFS – Introduction to data (unit sequence)	Y1 – Grouping data (strand sequence) EYFS – Using hardware to create media (unit sequence)	Y1 – Digital Painting (strand sequence) EYFS – All about instructions (unit sequence)	Y1 – Moving a robot (strand sequence) Y1 – Technology all around us (unit sequence)

Online Safety:

Lessons

- Staying safe on the internet
- Digital wellbeing

Knowledge & Skills (end points)

- To learn to identify some examples of personal information
- To learn about rules that keep me safe online
- To learn how some people can be unkind online

Key Vocabulary

Personal, Information, Online, Rules, Wellbeing, Safe, Comments, Cyberbullying,

Framework link

- Personal, Social and Emotional Development – Self-regulation ELG 1a, Managing self ELG 2b,
- Understanding the World – Past and Present ELG 1a
- C & L – Listening, attention and understanding ELG 1a, Speaking ELG 2a, 2b, 2c
- Understanding the World – Technology - Range 2-6.

Year 1

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Scheme of Learning Title	Technology all around us	Grouping Data	Digital Painting		Moving a robot	
Lessons	• Using technology • Developing mouse skills • Using a computer keyboard • Developing keyboard skills **(4 lessons)**	• Label and match • Group and count • Describe an object • Comparing groups and answering questions **(4 lessons)**	• How can we paint using computers? • Using shapes and lines • Making careful choices – why did I choose that? • Painting all by myself ***(contains AI reference – pointillism and AI)*** • Comparing computer art and painting **(5 lessons)**		• Buttons and Directions • Forwards and backwards • Four directions • Getting there • Routes **(5 lessons)**	
Knowledge & Skills (end points)	• To identify a computer and its main parts • To use a mouse in different ways • To use a keyboard to type on a computer • To use a keyboard to edit text	• To label objects • To identify that objects can be counted • To describe objects in different ways • To compare groups of objects and use them to answer questions	• To describe what different freehand tools do • To use the shape tool and the line tools • To make careful choices when painting a digital picture and explain why I have used specific tools • To use a computer on my own to paint a picture • To compare painting a picture on a computer and on paper		• To explain what a given command will do • To combine forwards and backwards commands to make a sequence • To combine four direction commands to make sequences • To plan a simple program • To find more than one solution to a program	
Key Vocabulary	Technology, Mouse, Screen, Drag, Trackpad, Brush, Keyboard, Save, File, Cursor, Open, Arrow keys	Label, Objects, Match, Group, Count, Sort, Properties, Similar, Arranged, Comparing, Record, Describe	Paint tool, freehand, Save, Shape, Square, Recreate, Pattern, Colours, Different, Change, Brush size, Style, Pointillism, Focus, Paper		Instruction, Command, Direction, Forwards, Backwards, Sequence, Left, Right, Predict, Program, Algorithm, Debug, Solution, Plan, Route	
NC Links	KS1 - d) KS1 - e) KS1 - f)	KS1 - d) KS1 - e)	KS1 - d) KS1 - e) KS1 - f)		KS1 - a) KS1 - b) KS1 - c)	
Sequenced From	EYFS – Using a computer (strand sequence)	EYFS – Introduction to data (strand sequence)	EYFS – Using hardware to create media (strand sequence)		EYFS – All about instructions (strand sequence)	

Sequenced To	Y2 - IT around Us (strand sequence)	Y2 – Pictograms (strand sequence)	Y2 – Digital Photography (strand sequence)	Y2 – Robot algorithms (strand sequence)

Online Safety:

Lessons

- 1.Using the internet safely
- 2.Online emotions
- 3.Always be kind and considerate
- 4.Posting and sharing online

Knowledge & Skills (end points)

- To know what the internet is and how to use it safely
- To understand different feelings when using the internet
- To understand how to treat others, both online and in-person
- To understand the importance of being careful about what we post and share online

Key Vocabulary

Communicate, Connect, Devices, Digital footprint, Emotion, Feelings, Instructions, Internet, Online, Respect, Sharing, Strangers, Trust

NC link

- e) Recognise common uses of information technology beyond school
- f) 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

