

Units for curriculum planning

Key Stage 1

Cycle A

Autumn 1 Marvellous Me/ Regal Royals	Autumn 2 Paws, Claws and Whiskers	Spring 1 Amazing Adventures	Spring 2 Dazzling Dragons	Summer 1 The Great fire of London	Summer 2 Beachcombers
Computing systems and networks		Creating Media (Art links)		Data and information (Maths – statistics links)	
Technology around us 1.1 Recognising technology in school and using it responsibly	Information technology around us 2.1 Identifying IT and how its responsible use improves our world in school and beyond	Digital Painting 1.2 Choosing appropriate tools in a program to create art, and making comparisons with working non-digitally	Digital photography 2.2 Digital photography Capturing and changing digital photographs for different purposes.	Grouping data 1.4 Exploring object labels, then using them to sort and group objects by properties	Pictograms 2.4 Collecting data in tally charts and using attributes to organise and present data on a computer
2 lessons L1- 1(starter)2&3 L2- 4,5,6	2 lessons <i>All unplugged</i> L1- 1,2,3 L2- 4,5,6	3 lessons L1- 1,2 L2- 3,4 L3- 5,6	3 Lessons L1- 1(starter) 2,3 L2- 4,5 L3- 6 (unplugged)	4 Lessons L1- 1 (unplugged) L2- 2, 3 L3- 4,5 L4- 6	4 Lessons L1- 1,2 (teacher led) L2- 3 L3- 4,5 L4- 6
(Band 1) Recognise common uses of information technology in the home and school environment	(Band 2) Recognise common uses of information technology beyond school	(Band 1) Use technology purposefully to create digital content		(Band 2) Use technology purposefully to create, organise, store, manipulate and retrieve digital content	

(Band 1) Understand where to go for help and support when he/she has concerns about content or contact on the internet or other online technologies

(Band2) Use technology safely and keep personal information private

Cycle B

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Creating Media (Writing link, Music Link)		Programming A		Programming B	
Digital Writing 1.5 Using a computer to create and format text, before comparing to writing non-digitally	Making Music 2.5 Using a computer as a tool to explore rhythms and melodies, before creating a musical composition.	Moving a robot 1.3 Writing short algorithms and programs for floor robots, and predicting program outcomes.	Robot algorithms 2.3 Creating and debugging programs, and using logical reasoning to make predictions.	Programming animations 1.6 Designing and programming the movement of a character on screen to tell stories.	Programming quizzes 2.6 Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz
3 Lessons L1- 1 (starter), 2 L2- 3,4 L3- 5,6	3 Lessons L1- Starter 1, 2, 3 L2- 4,5 L3- 6	3 Lessons L1- 1 L2- 2,3,4 L3- 5,6	4 Lessons L1- unplugged- 1 (starter),2,3- L2- 4 L3- 5 L4- 6	3 Lessons L1- 1,2,3 L2- 4,5 L3- 6	5 lessons L1- 1,2 L2- 3 L3- 4 L4- 5 L5- 6
(Band 2)- Use technology purposefully to create digital content comparing the benefits of different programs		(Band 1) Predict the behaviour of simple programs (Band 2) Understand that programs execute by following precise and unambiguous instructions	(Band 2) Use logical reasoning to predict the behaviour of simple programs (Band 2) Create and debug simple programs	(Band 1) Understand what algorithms are and how they are implemented on digital devices (Band 2) Debug simple programs by using logical reasoning to predict the actions instructed by the code	(Band 2) Create simple programs

(Band 1) Understand where to go for help and support when he/she has concerns about content or contact on the internet or other online technologies

