

[illegible]



Riverside Primary School and Nursery

Key Learning and Vocabulary - Unit-by-unit

COMPUTING

Login, logout, mouse, keyboard, password, click, right click, drag, screen, duplicate, tools, username, undo, drop, cursor	Algorithm, bug, clear, debug, directions, instructions, precise, steps, solution, code, device, input, programming, robot, sequence, order,	Rocket launch, instructions, design, evaluate, materials, list, create	Beebot, code, demonstrate, programme, film, precise, instruction, video, inputting, clear, pause, predict,		Bar chart, branching database, chart, compare, data, keyboard, mouse, record, sort, tally, data collection, information table,	Communicate, connext,, devices, emotions, personal information, sharing , strangers, respect, trust, smartphone, smart watch, consoles, devices
--	---	---	--	--	---	--

Year 2						
Unit 1 - Computing systems and networks 1: What is a computer?	Unit 2 - Programming 1: Algorithms and debugging	Unit 3 - Computing systems and networks 2: Word processing	Unit 4 - Programming 2: ScratchJr	Unit 5 - Creating media: Stop motion	Unit 6 - Data Handling: International Space Station (ISS)	Unit 7 - Online safety
Key Learning	Key Learning	Key Learning	Key Learning	Key Learning	Key Learning	Key Learning
To understand what a computer is and identify some of its components.	To decompose a game to predict the algorithms.	To use the space bar and backspace correctly.	To know that coding is writing in a special language so that the computer understands what to do.	To understand and explain what animation means.	To know that computers can be used to monitor conditions in the ISS.	To understand the difference between online and offline.
To recognise technology and how it is controlled.	To understand that computers can cause algorithms to make predictions (machine learning).	To develop confidence with the keyboard and the basics of touch typing.	To understand that the character in ScratchJr is controlled by the programming blocks. .	To understand and explain what stop motion means.	To create and label images.	To identify whether information is safe or unsafe to be shared online.
To recognise that buttons cause effects and that technology follows instructions.	To write a clear and precise algorithm.	To know that I can make text a different style, size and colour.	To create an animation of an animal moving.	To use onion skinning to make small changes to my object.	To input simple data into a spreadsheet.	To understand how to stay safe when talking to people online and what to do if they see or hear something online that makes them feel upset or uncomfortable.



Riverside Primary School and Nursery
Key Learning and Vocabulary - Unit-by-unit
COMPUTING

To develop word processing skills, including altering text, copying and pasting and using keyboard shortcuts.	To know that abstraction is the removing of unnecessary detail to help solve the problem.	To know that copy and paste is a quick way of duplicating text.	To use loop blocks when programming to repeat an instruction more than once.	To use the 'pen tool' to add special effects to my animation.	To understand what steps you need to take to create an algorithm.	To know that you should ask permission from others before sharing about them online and that they have the right to say 'no'.
To learn how computers are used in the wider world.	To know that loops in programming are where you set a certain instruction to be repeated multiple times.	To use 'google' to copy and paste an appropriate image into a document.	To program a familiar story using algorithms and loops.	To design and make an animation using onion skinning and the 'pen tool' to add special effects.	To interpret data from a spreadsheet.	To learn strategies for checking if something they read online is true.
Vocabulary	Vocabulary	Vocabulary	Vocabulary	Vocabulary	Vocabulary	Vocabulary
desktop , device, digital , electricity , function , input, invention, keyboard, laptop , monitor , mouse, output, screen , system , tablet, technology , video , wires	Abstraction , algorithm, artificial intelligence, bug, clear, correct, data, debug, decompose, error, key features , loop , predict, unnecessary	Backspace , bold , copy , copyright , cut, delete, forward button , highlight , home row , home screen , image, import, italics , keyboard, keyword , layout , navigate , paste , redo , search, space bar, text , text effects , touch typing , underline , undo , word processing	Algorithm, animation, blocks , bug, button, CGI , computer code , debug, fluid , icon , imitate , instructions, loop, on tap , programming, repeat, Scratch JR , sequence, sound recording.	Animation , animator , background , digital device , flipbook , frames moving images , onion skinning , still images , debug, effects, evaluate, fluid , pen tool	algorithm, data, experiment , insulation , interactive map , International Space Station , interpret , monitor, planet , satellite , sensor, temperature , thermometer .	Accept , comment , consent , content , deny , emojis , offline , permission , personal information, pop-ups , pressure , private, information, reliable , share, terms and conditions , trusted adult .