Year 2

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Scheme of Learning Title	IT around us	Pictograms	Digital Photography		Robot algorithms	
Lessons	• What is IT? • IT in school and the wider community • The benefits of IT • Using IT in different ways **(4 lessons)**	• Counting and comparing • Creating pictograms (include enter the data) • What is an attribute? • Comparing people and presenting information **(4 lessons)**	• Taking photographs – Landscape or portrait? • What makes a good photograph • Lighting • Effects • Is it real? ***(contains AI reference – generated images*** **(5 lessons)**		• Following instructions and ordering sequences • Making predictions • Mats and routes • Algorithm design • Debugging **(5 lessons)**	
Knowledge & Skills (end points)	• To recognise the uses and features of information technology • To identify information technology in school and beyond • To explain how information technology helps us • To recognise that choices are made when using information technology	• To recognise that we can count and compare objects using tally charts • To recognise that objects can be represented as pictures to create a pictogram • To select objects by attribute and make comparisons • To recognise that people can be described by attributes	• To use a digital device to take a photograph and make choices when taking a photograph • To describe what makes a good photograph • To decide how photographs can be improved • To use tools to change an image • To recognise that photos can be changed		• To explain what happens when we change the order of instructions • To use logical reasoning to predict the outcome of a program • To explain that programming projects can have code and artwork • To design an algorithm • To create and debug a program that I have written	
Key Vocabulary	Feature, Use, Information Technology, Sorting, Computer, Places, Devices, Benefit, Barcodes, Digital, Mindful, Connect	Tally chart, Counting, Match, Pictogram, Collecting, Data, Attribute, Create, Grouping, Compare, Conclusion, Describe	Capture, Landscape, Portrait, Positioning, Framing, Subject, Effect, Source, Lighting, Filter, Edit, Combine, Format, Photography, Apply		Instructions, Commands, Sequences, Algorithm, Prediction, Outcome, Code, Artwork, Routes, Goal, Program, Create, Debug, Test, Mistake	
NC Links	KS1 - a) KS1 - e)	KS1 - a) KS1 - d)	KS1 - d) KS1 - e)		KS1 - a) KS1 - b)	

				KS1 - c)
Sequenced From	Y1 – Technology all around us (strand sequence)	Y1 – Grouping data (strand sequence)	Y1 – Digital painting (strand sequence)	Y1 – Moving a robot (strand sequence)
Sequenced To	Y3 – Connecting computers (strand sequence)	Y3 – Branching databases (strand sequence)	Y3 – Stop-frame animation (strand sequence)	Y3 – Sequencing sound (strand sequence)

Online Safety:

Lessons

- What happens when I post online
- How do I keep my things safe online
- Who should I ask?
- It's my choice
- IS it true?

Knowledge & Skills (end points)

- To know what happens to information posted online
- To know how to keep things safe and private online
- To explain what should be done before sharing information online
- To explain why I have the right to say no and deny permission
- To learn strategies that will help me decide if something I see online is true or not

Key Vocabulary

Accept, Comment, Consent, Content, Deny, Emojis, Offline, Online, Password, Permission, Personal information, Pop-ups, Pressure, Reliable, Share, Trusted adult

NC Links

- d) Use technology purposefully to create, organise, store, manipulate and retrieve digital content
- e) Recognise common uses of information technology beyond school
- f) 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

Year 3

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Scheme of Learning Title	Connecting computers	Branching databases	Stop-frame animation		Sequencing sound	
Lessons	• How does a digital device work? • How do digital devices help us • How am I connected • How are computers connected including our school **(4 lessons)**	• Yes or no questions • Making groups • Creating and structuring a branching database • Creating an identification tool **(4 lessons)**	• Can a picture move? • Frame by frame • What's the story? • Picture perfect • Evaluate and make it great! **(5 lessons)**		• Introduction to Scratch • Programming sprites • Sequencing and ordering commands • Looking good • Making an instrument **(5 lessons)**	
Knowledge & Skills (end points)	• To explain how digital devices function • To recognise how digital devices can change the way that we work • To explain how a computer network can be used to share information • To explain how digital devices can be connected	• To create questions with yes/no answers • To identify the attributes needed to collect data about an object • To create a well-structured branching database • To plan the structure of a branching database and create an identification tool	• To explain that animation is a sequence of drawings or photographs • To relate animated movement with a sequence of images • To plan an animation • To identify the need to work consistently and carefully • To review and improve an animation		• To explore a new programming environment • To identify that commands have an outcome • To recognise that a sequence of commands can have an order • To change the appearance of my project • To create a project from a task description	
Key Vocabulary	Input, Process, Output, Digital devices, Similarities, Differences, Connection, Computer Network, Network Switch, Server, Wireless Access Point (WAP), Desktop Computer	Open-ended, Group, Object, Attribute, Organising, Structure, Branching Database, Creating, Testing, Uniquely, Plan, Reflect	Sequence, Animation, Effective, Stop-frame, Predict, Movement, Storyboard, Plan, Prepare Onion Skinning, Quality, Frames, Evaluate, Improve, Feedback		Sprite, Backdrop, Attributes, Controlled, Action, Plan, Sequence, Event, Code, Commands, Program, Artwork, Algorithm, Costume, Debug	
NC Links	KS2 - a) KS2 - c) KS2 - d)	KS2 - f)	KS2 - f) KS2 - g)		KS2 - a) KS2 - b) KS2 - c)	