(Band2) Use technology safely and keep personal information private

Autumn 1 Stone Age to Iron Age	Autumn 2 Around the World	Spring 1 Stone Age to Iron Age	Spring 2 Costa Rica	Summer 1 The Victorians	Summer 2 Raging Rivers
Computing systems and networks		Creating Media <i>Please note- could be done as a day or outcome to present information</i>		Data and information (maths- statistics (NB- potential for Science/ data analysis)	
Connecting computers 3.1 Identifying that digital devices have inputs, processes, and outputs, and how devices can be connected to make networks.	The internet 4.1 Recognising the internet as a network of networks including the WWW, and why we should evaluate online content.	Stop-frame animation 3.2 Capturing and editing digital still images to produce a stop-frame animation that tells a story	Audio editing 4.2 Capturing and editing audio to produce a podcast, ensuring that copyright is considered.	Branching databases 3.4 Building and using branching databases to group objects using yes/no questions.	Data logging 4.4 Recognising how and why data is collected over time, before using data loggers to carry out an investigation.
4 Lessons L1- 1,2 L2- 2,3 L3- 4 L4- 5,6	3 Lessons L1- 1,2 L2- 3,4 L3- 5,6	3 Lessons L1- 1 (teacher modelled starter- youtube clip),2 L2- 4 (skip 3- prepare examples) L3- 5,6	5 Lessons L1- 1,2 L2- 3 L3- 4 L4- 5 L5- 6	3 Lessons L1- 1 (starter), 2,3- unplugged L2- 4 L3- 5,6	4 Lessons L1- Unplugged (maths link) L2- 2, 3 L3- 4,5 L4- 6
Band3- Use simple search technologies Band 3- Use simple search technologies and recognise that some sources are more reliable than others (Band 4) Understand what servers are and how they provide services to a network	Band 3-Understand that the internet is a large network of computers and that information can be shared between computers (Band 4) Understand how results are selected and ranked by search engines	Band 4- With support select and use a variety of software on a range of digital devices		Band3- With support select and use a variety of software to accomplish goals	

Band 3- Use technology safely and respectfully, keeping personal information private; Use technology safely and recognise acceptable and unacceptable behaviour Band 4- Use technology responsibly and understand that communication online may be seen by others; Understand where to go for help and support when he/she has concerns about content or contact on the internet or other online technologies

Cycle B

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
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Creating Media		Programming A1 and B1		Programming A2 and B 2	
<p>Desktop publishing 3.5</p> <p>Creating documents by modifying text, images, and page layouts for a specified purpose.</p> <p><i>Could use as a tool to present information from a wider unit</i></p>	<p>Photo editing 3.6</p> <p>Manipulating digital images, and reflecting on the impact of changes and whether the required purpose is fulfilled</p> <p>PSHE link- self-image</p>	<p>Sequencing sounds 3.3</p> <p>Creating sequences in a block-based programming language to make music.</p>	<p>Events and actions in programs 3.6</p> <p>Writing algorithms and programs that use a range of events to trigger sequences of actions</p>	<p>Repetition in shapes 4.3</p> <p>Using a text-based programming language to explore count-controlled loops when drawing shapes..</p>	<p>Repetition in games 4.6</p> <p>Using a block-based programming language to explore count-controlled and infinite loops when creating a game</p>
<p>2 Lessons</p> <p>L1- 1(starter), 2</p> <p>L2- 3(starter), 4,5</p> <p><i>Optional L3- 6</i></p>	<p>4 Lessons</p> <p>L1- 1,2</p> <p>L2- 3,4</p> <p>L3- 5</p> <p>L4- 6</p>	<p>4 Lessons</p> <p>L1- 1(starter), 2</p> <p>L2- 3,4</p> <p>L3-5</p> <p>L4- 6</p>	<p>4 Lessons</p> <p>L1- 1</p> <p>L2- 2,3</p> <p>L3- 4,5</p> <p>L4- 6</p>	<p>6 Lessons</p> <p>L1-1</p> <p>L2-2</p> <p>L3-3</p> <p>L4-4</p> <p>L5-5</p> <p>L6- 6</p>	<p>5 Lessons</p> <p>L1-1,2</p> <p>L2-3</p> <p>L3-4</p> <p>L4-5</p> <p>L5-6</p>
<p>(Band 3) Design, write and debug programs that control or simulate virtual events</p> <p>(Band 4) Select, use and combine a variety of software, systems and content that accomplish given goals</p>		<p>(Band 3) Use logical reasoning to explain how some simple algorithms work</p>	<p>(Band 4) Decompose programs into smaller parts</p>	<p>(Band 4) Use logical reasoning to detect and correct errors in algorithms and programs</p>	

Band 3- Use technology safely and respectfully, keeping personal information private

Band 3- Use technology safely and recognise acceptable and unacceptable behaviour

Band 4- Use technology responsibly and understand that communication online may be seen by others

Band 4- Understand where to go for help and support when he/she has concerns about content or contact on the internet or other online technologies

