



Wessex Primary School

Key Learning and vocabulary

Computing



YEAR 1

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Algorithms unplugged	Bee-Bots	Digital Imagery	Art Software – Sketchpad	Rocket to the Moon	Data Handling
Key Learning	Key Learning	Key Learning	Key Learning	Key Learning	Key Learning
To understand what an algorithm is.	To explore a new device.	To take clear photos	To log onto an iPad and access a website.	To recognise digital content can be represented in many forms.	To understand what data is. To show data in different ways.
To follow instructions precisely to carry out an action.	To understand what an algorithm is (recap) To program a device.	To understand and create a sequence of pictures to tell a story	To navigate a piece of software.	To design a rocket using a graphics editing programme.	To create a class pictogram
To understand that algorithms need to be clear and precise.			To use an iPad to draw and edit shapes.	To create and sequence a set of instructions.	To use technology to represent data.
To understand that computers and devices around us use inputs and outputs.	To teach someone how to program a Bee Bot.	To edit photos.	To draw a scene from a story using digital tools.	To build a rocket.	To collect and record data.
To understand and be able to explain what decomposition is.	To plan and follow a precise set of instructions.	To create a photo collage	To create a self-portrait using digital techniques.	To test a design and record data.	To sort data into a branching database.
To know how to debug an algorithm.	To create a programme that tells				





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	a story.				
Vocabulary	Vocabulary	Vocabulary	Vocabulary	Vocabulary	Vocabulary
algorithm computer debug device input output program	algorithm debug program device Bee Bot Instructions Code Sequence	digital image sequence blurred edit orientation crop resize	software resize fill iPad website digital duplicate	Software design digital data spreadsheet	data bar chart pictogram tally table branching database





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Year 2

Year 2					
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
What is a computer?	Algorithms and debugging	Word Processing	Programming 2 MakeCode	Stop Motion – Option 1: Using tablets	Data Handling: International Space Station
Key Learning	Key Learning	Key Learning	Key Learning	Key Learning	Key Learning
Computer parts To recognise the parts of a computer.	Dinosaur algorithm To decompose a game to predict the algorithms that are used	Getting to know the keyboard To begin to learn to touch type	Tinkering with code To explore programming in games	What is animation? To understand what animation is.	Homes in space To locate features on an interactive map.
Inputs To recognise how technology is controlled.	Machine learning To understand that computers can use algorithms to make predictions (machine learning)	Getting started with word processing To understand how to use a word processor	Tinkering with MakeCode To explore the block code features of MakeCode	My first animation To create a stop motion animation.	Space bag To create a digital drawing.
Technology Safari To recognise technology	Through the maze To plan algorithms that will solve problems.	Newspaper writing To understand how to add images to a text document	What does the code mean? To interpret a MakeCode algorithm using paper chains.	Planning my project To plan my stop motion animation.	Warmer, colder To input data in a spreadsheet
Invention To create a design for an invention	Making maps To understand what abstraction is.	Poetry book To create a poetry book using sources from the internet.	Building a program To plan and build a program in MakeCode	Creating my project To create a stop motion animation	Experiments in space To create algorithms for healthy plant growth.





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Real-world Role play To understand the role of computers	Unplugged debugging To understand what debugging is.	Digital writer To create a digital piece of writing	Evaluating a program To evaluate if a program is successful based on the MakeCode outcome.	Creating my project To create a stop motion animation.	Goldilocks planets To retrieve data from a spreadsheet.
Vocabulary	Vocabulary	Vocabulary	Vocabulary	Vocabulary	Vocabulary
battery, buttons, computer, desktop, electricity, input, laptop, mouse, output, robot, screen (monitor), tablet.	abstraction, algorithm, artificial intelligence, bug, clear, correct, data, debug, decompose, error, key features, loop, predict, unnecessary.	back button, backspace, bold, copy, keyboard, shortcut, layout, navigate, paste, copyright, cut, delete, forward, button, highlight, image, import italic, keyboard, redo, search, space bar, text, effects, touch, typing, underline, undo, word processing.	algorithm, block coding, bug, debug, evaluate, Microbit, MakeCode, program, programming, sequence.	animation, background, decompose, digital, device, drawing, flipbook, frames, moving, images, object, onion skinning, plan, still, images.	data, digital content, essential, experiment, goldilocks zone, interactive map, international space station, algorithm, astronaut, column, input, monitor, row, satellite, sensor, space, spreadsheet, survival, temperature, thermometer
Key vocabulary for each term has been highlighted					





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Year 3					
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Unit name: Online Safety	Unit name: Computing systems and networks 1: Networks	Unit name: Computing systems and networks 3: Journey inside a computer	Unit name: Computing systems and networks 2: Emailing	Unit name: Programming: Scratch	Unit name: Video trailers – Using iPads
Key Learning	Key Learning	Key Learning	Key Learning	Key Learning	Key Learning
To understand how the internet can be used to share beliefs, opinions and facts.	To recognise what a network is.	To recognise basic inputs and outputs.	To understand how we communicate with technology.	To explore a programming application.	To plan a book trailer.
To explain what should be done before sharing information online.	To demonstrate how information moves around a network.	To identify the components inside a laptop.	To understand what emails are and how to send one.	To use repetition (a loop) in a program.	To take photos or videos that tell a story.
To identify the effects that the internet can have on people's feelings.	To demonstrate how a website works.	To understand the purpose of computer parts. L3	To know how to create an email with an attachment.	To program an animation.	To edit a video.
To understand the ways personal information can be shared on the internet.	To explore the role of a router.	To understand the purpose of computer parts. L4	To understand the importance of being kind online.	To program a story.	To add text and transitions to a video.