Sequenced From	Y2 – IT around us (strand sequence)	Y2 – Pictograms (strand sequence)	Y2 – Digital photography (strand sequence)	Y2 – Robot algorithms (strand sequence)
Sequenced To	Y4 – The internet (strand sequence)	Y4 – Data logging (strand sequence)	Y4 – Photo editing (strand sequence)	Y4 – Repetition in games (strand sequence)

Online Safety:

Lessons

- Beliefs, opinions and facts on the internet
- When being online makes me upset
- Sharing of information
- Rules of social media platforms

Knowledge & Skills (end points)

- To understand how the internet can be used to share beliefs, opinions and facts
- To understand that the internet can affect your moods and feelings
- To understand the ways personal information can be shared on the internet
- To understand the rules for social media platforms

Key Vocabulary

Accurate, Age restricted, Autocomplete, Beliefs, Block, Content, Digital devices, Fact, Fake news, Internet, Opinion, Password, Persuasive, Privacy settings, Reliable, Report, Requests, Search engine, Sharing, Social media platforms, Social networking, Wellbeing

NC links

- d) 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
- e) Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- g) Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

Year 4

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Scheme of Learning Title	The internet	Investigating weather	Photo editing		Repetition in games	
Lessons	• Connecting Networks • What is the internet made of • Sharing information • What is a website and who owns the web ***(contains AI reference – AI generated image)*** **(4 lessons)**	• What is the weather • Weather stations • Extreme weather ***(contains AI use)*** • Present a weather forecast ***(contains greenscreen use*** **(4 lessons)**	• Changing digital images (composition) • Changing images for different uses • Fake images ***(contains AI use – showing how AI generates fake images)*** • Making a publication • Evaluating a publication 2 **(5 lessons)**		• Using loops to create shapes • Different loops in Scratch • Modifying a game • Designing a game • Creating a game **(5 lessons)**	
Knowledge & Skills (end points)	• To describe how networks physically connect to other networks • To recognise how networked devices make up the internet • To outline how information can be shared via the World Wide Web (WWW) • To recognise how the content of the World Wide Web is created by people	• To explain that data gathered over time can be used to answer questions • To use a digital device to collect data automatically • To explain that a data logger collects 'data points' from sensors over time • To recognise how a computer can help us analyse data and use data from sensors to answer questions	• To explain that the composition and colours of digital images can be changed • To explain how cloning can be used in photo editing • To combine images for a purpose • To combine images to complete a publication • To evaluate how changes can improve an image		• To develop the use of count-controlled loops in a different programming environment • To explain that in programming there are infinite loops and count-controlled loops • To modify an infinite loop in a given program • To design a project that includes repetition • To create a project that includes repetition	
Key Vocabulary	Internet, Functions, Router, Services, World Wide Web (WWW), Routing, Media, Domain name, Web browser, Content, Features, Rules	Data set, Data tables, Collecting, Recording, Data loggers, Sensors, Automatically, Data points, Download,	Composition, Rotate, Editing, Cloning, Duplicate, Retouching, Combine, Plan, Suitable, Criteria, Complete, Improve, Evaluate, Review, Feedback		Count-controlled loop, Programming, Environment, Infinite loop, Modify, Languages, Repeat, Design, Forever,	

