

Computing at Cockington Primary School



Cockington Curriculum Drivers

As a result of being taught the Cockington Curriculum, our children will:

☐ **Believe: Understand Self**

Believe in themselves as individuals and as learners

☐ **Achieve: Build Knowledge and Skills**

Have the knowledge and skills needed for the next stage of their lives

☐ **Succeed: Be Good Citizens**

Have the strength of character and knowledge that will help them to succeed as citizens, within and beyond our locality



Sequential Curriculum

The computing at Cockington has been based on *Teach Computing* curriculum from the NCCE (National Computing Centre for Education). Our computing strands have both declarative and procedural knowledge that deepens and broadens progressively each year:

☐ **Computing Systems and Networks**

☐ **Creating Media**

☐ **Programming**

☐ **Data & Information.**

☐ **Digital Citizenship**

These strands are re-visited each year and children's understanding is built on year-on-year. In EYFS, we start children on their journey to becoming computational thinkers through Barefoot Units. This gives them a strong foundation to explore Computing in Key Stages 1 & 2.



Purposeful Learning

Part of our computing curriculum is taught through 'Learning Experiences' driven by carefully mapped content within and between LEs. However, some discrete units of computing are also delivered alongside this to ensure all objectives are taught effectively.

Learning Experiences begin with a 'hook' that inspires the children and sets a stimulating, purposeful and time-limited challenge.

A sequence of well-judged, rigorous lessons to develop knowledge follows.

A high-quality 'outcome' concludes the experience, which may involve showcasing learning to a wider audience e.g. showing a video and the end of Creating Media unit.



Progress For All

Children receive Quality First Teaching through pedagogy rich in Rosenshine's principles of effective instruction. Priority is given to the professional development of staff.

The typical gaps of vocabulary, oracy, reading fluency and cultural capital are a focus in our curriculum.

Reading is our priority. Our environment and culture celebrates reading. Our Reading curriculum is evidence-informed, sequential and focuses in equal measure on fluency and comprehension.

Additional needs are met through adaptive teaching and carefully planned, individualised support.



Building Knowledge

Pedagogy and content are carefully considered so that knowledge is built within and across teaching sequences.

Reviews of knowledge are built into our curriculum, including the use of KWL grids and a focus on fluency in reading and maths.

Learning experiences dovetail so that learning can be retrieved and applied. Portfolios aid retrieval of knowledge across the years.

Learning Experience outcomes demonstrate the learning that has taken place.

Big Ideas

We choose to deliver our curriculum in a way that encourages children to open their eyes to the world and find their spark.

1. Sustainability: It is everyone's responsibility to use the Earth and its resources in a way that is sustainable.
2. Global Citizens: Societies across the world are built on shared ideas and systems in which every citizen has their role to play.
3. Connecting to our locality: Our locality is a place of historical, cultural and geographical significance and this impacts our lives.
4. Talents and Interests: Each of us can develop a unique set of talents and interests to bring life-long contentment, joy and direction.
5. Active Citizenship: Everyone can use their voice, knowledge and skills for the good of others.
6. STEAM: Mastering the 4 C's of 21st century learning will unlock opportunities throughout our lives.





Intent:

At Cockington, high-quality computing teaching will provide children, regardless of need or barrier, with the knowledge, understanding and skills required to thrive in an increasingly digital world. Through a carefully sequenced curriculum, children develop their understanding of computer systems and networks, programming, creating media and data and information. Key concepts and vocabulary are explicitly taught and revisited over time, enabling children to build secure knowledge and make meaningful connections between different aspects of computing.

Computational thinking equips children to solve problems logically, evaluate solutions and understand the impact of technology on their lives and the wider world. Children learn to design, create and debug programs using both block-based and text-based approaches, whilst using a range of digital technologies purposefully and creatively to express themselves and communicate their ideas.

At Cockington, children become digitally literate citizens who understand how digital systems work and how information is shared, accessed and evaluated. Through a strong emphasis on digital citizenship and online safety, children learn to use technology safely, respectfully and responsibly. They develop an understanding of privacy, digital identity and online behaviour, recognise potential risks and know where to seek support when concerns arise. These concepts are revisited throughout the curriculum and enriched through wider opportunities, enabling children to become active, informed and responsible participants in a rapidly changing digital world.

A rich and ambitious computing vocabulary is at the heart of our curriculum. By explicitly teaching and revisiting key terminology, children are able to articulate their understanding confidently and are equipped with the knowledge and skills needed for the next stage of their education and life beyond school.