Riverside Primary School and Nursery
Key Learning and Vocabulary - Unit-by-unit
COMPUTING

Year 3						
Unit 1 Computing systems and networks 3: Journey inside a computer	Unit 2 Programming Scratch	Unit 3 Computing systems and network 2: Emailing	Unit 4 Computer systems and networks 1: Networks	Unit 5 Video trailers	Unit 6 Datahandling: Comparison cards databases	Unit 7 Online Safety
Key Learning	Key Learning	Key Learning	Key Learning	Key Learning	Key Learning	Key Learning
To recognise basic inputs and outputs.	To explore a programming application.	To understand how we communicate with technology.	To recognise what a network is.	To plan a book trailer.	To understand the terminology around databases.	To know how the internet can be used to share opinions, beliefs and facts
To identify the components inside a computer.	To program a story by adding blocks.	To understand what emails are and how to send one.	To demonstrate how information moves around a network.	To take photos or videos that tell a story.	To compare computer and paperised databases.	To explain what should be done before sharing information online
To understand the purpose of computer parts.	To plan a remix of an animation by altering an existing code.	To know how to create an email with an attachment	To demonstrate how a website works.	To edit a video.	To sort, filter and interpret data.	To identify the effects the internet can have on people's feelings
To decompose a tablet computer.	To plan a remix of an animation by altering a program's code.	To understand the importance of being kind online.	To explore the role of a router.	To add text and animation to a video.	To represent data in different ways.	To understand the ways personal information can be shared on the internet
	To evaluate a remixed program.	To recognise when an email is not genuine.	To explore the role of packet data.	To evaluate video editing.	To sort data for a purpose.	To understand the rules of social media platforms.



Riverside Primary School and Nursery
Key Learning and Vocabulary - Unit-by-unit
COMPUTING

Vocabulary	Vocabulary	Vocabulary	Vocabulary	Vocabulary	Vocabulary	Vocabulary
algorithm ,disassemble, keyboard, microphone, monitor, laptop, desktop computer, hard drive, CPU, HDD, ROM	Algorithm, code block, application, loop, program, repetition code, Scratch, animation, code, decompose, game, predict, remixing code, review, sprite, tinker	Attachment, email, link, inbox, document, emoji, content, email address, email account, font, personal information	Device, file, internet, network, network switch, packet data, router, server, wired, wireless, access points access, points,	Video trailer, camera angle, edit, sound effects, graphics, storyboard, transition, key events, clip	Data, database, field, filter, spreadsheet, information, interpret, chart, record, sort	Hoax, opinion, belief, permission, age restriction, fake news, content, privacy settings, fact, share, internet settings

Year 4						
Programming (Scratch)	HTML (Websites)	Data handling (investigating weather)	Website Design- Computing systems and networks	Collaborative learning	Computational thinking	Online safety (One lesson each unit)
Key Learning	Key Learning	Key Learning	Key Learning	Key Learning	Key Learning	Key Learning
To understand that a variable is a value that can change.	To remix existing codes.	To know that computers use different forms of input so that they can record and respond to data	To know that a website is a collection of pages that are connected	To understand that software can be used collaboratively online to work as a team	To know that combining computational thinking skills can help you solve a problem	To understand some of the methods used to encourage people to buy things online
To know what a conditional statement is in programming.	To build a webpage and create content for it.	To know that a weather machine is an automated machine that responds to data	To know that websites usually have a homepage and sub pages as well as clickable links to new pages	To know what types of comments and suggestions on a collaborative document can be helpful	To understand that pattern recognition means identifying patterns to help work out code	To understand that technology can be designed to act like or impersonate living things.
To understand that variables can help you create a quiz on Scratch.	To understand that not all information found on the internet is always fact and some sources are more trustworthy than others.	To understand that weather forecasters use specific language , expression and pre-prepared scripts to help create a weather forecast	To know that websites should be informative and interactive	To know that images , text, transitions and animations can be used in presentation slides	To understand that algorithms can be used for a number of purposes	To understand that technology can be a distraction and identify when someone might need to limit the amount of time spent using technology.