		Importing, Analyse, Interpreting		Evaluate, Select, Improve, Algorithm, Build, Debug
NC Links	KS2 - d)	KS2 - b) KS2 - f) KS2 - g)	KS2 - e) KS2 - f) KS2 - g)	KS2 - a) KS2 - b) KS2 - c) KS2 - f)
Sequenced From	Y3 – Connecting computers (strand sequence)	Y3 – Branching databases (strand sequence)	Y3 – Stop-Frame animation (strand sequence)	Y3 – Sequencing sound (strand sequence)
Sequenced To	Y5 – Systems & searching (strand sequence)	Y5 – Flat-file databases (strand sequence)	Y5 – Vector graphics (strand sequence)	Y5 – Selection in quizzes (strand sequence)

Online Safety:

Lessons

- What happens when I search online
- How do companies encourage us to buy online?
- Fact, opinion or belief
- What is a bot?
- What is my #TechTimetable like?

Knowledge & Skills (end points)

- To describe how to search for information within a wide group of technologies and make a judgement about the probable accuracy
- To understand some of the methods used to encourage people to buy things online
- To understand that technology can be designed to act like or impersonate living things
- To understand that technology can be a distraction and identify when someone might need to limit the amount of time spent using technology

Key Vocabulary

Accuracy, Advantages, Advertisements, Belief, Bot, Computer, Distractions, Fact, Hashtag, Implications, In-app purchases, Influencer, Opinion, Program, Recommendations, Reliable, Risks, Screen time, Search results, Snippets, Sponsored, Trustworthy

NC Links

- e) Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- g) Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

Year 5

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Scheme of Learning Title	Systems & searching	Flat-file databases	Vector graphics		Selection in quizzes	
Lessons	• Systems • Computer systems and us • Searching the web ***(contains AI reference – AI on search engines)*** • Search results and order **(4 lessons)**	• Creating a paper-based database • Using a computer database • Using search tools (comparing data visually) • Databases in real life **(4 lessons)**	• The drawing tools • Creating images • Making effective drawings • Layers and objects – Manipulating) • Creating a vector drawing **(5 lessons)**		• Exploring conditions • Selecting outcomes and answers • Planning a quiz • Testing a quiz • Evaluating a quiz **(5 lessons)**	
Knowledge & Skills (end points)	• To explain that computers can be connected together to form systems • To recognise the role of computer systems in our lives • To experiment with search engines • To describe how search engines select results and explain why order of results is important	• To use a form to record information • To outline how you can answer questions by grouping and then sorting data • To explain that tools can be used to select specific data and be displayed visually • To use a real-world database to answer questions	• To identify that drawing tools can be used to produce different outcomes • To create a vector drawing by combining shapes • To use tools to achieve a desired effect • To recognise that vector drawings consist of layers and that grouping objects make them easier to work with • To apply what I have learned about vector drawings		• To explain how selection is used in computer programs • To explain how selection directs the flow of a program • To design a program that uses selection • To create a program that uses selection • To evaluate my program	
Key Vocabulary	System, Communicate, Input-Process-Output, Sensors, Digital systems, Benefits, Search engine, Compare, Address bar, Web Crawlers, Index, Criteria	Order, Group, Database, Field, Record, Navigate, AND/OR, Value, Chart Real-life, Searching, Shortlist	Vector, Shape, Object, Rotate, Recreate, Duplicate, Zoom, Alignment, Modify, Layering, Ordering, Drawing, Grouping, Creating, Reflecting		Conditions, Selection, Action, If…then…else statement, Identifying, Outcome, Interactive, Design, Algorithm, Statement, Implement, Testing, Improvements, Appearance, Extending	
NC Links	KS2 - d) KS2 - e)	KS2 - f)	KS2 - f) KS2 - g)		KS2 - a) KS2 - b)	

	KS2 - g)			KS2 - c) KS2 - d) KS2 - f)
Sequenced From	Y4 – The internet (strand sequence)	Y4 – Data logging (strand sequence)	Y4 – Photo editing (strand sequence)	Y4 – Repetition in games (strand sequence)
Sequenced To	Y6 – Communication & collaboration (strand sequence)	Y6 – Introduction to spreadsheets (strand sequence)	Y6 – Web page creation (strand sequence)	Y6 – Variables in games (strand sequence)

Online Safety:

Lessons

- Online protection
- Online communication
- Online reputation
- Online bullying
- Online health

Knowledge & Skills (end points)