How we teach Computing at Cockington Primary School



12 pedagogy principles – Key Stages 1 and 2

Lead with concepts

Support pupils in the acquisition of knowledge, through the use of key concepts, terms and vocabulary providing opportunities to build a shared and consistent understanding. Glossaries, concepts maps, and displays, along with regular recall and revision support this approach.



Unplug, unpack, repack

Teach new concepts by first unpacking complex terms and ideas, exploring these ideas in unplugged and familiar contexts, then repacking this new understanding into the original concept. This approach (semantic waves) can help pupils develop a secure understanding of complex concepts.



Create projects

Use project-based learning activities to provide pupils with the opportunity to apply and consolidate their knowledge and understanding. Design is an important, often overlooked aspect of computing. Pupils can consider how to develop an artefact for a particular user or function and evaluate it against a set of criteria.



Challenge misconceptions

Use formative questioning to uncover misconceptions and adapt teaching to address them as they occur. Awareness of common misconceptions alongside discussion, concept mapping, peer instruction, or simple quizzes can help identify areas of confusion.



Structure lessons

Use supportive frameworks when planning lessons, such as PRIMM (Predict, Run, Investigate, Modify, Make) and Use-Modify-Create. These frameworks are based on research and ensure that differentiation can be built in at various stages of the lesson.



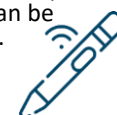
Work together

Encourage collaboration, specifically using pair programming and peer instruction, and also structured group tasks. Working together stimulates classroom dialogue, articulation of concepts, and development of shared understanding.



Model everything

Model processes or practices – everything from debugging code to binary number conversions – using techniques such as worked examples and live coding. Modelling is particularly beneficial to novices, providing scaffolding that can be taken gradually taken away.



Add variety



Provide activities with different levels of direction, scaffolding, and support that promote active learning, ranging from

highly structured to more exploratory tasks. Adapting your instruction to suit different objectives will help keep all pupils engage and encourage greater independence.

Make concrete

Bring abstract concepts to life with real0world, contextual examples and a focus on interdependencies with other curriculum subjects. This can be achieved through the use of unplugged activities, proposing analogies, storytelling around concepts, and finding examples of the concepts in pupils' lives.



Read and explore code first

When teaching programming, focus first on code 'reading' activities, before code writing. With both block-based and text-based programming, encourage pupils to review and interpret blocks of code. Research has shown that being to read, trace and explain code augments pupils' ability to write code..



Get hands-on

Use physical computing and making activities that offer tactile and sensory experiences to enhance learning.

Combining electronics and programming with arts and crafts (especially through explanatory projects) provide pupils with a creative, engaging context to explore and apply computing concepts.

Foster program comprehension

Use a variety of activities to consolidate knowledge and understanding of the function and structure of programs, including debugging, tracing and Parson's Problems. Regular comprehension activities will help secure understanding and build connections with new knowledge.



Expectations for High-Quality Computing Teaching at Cockington Primary School



Every Computing lesson should...

Retrieve

Retrieve prior learning and revisit key vocabulary from previous lessons.

Teach

Explicitly introduce new concepts using modelling, worked examples and ambitious vocabulary.

Apply

Provide opportunities for children to apply new learning independently through purposeful practical activities.

Review

Use questioning, discussion and reflection to identify misconceptions and celebrate success.

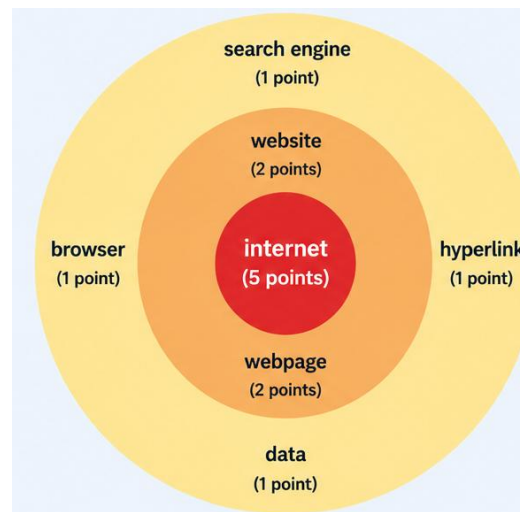
Vocabulary in every lesson

Teachers should:

- revisit vocabulary from previous lessons
- explicitly teach new vocabulary
- encourage pupils to use computing vocabulary when speaking and explaining
- display and refer to vocabulary throughout the unit