Riverside Primary School and Nursery

Key Learning and Vocabulary - Unit-by-unit

COMPUTING

To recall the features on how to use Scratch.	To understand what changing the HTML and CSS does to alter the appearance of an object on the web.	To use keywords to search for information and data on the internet	To build a webpage for a purpose and create content for it	To use a range of online software to work collaboratively with others	To use decomposition to understand and solve problems with a code	To understand what behaviours are appropriate in order to stay safe and be respectful online
To identify what a code is.	To know what the 'inspect' elements tool is and how it is used	To create a spreadsheet to record, sort and analyse data	To use software to work collaboratively with others	To recognise what appropriate behaviour is when collaborating with others	To use abstraction to identify the important parts when completing both plugged and unplugged activities	
Vocabulary	Vocabulary	Vocabulary	Vocabulary	Vocabulary	Vocabulary	Vocabulary
Broadcast block, variable, decomposition, conditional, parameters, script, orientation, sprite, tinker	Code, content, CSS, fake news, hex code, input, output, permission, script, tags, URL, component, copyright, end tag, hacking, HTML, headline, internet browser, remixing, start tag, text, webpage.	Climate zone, collaboration, evaporation, cylinder, forecast, pinwheel, script, sensor data, thermometer, forecast, backdrop, condensation, degrees, extreme weather, heat sensor, presenter, satellite, solar panel, tornado.	Assessment, checklist, content, embed, hobby, hyperlinks, insert, plan, publish, review, subpage, theme, website, collaboration, contribution, evaluate, google sites, home page, images, online, progress, record, style, tab, webpage, www- world wide web	Animations, average, bar chart, collaboration, comment, contribution, data, edited, email account, format, freeze, icon, images, insert, link, multiple choice, numerical data, pie chart, presentations, resolved, reviewing comments, share, slides, software, spreadsheets, suggestions, survey, teamwork, themes, transitions.	Abstraction, algorithm, code, computational thinking, decomposition, input, output, logical reasoning, pattern recognition, script, sequence, variable	Accuracy, Advantages, Advertisements, belief, Bot, Chatbot, Computer, Distractions, Fact, Hashtag, Implications, In-app purchases, Influencer, Opinion, Program, Recommendations, Reliable, Risks, Screen time, Search results, Snippets, Sponsored, Trustworthy.



Riverside Primary School and Nursery
Key Learning and Vocabulary - Unit-by-unit
COMPUTING