- To know different ways we can communicate online
- To understand how online information can be used to form judgements
- To understand some ways to deal with online bullying
- To know that apps require permission to access private information and that you can alter the permissions
- To know where I can go for support if I am being bullied online or feel that my health is being affected by time online

Key Vocabulary

Accurate information, Advice, Application, Bullying, Communication, Emojis, Health, In-app purchases, Information, Judgement, Memes, Mental health, Mindfulness, Mini-biography, Online communication, Opinion, Organisation, Password, Personal information, Positive contributions, Private information, Real world, Strong password, Summarise, Support, Technology, Trusted adult, Wellbeing

NC Links

- e) Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- f) 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
- g) Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

Year 6

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Scheme of Learning Title	Communication & collaboration	Introduction to spreadsheets	3D Modelling		Sensing movement	
Lessons	• Internet addresses • Data packets • Working together and shared working ***(contains AI reference – AI used as collaboration tool)*** • How we communicate **(4 lessons)**	• What is a spreadsheet – modifying spreadsheets) • What's the formula? Calculate and duplicate • Event planning • Presenting data **(4 lessons)**	• Introduction to 3d modelling • Modifying 3D objects • Make your own name badge • Planning a 3D model • Making your own 3D model **(5 lessons)**		• The micro:bit • Go with the flow • Sensing inputs • Designing a step counter • Making a step counter **(5 lessons)**	
Knowledge & Skills (end points)	• To explain the importance of internet addresses • To recognise how data is transferred across the internet • To explain and evaluate how sharing information online can help people to work together • To recognise how we communicate using technology and evaluate different methods of online communication	• To create and build a data set in a spreadsheet • To explain that formulas can be used to produce calculated data and to apply them • To create a spreadsheet to plan an event • To choose suitable ways to present data	• To recognise that you can work in three dimensions on a computer • To identify that digital 3D objects can be modified • To recognise that objects can be combined in a 3D model • To plan my own 3D model • To create my own digital 3D model		• To create a program to run on a controllable device • To explain that selection can control the flow of a program • To update a variable with user input • To design a project that uses inputs and outputs on a controllable device • To develop a program to use inputs and outputs on a controllable device	
Key Vocabulary	Transfer, Communicating, Domain Name Server (DNS), Data packets, Header, Data payload, Collaborative, Explore, Stored, Protocols, Methods, Purpose,	Data, Spreadsheet, Format, Formula, Calculations, Duplicating, Data headings, Planning, Functions, Presenting, Charts, Suggest	Perspective, Workplane, Viewing angle, Modify, Resize, Recolour, Rotate, Duplicate, Group, Analyse, Plan, Combine, Construct, Explain, Improve		Programming, Emulator, Transfer, Selection, If..then..else statement, Condition, Variable, Input, Conditional statement, Design, Algorithm, Program flow, Create, Test, Debug	
NC Links	KS2 - d) KS2 - e) KS2 - f) KS2 - g)	KS2 - d) KS2 - f) KS2 - g)	KS2 - e) KS2 - f) KS2 - g)		KS2 - a) KS2 - b) KS2 - c) KS2 - f)	

Sequenced From	Y5 – Systems & searching (strand sequence)	Y5 – Flat-file databases (strand sequence)	Y5 – Vector graphics (strand sequence)	Y5 – Selection in quizzes (strand sequence)
Sequenced To	Y7 - (strand sequence)	Y7 - (strand sequence)	Y7 - (strand sequence)	Y7 - (strand sequence)

Online Safety:
Lessons

- Life online
- Sharing online
- Creating a positive online reputation
- Capturing evidence
- Password protection
- Think before you click

Knowledge & Skills (end points)

- To know that a digital footprint means the information that exists on the internet as a result of a person's online activity
- To know what steps are required to capture bullying content as evidence
- To understand that it is important to manage personal passwords effectively
- To understand what it means to have a positive online reputation
- To know some common online scams

Key Vocabulary
Anonymity, Antivirus, Biometrics, Block and report, Consent, Copy, Digital footprint, Financial information, Hacking, Inappropriate, Malware, Online bullying, Password, Personal information, Phishing, Privacy settings, Reliable source, Respect, Scammers, Secure, Settings, Software updates, Two factor authentication, URL, Username

NC Links

- d) 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
- e) Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- g) Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