What this could look like

-  Oral Bullseye
-  Turn and Talk
-  Mini whiteboards
-  Match the word to the definition
-  "Which word am I?"
-  Odd One Out
-  True or False vocabulary statements



Points	Tally	Total
1 point words		
2 point words		
5 point words		
Overall total =		

Computing Progression at Cockington Primary School



Strand	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Computing Systems & Networks	Exploring Technology	Technology Around us	Information Technology Around Us	Connecting Computers	The Internet	Systems and Searching	Communication and Collaboration
Programming	Instructions and Sequencing	Moving a Robot	Robot Algorithms	Events and Actions in Programs	Repetition in Games	Selection in Physical Computing (Micro:bits)	Programming a Space Simulation
Creating Media	Creating and Exploring	Digital Painting	Digital Photography	Desktop Publishing	Audio Production	Video Production	3D Design with Tinker CAD
Data & Information	Sorting and Grouping	Grouping Data	Pictograms	Branching Databases	Data Logging	Flat-File Databases	Spreadsheets

Golden Thread: Digital Citizenship and Safety

Supported through: TeachComputing; Be Internet Legends; PSHE; Digital Citizenship Week; Assemblies

Computing Long-Term Overview at Cockington Primary School



Term	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Autumn	Exploring Technology	Technology Around us	Information Technology Around Us	Connecting Computers	The Internet	Systems and Searching	Communication and Collaboration
	Instructions & Sequencing	Moving a Robot	Digital Photography	Events and Actions in Programs	Repetition in Games	Selection in Physical Computing (Micro:bit)	Programming a Space Simulation
Spring	Creating and Exploring	Grouping Data	Robot Algorithms	Branching Databases	Data Logging	Video Production	Spreadsheets
Summer	Sorting and Grouping	Digital Painting	Pictograms	Desktop Publishing	Audio Production	Flat-file Databases	3D Design with Tinker CAD

National Curriculum Coverage KS1 at Cockington Primary School



	Year 1	Year 2
Understand what algorithms are and that they are implemented as programs.	Moving a Robot	Robot Algorithms
Create and debug simple programs.	Moving a Robot	Robot Algorithms
Use logical reasoning to predict the behaviour of simple programs.	Moving a Robot	Robot Algorithms
Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	Technology Around Us Digital Painting Grouping Data	Information Technology Around Us Digital Photography Pictograms
Recognise common uses of information technology beyond school.	Technology Around Us	Information Technology Around Us
Use technology safely and respectfully, keeping personal information private.	Embedded throughout the curriculum through Teach Computing units, PSHE, Be Internet Legends, Digital Citizenship Week and assemblies.	

National Curriculum Coverage KS2 at Cockington Primary School



	Year 3	Year 4	Year 5	Year 6
Design, write and debug programs.	Events and Actions in Programs	Repetition in Games	Selection in Physical Computing (Micro:bit)	Programming a Space Simulation
Use sequence, selection and repetition in programs.	Events and Actions in Programs (sequence)	Repetition in Games	Selection in Physical Computing	Programming a Space Simulation
Use logical reasoning to explain how algorithms work.	Events and Actions in Programs	Repetition in Games	Selection in Physical Computing	Programming a Space Simulation
Understand computer networks, including the internet.	Connecting Computers	The Internet	Systems & Searching	Communication & Collaboration
Use search technologies effectively.		The Internet	Systems & Searching	Communication & Collaboration
Select, use and combine a variety of software to design and create content.	Desktop Publishing	Audio Production	Video Production	3D Design with TinkerCAD
Use technology safely, respectfully and responsibly.	Embedded throughout the curriculum through Teach Computing units, PSHE, Be Internet Legends, Digital Citizenship Week and assemblies.			
Select, use and combine a variety of	Branching	Data Logging	Flat-file	Spreadsheets