Upper Key Stage 2

Cycle A

Autumn 1 Mighty Mayans	Autumn 2 South America	Spring 1 Ancient Greeks	Spring 2 From Greenland to Panama	Summer 1 Keep Calm and Carry on	Summer 2 Rising Tides
Computing systems and networks		Creating Media		Data and information	
Sharing information 5.1 Identifying and exploring how information is shared between digital systems.	Internet communication 6.2 Recognising how the WWW can be used to communicate and be searched to find information.	Video editing 5.2 Planning, capturing, and editing video to produce a short film	Webpage creation 6.2 Designing and creating webpages, giving consideration to copyright, aesthetics, and navigation.	Flat-file databases 5.4 Using a database to order data and create charts to answer questions. <i>History, Geography and Maths Links</i>	Introduction to spreadsheets 6.4 Answering questions by using spreadsheets to organise and calculate data.
3 Lessons L1- 1,2 L2- 3,4 L3- 5,6 (1/2 unplugged)	4 Lessons L1- 1 L2- 2 L3- 3,4 L4- 5,6	4 lessons L1- 1,2 L2- 3,4 L3- 5 L4-6	3 Lessons L1- 1, 2- UNPLUGGED L2- 3(starter), 4 L3- 5,6	5 Lessons L1- 1 L2- 2,3 L3-4 L4-5 L5-6	5 Lessons L1- 1,2 L2- 3 L3-4 L4-5 L5- 6
<ul style="list-style-type: none"> (Band 5) Begin to use internet services to share and transfer data to a third party (Band 5) Use filters in search technologies effectively (Band 6) Use filters in search technologies effectively and is discerning when evaluating digital content (Band 6) Understand how computer networks enable computers to communicate and collaborate (Band 6) Be discerning when evaluating digital content 		<ul style="list-style-type: none"> (Band 5) Independently select, use and combine a variety of software to design and create content for a given audience (Band 6) Independently select, use and combine a variety of software to design and create content for a given audience, including collecting, analysing, evaluating and presenting data and information (Band 5) Use filters in search technologies effectively and appreciates how results are selected and ranked (Band 6)- Begin to use internet services within his/her own creations to share and transfer data to a third party 		<ul style="list-style-type: none"> (Band 5) Independently select and use appropriate software for a task (Band 6)- Independently select, use and combine a variety of software to collect, analyse, evaluate and present data and information 	

(Band 5) Understand the need to only select age appropriate content; (Band 6) Use technology respectfully and responsibly

(Band 6) Identify a range of ways to report concerns about content and contact in and out of school

Cycle B

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
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Creating Media <i>Art link, DT link</i>		Programming A1 and B1		Programming A2 and B2	
Vector drawing 5.5 Creating images in a drawing program by using layers and groups of objects	3D modelling 6.5 Planning, developing, and evaluating 3D computer models of physical objects.	Selection in physical computing 5.3 Exploring conditions and selection using a programmable microcontroller	Selection in quizzes 5.6 Exploring selection in programming to design and code an interactive quiz.	Variables in games 6.3 Exploring variables when designing and coding a game	Sensing 6.6 Designing and coding a project that captures inputs from a physical device
4 Lessons L1- 1,2 L2- 3,4 L3- 5 L4- 6	4 Lessons L1- 1,2 L2- 3 L3-4 L4- 5,6	4 Lessons L1-1,2 L2 -3,4 L3- 5 L4-6	5 Lessons L1-1,2 L2-3 L3-4 L4-5 L5-6	6 Lessons L1-1 L2-2 L3-3 L4-4 L5-5 L6-6	6 Lessons L1-1 L2-2 L3-3 L4-4 L5-5 L6-6
Band 6 Design and create a range of programs, systems and content for a given audience		<ul style="list-style-type: none"> Band 5- Design, input and test an increasingly complex set of instructions to a program or device Band 5- Design write and test simple programs with opportunities for selection, where a particular result will happen based on actions or situations controlled by the user Band 5- Use logical reasoning to explain how increasingly complex algorithms work to ensure a program's efficiency Band 6- Include use of sequences, selection and repetition with the hardware used to explore real world systems Band 6- Solves problems by decomposing them into smaller parts 		<ul style="list-style-type: none"> Band 6 Create programs which use variables Band 6- Use variables, sequence, selection, and repetition in programs <ul style="list-style-type: none"> Band 6- Use logical reasoning to explain how increasingly complex algorithms work and to detect and correct errors in algorithms and programs efficiently Band 5- Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems Band 5- Design, write and test simple programs that follow a sequence of instructions or allow a set of instructions to be repeated 	

(Band 5) Understand the need to only select age appropriate content; (Band 6) Use technology respectfully and responsibly

(Band 6) Identify a range of ways to report concerns about content and contact in and out of school