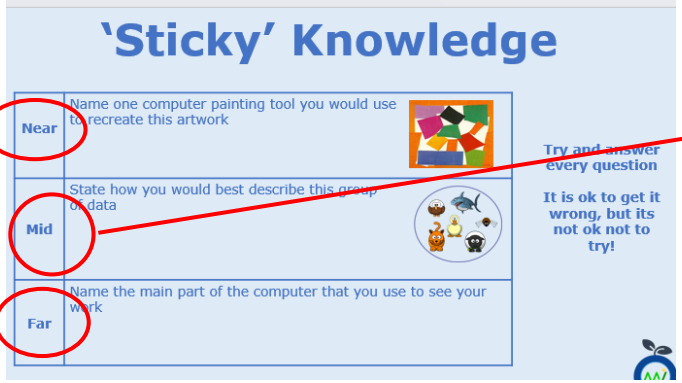
Individual Lesson Planning (all Years)

In the resources folder you will find personalised resources (to the individual schools): individual lessons, work booklets etc. Prior to teaching the lesson staff will be expected to see if they are suitable for their classes, as a class teacher there is a requirement to review the material and alter accordingly to meet the needs of the class, these altered lessons must be saved into your own planning folder and not over the master copy e.g. the font colour might need adjusting for your class etc.

Each lesson starts with a 'sticky knowledge' slide this is to identify whether students are retaining the knowledge from previous lesson as they will be able to retrieve it. The sticky knowledge slide is arranged in the following order:

Knowledge they should have retained from a more recent lesson

Knowledge they should have retained from a strand even further back e.g. if it was the start of a new year this would be from the previous year

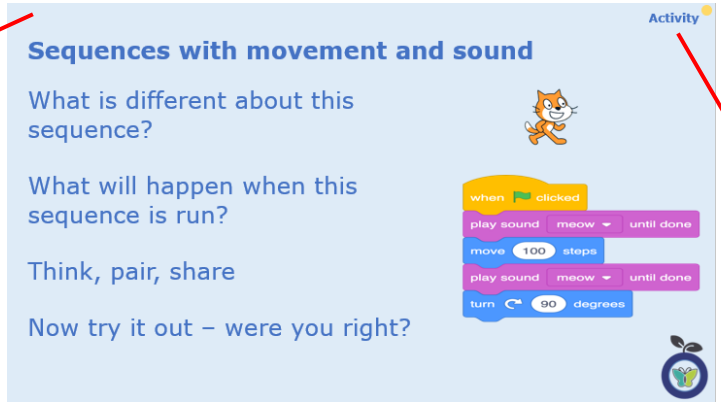


Knowledge they should have retained from a previous strand, a bit further back in

For each lesson there is a full presentation this has been arranged in a specific way to allow staff and students to establish the links between lessons throughout the years, it will also allow staff and students to talk more confidently about the learning journey.

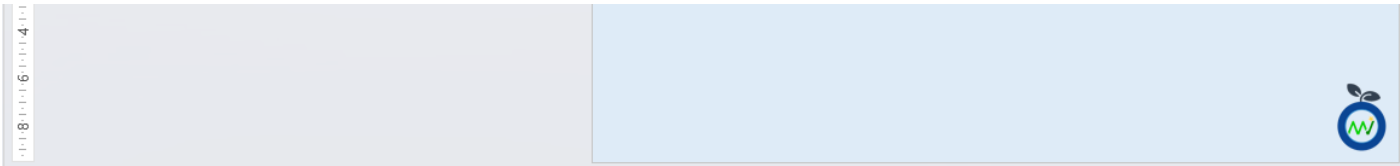
Each strand will have a corresponding learning journey diagram so students can see what they have been doing and what they are doing for the rest of the year

Each slide is consistent in there layout, there is minimal information on them, only information that is important to the learning. All other information (e.g. pictures) have been removed to ensure that the students can focus on the learning and not get over stimulated by additional media



You will notice there is a coloured dot on the top of the slides – this relates to the strand colour so it enables individuals to establish the links between the units to help with progression over time

You will also see some information at the top e.g. Activity, Plenary, Assessment. This is there just to guide the lesson process