Vocabulary Progression at Cockington Primary School



Strand	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Computing Systems & Networks	technology, computer, device	technology, computer, keyboard, mouse, device	information technology, barcode, scanner, computer, device	network, connection, switch, server, wireless	internet, website, router, webpage, browser	search engine, world wide web, ranking, index, search term	communication, collaboration, shared, cloud, system
Programming	instructions, forwards, backwards	instruction, command, program, route, debug	algorithm, debug, sequence, prediction, program	event, action, sprite, block, sequence	repetition, loop, forever, count-controlled, debug	selection, condition, input, output, physical computing	variable, value, modify, algorithm, decompose
Creating Media	create, draw, picture	paint, brush, undo, tool, shape	photograph, portrait, landscape, framing, editing	font, template, layout, orientation, placeholder	microphone, record, podcast, audio, edit	storyboard, clip, timeline, transition, copyright	3D design, model, prototype, dimension
Data & Information	sort, group, same	group, object, label, compare, attribute	pictogram, data, chart, survey, represent	database, question, branching, record, attribute	data logger, sensor, collect, measure, data	database, field, record, sort, search	spreadsheet, cell, formula, calculate, range
Digital Citizenship	trusted adult, kind, safe	personal, information online, private, trusted	password, kindness, bullying, share, permission	reliable, report, fact, opinion, search	influence, respect, behaviour, identity, content	privacy, footprint, risk, settings, consent	reputation, misinformation, bias, identity, responsibility



Digital Citizenship Progression at Cockington Primary School



	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Digital Citizenship & Safety	Trusted Adults	Personal Information	Passwords and Kindness	Reliability & reporting	Behaviour & Influence	Privacy & Footprint	Identity and Reputation

Digital Experiences at Cockington Primary School



	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Hardware and Digital Experiences	Bee-bots Interactive Whiteboard iPads Barefoot Computing	Bee-Bots iPads Laptops Paintz	iPads Laptops Scratch Jr.	Laptops Keyboard & Mouse Scratch Desktop Publishing	Laptops Scratch Microphones Audio Editing Data Loggers	Laptops Micro:Bits Scratch Video Production	Laptops TinkerCAD Spreadsheets Collaborative Platforms



Bee-Bots



iPads



Laptops



Keyboards



Microphones



Data Loggers



Micro:bits



3D Design



Collaboration

Year 1 Computing Unit Overviews

at Cockington Primary School



Unit Title	Technology Around Us	Moving a Robot
Prior Learning:	- Exploring technology in EYFS - Following simple instructions	- Children have explored simple instructions and sequencing through Barefoot Computing and Bee-Bots in EYFS. - Children understand that technology follows instructions.
Sticky Knowledge:	- Technology helps us in everyday life. - A computer follows instructions. - Different types of technology have different purposes. - Technology can be used safely at home and at school.	- An algorithm is a set of instructions that can be followed to complete a task. - A program is an algorithm that has been put into a computer or robot. - Instructions must be in the correct order (sequence) for a robot to work correctly. - Bugs (errors) can stop a program from working as intended and can be fixed through debugging.
Key Vocabulary:	technology, computer, device, keyboard, mouse	instruction, command, program, route, debug
Learning Objectives:	- I can identify examples of technology. - I can explain what a computer is used for. - I can use a computer safely. - I can use key computing vocabulary correctly.	- I can give clear instructions to move a robot. - I can create a simple algorithm to complete a task. - I can predict what a robot will do by following a set of instructions. - I can find and fix mistakes in a simple

Year 1 Computing Unit Overviews

at Cockington Primary School



Unit Title	Grouping Data	Digital Painting
Prior Learning:	- Children have sorted and grouped objects through play in EYFS. - Children understand that objects can be grouped by their features.	- Children have explored drawing and mark-making in EYFS. - Children have used simple digital devices to create pictures.
Sticky Knowledge:	- Data is information collected for a purpose. - Objects can be grouped using their attributes. - Different groups can be created using different criteria. - Data helps us answer questions.	- Digital artwork can be created using different tools. - Different tools create different effects. - Digital work can be edited without starting again. - Artists make choices about colour, shape and line.
Key Vocabulary:	group, object, label, compare, attribute	paint, brush, undo, tool, shape
Learning Objectives:	- I can sort objects into groups. - I can explain why I have grouped objects together. - I can compare different groups. - I can answer simple questions using grouped data. - I can use computing vocabulary to explain my thinking.	- I can use digital tools to create artwork. - I can select different brushes and colours for a purpose. - I can use the undo tool to improve my work. I can compare digital and non-digital artwork. - I can explain the choices I made when creating my picture.
Hardware & Software:	 Laptops  Mouse	 Laptops  Paintz  iPads

Year 2 Computing Unit Overviews

at Cockington Primary School



Unit Title	Information Technology Around Us	Digital Photography
Prior Learning:	- Children identified different types of technology in Year 1. - Children learned that computers help people complete tasks. - Children used technology safely in school.	- Children created digital artwork using Paintz. - Children explored different digital tools. - Children understand that technology can be used creatively.
Sticky Knowledge:	- Information Technology (IT) helps people complete everyday tasks. - IT systems are made up of different devices working together. - Different types of technology have different purposes. - Technology should always be used safely and responsibly.	- Good photographs are carefully planned. - Different angles and framing create different effects. - Photographs can be edited to improve them. - Images communicate ideas and information.
Key Vocabulary:	information technology, barcode, scanner, computer, device	photograph, portrait, landscape, framing, editing
Learning Objectives:	- I can identify examples of Information Technology. - I can explain how Information Technology helps people. - I can describe how devices work together. - I can recognise different types of digital technology.	- I can take photographs for a purpose. - I can use different camera angles and framing. - I can edit a photograph. - I can explain why one photograph is more effective than another. - I can use key computing vocabulary accurately.