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To understand the rules for social media platforms.	To identify the role of packet data.	To understand the purpose of computer parts.	To recognise when an email is not genuine.	To program a game.	To evaluate video editing.
		To decompose a tablet computer.			
Vocabulary	Vocabulary	Vocabulary	Vocabulary	Vocabulary	Vocabulary
age restriction, content, digital device, fact, hoax, internet	network, network switch, router, server, Wi-Fi, wireless	CPU (central processing unit), GPU (graphics processing unit), Hard drive, RAM (random access memory), ROM (read only memory), Storage	attachment, Bcc (Blind carbon copy), Cc (Carbon copy), Compose, Inbox, Email account	animation, code, code block, Scratch, Sprite, tinker	Edit, Graphics, Import, Trailer, Transition, Voiceover





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Year 4					
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Programming 1: Further coding with Scratch	Data Handling: Investigating weather	Computing systems and networks	Creating Media: Website design	Skills showcase	Programming 2: Computational thinking
Key Learning	Key Learning	Key Learning	Key Learning	Key Learning	Key Learning
To recall the key features of Scratch.	To log data taken from online sources in a spreadsheet.	To understand that software can be used to work online collaboratively.	To explore the features of Google Sites.	To recognise the role of HTML in a web page.	To understand that computational thinking is made up of four key strands.
To understand how a Scratch game works by using decomposition to identify key features.	To design a weather station.	To understand how to contribute to someone else's work effectively.	To plan content for a collaborative webpage.	To change HTML code for a specific purpose.	To understand what decomposition is and how to apply it to solve problems.
To recognise what a variable is	To design an automated machine to respond to sensor data.	To understand how to create a digital survey.	To create a webpage as part of a collaborative class website.	To recognise the basics of HTML.	To understand what pattern recognition and abstraction mean.
To understand how to make a variable in Scratch.	To understand how weather forecasts are made.	To create and share a Microsoft Form.	To plan and create a website.	To alter the HTML on a live web page.	To understand how to create an algorithm and what it can be used for.
To create a quiz using	To use tablets or	To analyse data	To create and	ML on a live web	To combine





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variables.	digital cameras to present a weather forecast.		evaluate a website.	page. To alter an image on a web page.	computational thinking skills to solve a problem.
Vocabulary	Vocabulary	Vocabulary	Vocabulary	Vocabulary	Vocabulary
<p>code block, conditional statement, coordinates, decompose, feature, information, negative number, orientation, position, program, project, script, sprite, stage, tinker, variable</p>	<p>Accurate, climate zone, condensation, cylinder, degree Celsius, evaporation, presenter, rain, satellite, script, sensor data, solar panel Filming, forecast, heat sensor, lightning, measurement, pinwheel, temperature thermometer tornado, weather weather forecast, wind speed</p>	<p>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</p>	<p>Assessment, Audience Checklist, Collaboration, Content, Contribution, Images, insert, Online, Plan, Progress, Published, Create, Design, Embed Evaluate, Features, Google Sites, Hobby, Homepage, Hyperlinks, Record, Review, Style, Subpage, Tab, Theme, Web page, Website, World Wide Web</p>	<p>Code, content, copyright, CSS, end tag, fake news, hacker, heading HTML, tags, web page, elements internet browser, paragraph, remixing, start, tag, text, unplugged, URL, web page</p>	<p>Abstraction, algorithm, code, Computational thinking, decomposition, input, logical reasoning, output, pattern recognition, script, sequence, variable</p>
Key vocabulary for each term has been highlighted					





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Year 5					
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Unit name Search engines	Unit name Mars Rover 1	Programming 2: Micro:bit	Stop-motion animation – Stop Motion Studio	Online safety: Year 5	Skills showcase: Mars Rover 2
Key Learning	Key Learning	Key Learning	Key Learning	Key Learning	Key Learning
To understand what a search engine is and how to use it.	To identify how and why data is collected from space.	To tinker with a new piece of software.	To understand what animation is.	To understand how apps can access personal information and how to alter the permissions.	To recognise how bit patterns represent images as pixels.
To be aware that not everything online is true.	To read and calculate numbers using binary code.	To program an animation.	To understand what stop motion animation is.	To be aware of the positive and negative aspects of online communication.	To explain how the data for digital images can be compressed.
To search effectively.	To identify the computer architecture of the Mars Rovers.	To recognise coding structures.	To plan a stop motion video.	To understand how online information can be used to form judgements.	To identify and explain the fetch, decode and execute cycle.
To create an informative poster.	To use simple operations to calculate bit patterns.	To create a program for a specific task.	To create a stop motion animation.	To discover ways to overcome bullying.	To learn the basics of using Tinkercad through tutorials.