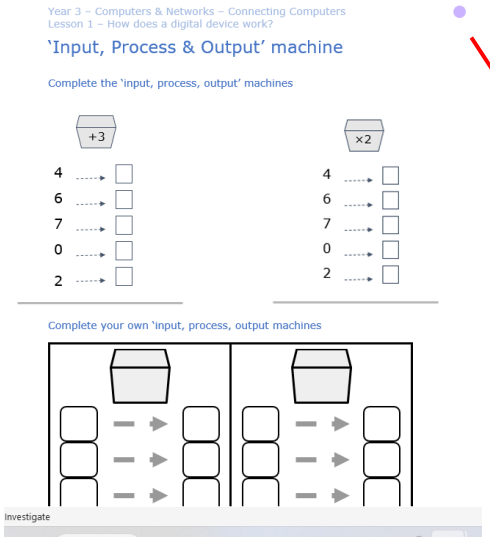


Ask the children to explore and play with the objects that you have laid out. While they play, observe how thy naturally sort and categories the objects.
Become involved in the play too, using some of the suggested prompts as a guide, and use language related to sorting and categorising. The children will naturally join in.
This activity is led by the children's interests. Whether they choose to use the objects to make patterns, play shops, build house or simply sort them – they will naturally categorise the objects as they do so. Use your role as a facilitator to introduce relevant vocabulary and new ideas.
Prompts for learning: I am going to sort out these beads. I will put the pink ones in here, the blue ones in here and the green ones in here. These pipe cleaners are longer than the straws. I am going to put all the soft things on this side and all the rough things on this side etc.

Other information that is important to the lesson is in the slide notes, this allows the teacher to access all the information specific to that lesson in the same place

Without having to download additional documents

Wherever possible student worksheets have been reduced from several pages to one or two, leaving work that is vitally important to the learning process. Work that should be available to be reviewed to identify how students are progressing. These student worksheets come in two different forms, firstly you have the single lesson worksheet that can be printed before the lesson or you can opt for the strand work booklet.


Year 3 – Computers & Networks – Connecting Computers
Lesson 1 – How does a digital device work?

'Input, Process & Output' machine

Complete the 'input, process, output' machines

+3

4	
6	
7	
0	
2	

×2

4	
6	
7	
0	
2	

Complete your own 'input, process, output machines

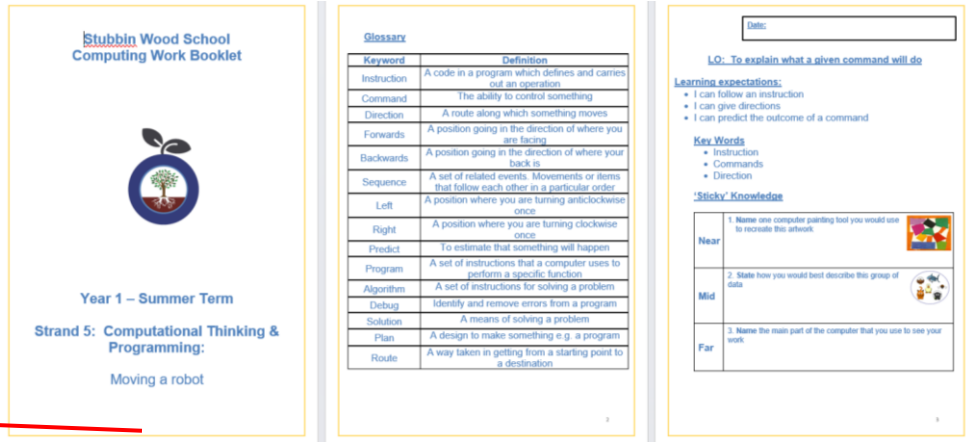
Investigate

Individual lesson worksheet, please note that these have the same dot at the top as already discussed. This allows an individual to see how they relate to each other e.g. anything with a purple dot is Computers & Networks and you will be able to explain that learning journey. You can also clearly see the journey that the students are on

The Strand work booklet, is a more organised way to show the students progression over time. In the Strand work booklet you are able to capture all the learning from the lesson, including the students individual opinion on how they thought they had progressed during the lesson

The strand work booklet follows the same colour coding scheme so you are clear what strand it belongs to

The strand work booklets are design to be printed in advance of the teaching of the strand, this will allow staff to get an additional understanding of what the students are trying to learn


Stubbin Wood School
Computing Work Booklet

Year 1 – Summer Term

Strand 5: Computational Thinking & Programming:

Moving a robot

Glossary

Keyword	Definition
Instruction	A code in a program which defines and carries out an operation
Command	The ability to control something
Direction	A route along which something moves
Forwards	A position going in the direction of where you are facing
Backwards	A position going in the direction of where your back is
Sequence	A set of related events. Movements or items that follow each other in a particular order
Left	A position where you are turning anticlockwise once
Right	A position where you are turning clockwise once
Predict	To estimate that something will happen
Program	A set of instructions that a computer uses to perform a specific function
Algorithm	A set of instructions for solving a problem
Debug	Identify and remove errors from a program
Solution	A means of solving a problem
Plan	A design to make something e.g. a program
Route	A way taken in getting from a starting point to a destination

Date:

LO: To explain what a given command will do

Learning expectations:
- I can follow an instruction
- I can give directions
- I can predict the outcome of a command

Key Words
- Instruction
- Commands
- Direction

'Sticky' Knowledge

Near	1. Name one computer painting tool you would use to recreate this artwork
Mid	2. State how you would best describe this group of data
Far	3. Name the main part of the computer that you use to see your work

Purple pen feedback will need to be developed with students

The idea is that students will get the instant feedback that they need to identify whether they have understood something or whether they need additional time to revisit that piece of work

Students will be motivated to get the questions right so they can tick with a purple pen, but also they have the opportunity if they were wrong to adjust their answers so they can learn from them.

Where purple pen feedback is appropriate for the lesson this is indicated in the notes on the presentation, along with correct answers, that can be discussed

Knowing the progress of each student

Unit	Lesson name	Lesson no.	Working towards/Learning intention (WT)	Secure Understanding (SE)	Greater depth (GR)	S1	S2	S3	S4	S5	S6	S7	S28	S29	S30	% of class working towards (WT) the learning intention in this lesson	% of class working at Secure understanc (SE) in this lesson
Online safety	Life online	1	Can discuss how they would feel in different situations online	The ability to discuss a range of issues online that can leave pupils feeling sad, frightened, worried or uncomfortable and can describe numerous ways to get	The ability to discuss negative feelings associated with issues online. Describing how to get help both online and offline and the importance of persistence until we get the help we need											0%	0%
	Sharing online	2	Can discuss whether sharing online has a positive or negative impact in different scenarios	Explaining how sharing online can have both negative and positive impacts. Being aware of how to seek consent from others before sharing material online. Describing how content can still be shared online even if it is set to	Explaining, with examples, how sharing online can have both positive and negative impacts. Discussing how content shared that was set to private can make someone feel and how they can get help if this happens											0%	0%
	Creating a positve online reputation	3	Discussing what their 'digital footprint' is	Explaining what a 'digital reputation' is and what it can consist of	Explaining strategies in developing a positive online reputation												
	Capturing evidence	4	Children understand why to capture evidence of online bullying and can use on e of them described method to do so	Understand the importance of capturing evidence of online bullying and can demonstrate some of these methods on the devices at school	Explaining why it is important to capture evidence of online bullying. They can demonstrate some of these methods on the devices at school and research how to do this on devices at home												
	Password protection	5	Describing ways to manage passwords in order to keep them safe and secure	Describing ways to manage passwords and strategies to add extra security such as two-factor authentication. Explaining what to do if passwords are shared, lost or stolen	Describing effective ways to manage passwords. Understanding the importance of not sharing passwords and describing why others may want your password. Explaining what to do if passwords are shared, lost of stolen and the importance of acting quickly											0%	0%
	Think before you click	6	Understanding what 'phishing' is and ways to identify phishing emails	Describing strategies to identify scams. Explaining ways to increase privacy settings and understanding why it's important to keep software updated	Describing ways in which online content is used to target people to gain money or information and describing a number of ways to help identify this content. Sharing tips on ways to increase privacy on apps and beginning to put these into practice on their own devices											0%	0%
					% of lessons student is working at GR	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
					% of lessons student is working at SE	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
					% of lessons student is working at WT	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		

Along-side all resources is a tracking spreadsheet that allows teachers to record the progress of the class

Using this template makes the tracking simple and the analysis of the progress of the class easy to understand.

You can identify how a specific student is doing in a strand, or you can see if a particular lesson might need revisiting.

The tracking therefore will inform future planning