Year 2 Computing Unit Overviews

at Cockington Primary School



Unit Title	Robot Algorithms	Pictograms
Prior Learning:	- Children created simple algorithms in Year 1. - Children programmed Bee-Bots using sequences. - Children debugged simple programs.	- Children grouped objects and answered questions using data. - Children understand that data can be organised in different ways.
Sticky Knowledge:	- Algorithms must be clear and in the correct order. - A program follows an algorithm. - Debugging improves a program. - More than one algorithm can solve the same problem.	- Data can be represented visually. - Pictograms help us answer questions. - Data should be accurate. - Different charts communicate information in different ways.
Key Vocabulary:	algorithm, debug, sequence, prediction, program	pictogram, data, chart, survey, represent
Learning Objectives:	- I can explain what an algorithm is. - I can create an algorithm to solve a problem. - I can predict what a program will do. - I can debug an algorithm when it doesn't work. - I can explain my thinking using computing vocabulary.	- I can collect simple data. - I can create a pictogram. - I can answer questions using data. - I can compare information shown in a pictogram. - I can explain my findings using computing vocabulary.
Hardware & Software:	 Bee-Bots  Laptops	 Laptops  Pictogram software

Year 3 Computing Unit Overviews at Cockington Primary School



Unit Title	Connecting Computers	Events and Actions in Programs
Prior Learning:	- Children identified different types of Information Technology in Year 2. - Children understand that devices help people complete tasks. - Children have used technology safely and purposefully..	- Children created and debugged algorithms in Year 2. - Children programmed Bee-Bots using sequences. - Children understand that programs follow instructions.
Sticky Knowledge:	- A network is a group of connected computers and devices. - Devices communicate by sending and receiving information. - Networks allow people to share information and resources. - Wired and wireless connections both allow devices to communicate.	- An event tells a program when to start an action. - Programs can respond to different events. - Programs can be improved through testing and debugging. - Code must be sequenced correctly to work as intended.
Key Vocabulary:	network, connection, switch, server, wireless	event, action, sprite, block, sequence
Learning Objectives:	- I can explain what a computer network is. - I can identify devices that are connected in a network. - I can explain why networks are useful. - I can describe the difference between wired and wireless	- I can create a program that uses events and actions. - I can predict what a program will do. - I can debug a program when it does not work. - I can explain how events control a program. - I can use computing vocabulary

Year 3 Computing Unit Overviews

at Cockington Primary School



Unit Title	Desktop Publishing	Branching Databases
Prior Learning:	- Children have created digital artwork. - Children have taken and edited digital photographs. - Children understand that technology can be used to communicate ideas.	- Children grouped and compared data in Year 1. - Children collected and represented data using pictograms in Year 2.
Sticky Knowledge:	- Desktop publishing combines text and images to communicate information. - Layout helps make information clear and easy to read. - Different audiences require different design choices. - Digital publications can be edited and improved.	- Databases organise information. - Branching databases use yes/no questions. - Good questions help sort information accurately. - Databases help users find information efficiently.
Key Vocabulary:	font, template, layout, orientation, placeholder	database, question, branching, record, attribute
Learning Objectives:	- I can create a publication for a specific audience. - I can combine text and images effectively. - I can use layout and design features appropriately. - I can evaluate and improve my	- I can create a simple branching database. - I can use yes/no questions to organise information. - I can answer questions using a database. - I can explain how databases help

Year 4 Computing Unit Overviews

at Cockington Primary School



Unit Title	The Internet	Repetition in Games
Prior Learning:	- Children understand how computers connect through networks. - Children know that devices communicate by sending information. - Children have used networks safely in school.	- Children have programmed using events and actions in Scratch. - Children have debugged simple programs. - Children understand that programs follow sequences of instructions.
Sticky Knowledge:	- The internet is a worldwide network of connected computers. - Websites are made up of webpages. - A router connects devices to the internet. - Web browsers allow us to access websites safely.	- Repetition (loops) makes programs more efficient. - Loops repeat instructions automatically. - Different loops are used for different purposes. - Programs should be tested and debugged regularly.
Key Vocabulary:	internet, website, router, webpage, browser	repetition, loop, forever, count-controlled, debug
Learning Objectives:	- I can explain how the internet works. - I can describe the difference between the internet and the World Wide Web. - I can explain how webpages are accessed. - I can use the internet safely and responsibly.	- I can use repetition in a program. - I can choose the correct type of loop. - I can debug a program that uses repetition. - I can explain why repetition makes programs more efficient. - I can use computing vocabulary confidently.