Year 5						
Unit 1 - Programming Music	Unit 2- Search Engnies	Unit 3 - Programming micro-bit	Unit 4 - Mars 1	Unit 5 - Stop motion	Unit 6 - Mars 2	Unit 7- Online Safety (1 lesson half-termly)
Key Learning		Key Learning	Key Learning	Key Learning	Key Learning	Key Learning
To tinker with scratch music elements	To understand what a search engine is and how to use it	To tinker with a piece of software	To understand how and why data is collected	To understand what animation is	To understand how bit patterns represent images as pixels	To understand how apps can access personal information
Create a program that plays themed music	To be aware that not everything online is true	To programme animation	To read and calculate using binary code	To understand what stop motion animation is	To explain hoe date for digital images can be compressed	To be aware of the positive & negatives of online communication
Plan a soundtrack program	To search effectively	To recognise coding structures	To identify the computer architecture of the mars rovers	To plan my stop motion video	To identify and explain the 'fetch, decode, execute' cycle	To understand how online information can be used to form judgements
Program a soundtrack	To create and informative poster	To create a program	To use simple operations to calculate bit patterns	To create a stop motion animation	To create a safe online profile and tinker with 3D design software	To discover ways to overcome bullying
Program music for a specific purpose	To understand how search engines work	To create a program	To represent binary as text	To edit and assess my stop motion animation	To modify the design of a 3D object using CSD software	To understand how technology can affect health & wellbeing
Vocabulary	Vocabulary	Vocabulary	Vocabulary	Vocabulary	Vocabulary	Vocabulary
Bugs, Coding, bug, debug, loop, melody, tinker, soundtrack, timbre,programming, decompose, pitch, sprite	Algorithm copyright credit fake news inaccurate Index keywords online page rank search engine TASK web crawler Website www	Hex file, code block, microbit, pedometer Bluetooth, variable, systematic, feature	Binary code, data, data transmission, mars rover, radio signal, computer simulation,	Animation, decomposition, onion skinning, fluid movement, thaumatrope,zootrope, evaluate, edit, frames	Algorithm, binary, bit, compression file CPU,data, encode JPEG, Pixels	Trusted adult Strong password app bullying meme personal information emojis



Riverside Primary School and Nursery
Key Learning and Vocabulary - Unit-by-unit
COMPUTING

--	--	--	--	--	--	--

Year 6						
Unit 1 - Intro to Python	Unit 2 - Big data 1	Unit 3 - Big data 2	Unit 4 - Computing systems and networks: AI	Unit 5 - Bletchley Park	Unit 6 - Skills showcase	Unit 7 - Online safety
Key Learning	Key Learning	Key Learning	Key Learning	Key Learning	Key Learning	Key Learning
To tinker with a new piece of software	To identify how barcodes and QR codes work	To explain how data can be safely transferred.	To explore the basics of AI	To understand there are many different types of secret codes	To design an electronic product	To describe online issues that give us negative feelings and know how to get help
To understand nested loops	To know how infrared waves transmit data	To investigate the data usage of different online activities	To recognise how AI processes and responds to text prompts	To understand the importance of having a secure password	To code and debug a programme	To explore the impact and consequences of sharing online
To understand basic python commands	To recognise how RFID is used	To identify how data collection can improve city life	To recognise how AI can be used to explore and generate images	To recognise the importance of the history of computers and create a well-researched presentation	To use CAD software to design a product	To know how to create a positive online reputation
To use loops when programming	To input and analyse real-world data	To design a system for turning a school into a smart school	To apply AI-generated HTML code to the website Trinket	To design a computer of the future	To create a website	To describe how to capture bullying content as evidence
To understand the use of random numbers	To analyse and evaluate data	To present ideas for turning a school into a smart school	To debate the ethical implications of AI	To create an audio advert for a future computer	To create a video advert	To manage personal passwords effectively
Vocabulary	Vocabulary	Vocabulary	Vocabulary	Vocabulary	Vocabulary	Vocabulary
Algorithm, command, import, input, loop,	Binary, data, infrared, privacy, QR code, radio	Big data, corrupted, internet of things, smart city, WiFi,	AI, algorithm, authenticity, ethical, code	Cipher, acrostic code, brute force hacking,	Bug, abstraction, algorithm, debug,	Digital footprint, online bullying, password,



Riverside Primary School and Nursery
Key Learning and Vocabulary - Unit-by-unit
COMPUTING

code, remix, output, repeat, indentation	waves, signal, transmission, barcode, boolean, chips, contactless, encrypted, proximity, wireless	bluetooth, threat		invention, scrambled, technological advancement, trial and error	coding	phishing, private, screen grab, block and report, digital personality, malware, online reputation, privacy setting, scammers, software update
--	---	----------------------	--	---	--------	---