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To understand how search engines work.	To represent binary as text.	To create a program.	To edit my stop motion animation.	To understand how technology can affect health and wellbeing.	To design a functional tyre for the Mars rover using Tinkercad.
Vocabulary	Vocabulary	Vocabulary	Vocabulary	Vocabulary	Vocabulary
Algorithm, copyright , credit, fake news, online, page, rank, search engine , TASK , inaccurate , index, keywords, web crawler, website , www	8-bit binary , addition, ASCII, binary code, Boolean, byte, Mars Rover, the Moon, numerical data , output, planet, radio signal, CPU , data, data transmission , decimal numbers, discovery, distance, Hexadecimal, input , RAM , scientist, sequence, signal, simulation, space, subtraction	Algorithm , Animation, App, Blocks, Bluetooth, Code block, Connection, Create, Debug, Decompose, Designing, Desktop, Device, Download , Images, Input, Instructions , Laptop, Load, Loop, Pedometer, Polling, Predict, Program, Repetition, Reset, Sabotage, Scoreboard, Screen, Systematic, Tablet, Tinkering , USB, Variables, Wifi, Wireless, Wires, Micro:bit , outputs , pairing Micro:bit Outputs Pairing	Animation , animator, background, character, decomposition , fluid, movement, frames, model, moving images, onion skinning, design, digital device , edit, evaluate, flipbook, still images, stop motion , storyboard , thaumatrope , zoetrope	Accurate, advice , app, application, app permissions, biography, bullying , communication, emojis, health, in-app purchases, information, judgement, meme, mental health, mindfulness, negative contribution , online, online communication, opinion, organisation, password, personal information , positive contribution , real world, strong password, summarise, support, trusted adult, well-being	3D, Algorithm , Binary image, CAD, Compression, CPU, Data, Drag and drop, Fetch , decode, execute, ID card, Input , JPEG, Memory , Online community, Operating system , Output , Pixels, RAM, Responsible, RGB, ROM, Safe
Key vocabulary for each term has been highlighted					





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Year 6					
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Computing systems and networks: Bletchley Park and the history of computers	Programming: Intro to Python	Data handling 1: Big Data 1	Data handling 2: Big Data 2	Skills showcase: Inventing a product-Microbit	Online safety: Year 6
Key Learning	Key Learning	Key Learning	Key Learning	Key Learning	Key Learning
To understand there are many different types of secret codes.	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 design an electronic product.	To describe online issues that give us negative feelings and know how to get help.
To understand the importance of having a secure password.	To understand nested loops.	To know how infrared waves transmit data.	To investigate the data usage of different online activities.	To code and debug a program.	To explore the impact and consequences of sharing online.
To recognise the importance of the history of computers and create a well-researched presentation.	To understand basic Python commands.	To recognise how RFID is used.	To identify how data collection can improve city life.	To use CAD software to design a product.	To know how to create a positive online reputation.
To design a computer of the future.	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 create a website.	To describe how to capture bullying content as evidence.





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To create an audio advert for a future computer.	To understand the use of random numbers.	To analyse and evaluate data.	To present ideas for turning a school into a smart school.	To create a video advert.	To manage personal passwords effectively.
					To be aware of strategies that help protect people online.
Vocabulary	Vocabulary	Vocabulary	Vocabulary	Vocabulary	Vocabulary
Acrostic, code , audio advert , brute force hacking , Caesar cipher , chip and PIN system cipher , ombination date shift , cipher discovery, invention, Nth letter, cipher, password, pigpen cipher, scrambled, script, secret, secure , technological advancement, trial and error	Algorithm , Code , Command , Design Import, Indentation, Input, Instructions, Loop , Output, Patterns, Random, Remix , Repeat , Shape	Algorithm , barcode , Boolean, brand, chip Commuter, contactless data, encrypt, infrared , Proximity, QR code, QR scanner, radio waves, RFID signal , Spreadsheet, systems Analyst, transmission wireless	Big Data, Bluetooth , Corrupted Data, Energy, GPS , Improve infrared , Internet of Things, Personal Privacy, QR codes, Revolution, RFID SIM Simulation , Smart city, Smart school , Stop motion Threat , WiFi, Wireless	Abstraction, adapt Advert, algorithm Bug. Code, coding Debug , design, edit Electronic, evaluate image rights, images information, input , loop , photos, product program, repetition, selection, sequence , software , structure, variable , video, website	Anonymity , biometrics Block, consent, digital footprint , digital personality, financial information, hacking, inappropriate, malware, online bullying , online reputation , password, personal information , phishing privacy settings , private, reliable source, report, respect, scammers screen, grab, screenshot, secure





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					selfie, software updates, two-factor authentication, URL, username
Key vocabulary for each term has been highlighted					