Year 4 Computing Unit Overviews

at Cockington Primary School



Unit Title	Audio Production	Data Logging
Prior Learning:	- Children created digital publications in Year 3. - Children understand that digital media communicates information. - Children have edited digital content.	- Children organised information using branching databases. - Children understand that data can answer questions. - Children have represented data in different ways.
Sticky Knowledge:	- Audio can be recorded, edited and improved digitally. - Good audio requires careful planning and clear communication. - Editing improves the quality of recordings. - Different audiences require different presentation styles.	- Data loggers collect information automatically. - Sensors measure changes in the environment. - Data can be analysed to answer questions. - Technology can collect data more accurately than people.
Key Vocabulary:	microphone, record, podcast, audio, edit	data logger, sensor, collect, measure, data
Learning Objectives:	- I can record clear digital audio. - I can edit an audio recording. - I can explain how audio can communicate information. - I can evaluate and improve my recordings. - I can use computing vocabulary accurately.	- I can use a data logger to collect information. - I can explain how sensors collect data. I can interpret collected data. - I can explain why data logging is useful. - I can use computing vocabulary to explain my learning.

Year 5 Computing Unit Overviews

at Cockington Primary School



Unit Title	Systems and Searching	Selection in Physical Computing (Micro:bit)
Prior Learning:	- Children understand how the internet connects computers. - Children know how websites and webpages are accessed. - Children have searched safely for information online.	- Children have programmed using sequence, events and repetition. - Children understand that programs can be tested and debugged. - Children have experience programming in Scratch.
Sticky Knowledge:	- Search engines use algorithms to organise search results. - Different search terms produce different results. - Search results are ranked; they are not always the best or most reliable. - Digital systems work together to help us find information.	- Selection allows a program to make decisions. - Inputs provide information to a program. - Outputs are actions produced by a program. - Programs can control physical devices by responding to inputs and producing outputs.
Key Vocabulary:	search engine, World Wide Web, ranking, index, search term	selection, condition, input, output, physical computing
Learning Objectives:	- I can explain how search engines find information. - I can choose effective search terms. - I can explain why search results appear in a particular order. - I can evaluate whether information	- I can program a micro:bit using selection. - I can use inputs and outputs in my program. - I can debug my program when it does not work. - I can explain how physical computing is used in everyday life.

Year 5 Computing Unit Overviews

at Cockington Primary School



Unit Title	Video Production	Flat-File Databases
Prior Learning:	- Children have created digital publications and audio recordings. - Children understand how digital media communicates information. - Children have edited digital content.	- Children created branching databases in Year 3. - Children collected and interpreted data using data loggers in Year 4. - Children understand that data can be organised to answer questions.
Sticky Knowledge:	- Effective videos require planning and organisation. - Different camera shots and angles communicate meaning. - Editing improves the quality and impact of a video. - Videos should be designed with a clear audience and purpose.	- Databases organise large amounts of information. - Fields and records help structure data. - Searching and sorting help us find information efficiently. - Digital databases are more effective than paper records for large datasets.
Key Vocabulary:	storyboard, clip, timeline, transition, copyright	database, field, record, sort, search
Learning Objectives:	- I can plan a video using a storyboard. - I can record and edit video clips. - I can use transitions appropriately. - I can evaluate my video against its intended audience and purpose. - I can explain my choices using computing vocabulary.	- I can create a flat-file database. - I can sort and search information. - I can explain the purpose of fields and records. - I can answer questions using data. - I can use computing vocabulary accurately.

Year 6 Computing Unit Overviews

at Cockington Primary School



Unit Title	Communication and Collaboration	Programming a Space Simulation
Prior Learning:	- Children understand how networks and the internet connect devices. - Children have used search engines effectively. - Children understand how digital systems share information.	- Children have programmed using sequence, repetition and selection. - Children have used inputs and outputs with micro:bits. - Children understand how programs can be debugged and improved.
Sticky Knowledge:	- Digital communication allows people to work together from different locations. - Information can be shared safely using online platforms. - Collaboration tools allow multiple users to work on the same document. - Digital communication should always be respectful, safe and appropriate.	- Variables store information that can change during a program. - Programs use variables to store information that changes. - Programming combines sequence, repetition, selection and variables to solve problems. - Testing and debugging improve the reliability of a program.
Key Vocabulary:	communication, collaboration, shared, cloud, system	variable, value, modify, algorithm, decompose
Learning Objectives:	- I can explain how people collaborate using digital technology. - I can share work safely using online tools. - I can explain how cloud-based	- I can create a program that uses variables. - I can explain how variables improve a program. - I can combine sequence, repetition,

Year 6 Computing Unit Overviews

at Cockington Primary School



Unit Title	3D Design with TinkerCAD	Spreadsheets
Prior Learning:	- Children have created digital publications, audio and video projects. - Children understand how digital technology can solve real-world problems. - Children have developed design skills through creating digital media.	- Children created branching and flat-file databases. - Children have collected and interpreted data. - Children understand that technology can organise and analyse information.
Sticky Knowledge:	- CAD stands for Computer-Aided Design. 3D models can be designed, tested and improved digitally. - Digital designs can solve real-world problems. - Designers evaluate and refine prototypes before creating final products.	- Spreadsheets organise and calculate data efficiently. - Formulae automatically calculate values. - Cells and ranges organise information. - Spreadsheets help identify patterns and answer questions using data.
Key Vocabulary:	CAD, 3D Design, Model, Prototype, Dimension	spreadsheet, cell, formula, calculate, range
Learning Objectives:	- I can create a 3D model using TinkerCAD. - I can explain how CAD supports the design process. - I can improve a digital prototype	- I can enter and organise data in a spreadsheet. - I can use formulae to perform calculations. - I can present data clearly.

Assessment and Evidence in Computing at Cockington Primary School



Assessment is an integral part of every computing lesson. Teachers assess children's understanding through observation, questioning, discussion and practical application. Assessment is used to identify misconceptions, celebrate success and inform future teaching.

Evidence of Learning	A child working at Greater Depth...	Retrieval	Exemplification (To be created for Sep 27)
 Photographs of practical activities	★ applies knowledge independently in unfamiliar contexts.	Prior learning is revisited regularly through retrieval activities, discussion and practical application to strengthen long-term memory and support progression across the curriculum.	Examples of expected and greater depth outcomes for each unit are stored within the Computing Subject Leader folder and used to support teacher assessment and moderation,
 Screenshots of digital work	★ Explains and justifies choices using accurate computing vocabulary.		
 Floor books	★ Debugs and improves work without adult support.		
 Pupil discussion and questioning	★ Evaluates outcomes and suggests purposeful improvements.		
 Final digital outcomes/projects			



Computing Glossary at Cockington Primary School



Term	Child-Friendly Definition
technology	Something made to help people solve problems or do jobs more easily.
computer	A device that follows instructions to process information.
device	A piece of technology used for a specific purpose.
keyboard	An input device used to type letters, numbers and commands.
mouse	An input device used to control a pointer on a screen.
information technology	The use of computers and digital devices to create, store and communicate information.
barcode	A pattern of lines or shapes that stores information which can be read by a scanner.
scanner	A device that reads information and sends it to a computer.
network	Computers and devices connected together to share information.
connection	A link between devices that allows information to be shared.
switch	A device that connects computers together in a network.
server	A computer that provides services or information to other computers.
wireless	Sending information without using cables.
internet	A worldwide network connecting computers and devices.



Computing Glossary at Cockington Primary School



Term	Child-Friendly Definition
website	A collection of webpages found on the internet.
router	A device that connects networks and allows access to the internet.
webpage	A single page on a website.
browser	Software used to access websites.
search engine	A tool used to find information on the internet.
World Wide Web	A collection of websites accessed through the internet.
ranking	The order in which search results appear.
index	A database used by search engines to organise webpages.
search term	Words entered into a search engine to find information.
communication	Sharing information with others.
collaboration	Working together with others to achieve a goal.
shared	Used by more than one person.
cloud	Online storage and services accessed over the internet.
system	Parts working together to complete a task.

Programming Glossary at Cockington Primary School



Term	Child-Friendly Definition
instruction	A command telling something what to do.
forwards	Moving ahead in a direction.
backwards	Moving in the opposite direction.
command	A single instruction given to a computer or device.
program	A set of instructions that a computer follows.
route	The path taken to reach a destination.
debug	Finding and fixing mistakes in a program.
algorithm	A sequence of instructions to solve a problem.
sequence	Instructions in the correct order.
prediction	A sensible guess about what will happen.
event	Something that triggers an action in a program.
action	What happens after an event.
sprite	A character or object in a program.
block	A piece of code used in block-based programming.

Programming Glossary at Cockington Primary School



Term	Child-Friendly Definition
repetition	Repeating instructions in a program.
loop	Instructions that repeat automatically.
forever loop	Instructions that continue until stopped.
count-controlled loop	A loop that repeats a set number of times.
selection	Choosing different actions depending on conditions.
condition	Something that must be true for an action to happen.
input	Information given to a computer.
output	Information produced by a computer.
physical computing	Using code to control real-world devices.
variable	Information that can change in a program.
value	The information stored in a variable.
modify	To change something.
decompose	Breaking a problem into smaller parts.



Creating Media Glossary at Cockington Primary School



Term	Child-Friendly Definition
create	To make something new.
draw	To make marks or pictures.
picture	An image or drawing.
paint	To create digital artwork using tools.
brush	A tool used to create marks.
undo	Reverse the last action.
tool	A feature used to perform a task.
shape	A geometric figure used in digital art.
photograph	An image captured using a camera.
portrait	A picture that is taller than it is wide.
landscape	A picture that is wider than it is tall.
framing	Deciding what appears in a photograph.
editing	Making changes to improve something.
font	The style of text.



Creating Media Glossary at Cockington Primary School



Term	Child-Friendly Definition
template	A ready-made layout.
layout	The arrangement of text and images.
orientation	Whether a page is portrait or landscape.
placeholder	A space reserved for content.
microphone	A device used to record sound.
record	To capture sound or video.
podcast	Audio content created for listening.
audio	Sound stored digitally.
storyboard	A plan for a video or sequence of events.
clip	A short section of video.
timeline	The order of media in a project.
transition	An effect used between clips.
copyright	Rules protecting someone else's work.
3D Design	Creating objects with height, width and depth.



Creating Media Glossary at Cockington Primary School



Term	Child-Friendly Definition
model	A digital representation of an object.
prototype	A first version used for testing ideas.
dimension	A measurement of size or shape.

Data and Information Glossary at Cockington Primary School



Term	Child-Friendly Definition
sort	Put things into groups.
group	Objects collected because they share something.
attribute	A feature or property of an object.
label	A name used to describe something.
compare	Look for similarities and differences.
pictogram	A chart using pictures to represent data.
data	Information collected for a purpose.
chart	A way of displaying information visually.
survey	Questions used to collect information.
represent	Show information in a different form.
database	An organised collection of information.
question	Something asked to gather information.
branching database	A system that sorts information using yes/no questions.
record	A single piece of information in a database.

Data and Information Glossary at Cockington Primary School



Term	Child-Friendly Definition
data logger	A device used to automatically collect measurements.
sensor	A device that detects changes.
collect	Gather information.
measure	Find the size, amount or value of something.
field	A category of information in a database.
search	Find information in a database.
spreadsheet	Software used to organise and calculate data.
cell	A box in a spreadsheet.
formula	An instruction used to calculate values.
calculate	Work out an answer using numbers.
range	A group of cells in a spreadsheet.



Digital Citizenship Glossary at Cockington Primary School



Term	Child-Friendly Definition
trusted adult	An adult who can help keep you safe.
safe	Protected from harm or danger.
personal information	Information that identifies you.
private	Something that should not be shared with everyone.
password	A secret code used to protect accounts.
kindness	Treating others respectfully online and offline.
bullying	Repeated unkind behaviour towards others.
permission	Being allowed to do something.
reliable	Information that can be trusted.
fact	Something that is true and can be proven.
opinion	What someone thinks or believes.
report	Tell a trusted adult or use a reporting tool when something is wrong.
influence	The ability to affect thoughts or actions.
identity	Who you are and how others see you.

Digital Citizenship Glossary at Cockington Primary School



Term	Child-Friendly Definition
content	Information, images or videos shared online.
privacy	Keeping personal information safe.
digital footprint	Information about you left behind online.
risk	The chance of something harmful happening.
settings	Controls that change how technology works.
consent	Giving permission for something to happen.
reputation	What others think about you based on your actions.
misinformation	False or misleading information.
bias	Favouring one idea or viewpoint over another.
responsibility	Making safe and sensible choices.