

**Mulberry Bush School**  
**Computing Curriculum: Long Term Progression Plan**

Stage	NC	Autumn		Spring		Summer	
<b>S1- Cherwell &amp; Windrush</b>	<b>CS</b>	<p><b>Unit: Bot Algorithms</b> Algorithms: Tea-Bot to make tea or coffee. Sandwich-Bot making jam sandwiches written work. Find the Fish (4-5 lessons)</p> <p><i>Cross curricular opportunities:</i> <b>English:</b> Instructional text, <b>DT:</b> Recipes <b>PE:</b> Co-ordinates</p>	<p><b>Unit: Robot</b> Robot Map: Directions to move squares (Verbal) (4-5 lessons)</p> <p><u>Software-</u> Internet based- Rommy the Robot: Explore, then write own maze. <u>Software-</u> Purple Mash- 2 DIY 3D make a maze game.</p> <p><i>Cross curricular opportunities:</i> <b>Maths:</b> Directions RT, L, FD, BK <b>Science:</b> Oceans and Seas / Weather Experts</p>	<p><b>Unit: Tile Algorithm</b> Light-bot, / ALEX Pupil bot L,R,F,B, Over (Visual) (4-5 lessons)</p> <p><u>Software-</u> Internet Light bot Hour of Code (Stage one levels only) or <u>APP-</u> Lightbot Jnr / A.L.E.X.</p> <p><i>Cross curricular opportunities:</i> <b>Maths:</b> Directions RT, L, FD, BK</p>	<p><b>Unit: Algorithms</b> Logo <u>Software-</u> Purple Mash- Logo (2-3 lessons)</p> <p><i>Cross curricular opportunities:</i> <b>Maths:</b> 2 D- shape drawing and identification</p>	<p><b>Unit: 2 GO</b> <u>Software-</u> Purple Mash- 2 GO (2-3 lessons)</p> <p><i>Cross curricular opportunities:</i> <b>Maths:</b> Co-ordinates</p> <p><b>Unit: BeeBots</b> BeeBots Line Dancing BeeBot software or app</p> <p><i>Cross curricular opportunities:</i> <b>Music:</b> famous Composers <b>Maths:</b> Co-ordinates <b>PE:</b> Co-ordinates</p>	<p><b>Unit: Scratch Jnr</b> <u>App-</u> Scratch Jnr (5 lessons)</p> <p><i>Cross curricular opportunities:</i> <b>English:</b> Narrative stories <b>History:</b> Famous for more the 5 minutes</p>
	<b>DL</b>	<p><b>Unit: Word Processing</b> Text, Insert picture, shape, text box (2-3 lessons)</p> <p><u>Software-</u> Purple Mash- 2 Simple Publish / 2 Connect/ 2 Create story / 2 write / MS Word or Publisher (Top Trump Card)</p> <p><i>Cross curricular opportunities:</i> <b>Science:</b> Forces</p>	<p><b>Unit: Power Point</b> Basic slides, pictures, transitions. (2-3 lessons)</p> <p><u>Software-</u> Purple Mash- 2 Simple Publish Plus 2 <u>Extn</u> MS PPT</p> <p><i>Cross curricular opportunities:</i> <b>Science:</b> Oceans and Seas / Weather Experts</p>	<p><b>Unit: Spreadsheets</b> Data Handling – Examples -Shopping prices, tables, Sum / (1-2 lessons)</p> <p><u>Software-</u> Purple Mash- 2 Count / 2 Calculate Extn 2 Simple Graph</p> <p><i>Cross curricular opportunities:</i> <b>Maths:</b> Data Handling</p>	<p><b>Unit: Photo</b> picture editing Camera Ipads. (2-3 lessons)</p> <p><u>Software-</u> MS Paint Cropping / NCH paint pad</p> <p><i>Cross curricular opportunities:</i> <b>E-Safety:</b> Poster or information leaflet on Privacy, Digital Footprint and reputation <b>English:</b> Information Texts</p>	<p><b>Unit: Audio</b> Sound buttons, TTS Easi Speak? file transfer (3-4 lessons)</p> <p><u>Software-</u> Sound buttons, TTS Easi Speak?, Purple Mash- 2 Simple Animate</p> <p><i>Cross curricular opportunities:</i> <b>English:</b> Speaking and listening- Living things and their habitats</p>	<p><b>Unit: Video</b> Video – iPad Camera, class camera, simple editing (3-4 lessons)</p> <p><u>APP-</u> Lego Movie maker / Adobe Spark Video/ I Movie</p> <p><i>Cross curricular opportunities:</i> <b>DT:</b> Cooking recipes from the past <b>Music:</b> From the 50's</p>

		experiment display / Animals – life cycles or Humans - Hygiene					and 60's
	<b>E –Safety</b>	<b>Units: Internet Safety, Information Literacy</b> (4 lessons note Lesson 3 & 4 link with Topic work) <b>and Cyberbullying</b> (1 lessons) To link with Anti Bullying week (Oct – Nov)		<b>Units: Privacy, Digital Footprint and reputation</b> (2 lessons)		<b>Units: Relationships and communication, Cyberbullying</b> (2-3 lessons)	
<b>S2 – Cherwell &amp; Windrush</b>	<b>CS</b>	<b>Unit: Simple Algorithms</b> Creating algorithms, sequencing, problem solving. <b>(2 lessons)</b>  <u>App-</u> Fix_the Factory and Daisy the Dino (2 lessons) <u>Software-</u> Purple Mash- 2 Code-Chimp Level	<b>Unit: Complex Algorithms</b> (Masking Tape Co-ordinates grid. Treasure island map or Battle Ships, change algorithm to visit points in different orders) <b>(2 lessons)</b>  <u>Software-</u> Purple Mash- 2 Code-Chimp Level / 2 DIY 3D make a maze game design first in an unplugged lesson.  <i>Cross Curricular opportunities:</i> <b>Maths:</b> Co-ordinates	<b>Unit: Tynker First Coding</b> <b>(4 lessons)</b>  <u>App-</u> Tynker (Hour Code) Candy Quest,	<b>Unit: Computer Functions</b> History and how a computer works, junk model <b>(2 lessons)</b>  <i>Cross curricular opportunities:</i> <b>Art:</b> Modelling <b>DT:</b> Modelling  <b>Unit Algorithms</b> Program, monitor and control  <u>Software-</u> Lego <i>Cross curricular opportunities:</i>	<b>Unit: Databases</b> <b>(2 lessons)</b>  <u>Software-</u> Purple Mash- 2 Investigate search Mini beasts / Pond on lake fish database and make a simple database  <i>Cross curricular opportunities:</i> <b>Maths:</b> Data Handling <b>Science:</b> living things and Habitats	<b>Unit: Scratch Basics</b> Familiarisation basic blocks, sprite and backdrops <b>(4-5 lessons)</b>  <u>App-</u> Scratch Jnr  <i>Cross curricular opportunities:</i> <b>English:</b> Narrative story telling WWI <b>History:</b> WWI
	<b>DL</b>	<b>Unit: Spreadsheets</b> Data Handling – Examples -Shopping prices, tables, Sum / (1-2 lessons)  <u>Software-</u> Purple Mash- 2 Simple Graph / Excel  <i>Cross curricular</i>	<b>Unit: Word Genre writing</b> <b>(2 lessons)</b>  <u>Software-</u> Purple Mash- 2Publish / 2 Write / MS Word  <i>Cross curricular opportunities:</i>  layout for genre. 2	<b>Unit: Power Point</b> <b>(2 lessons)</b> Topic link, hyperlinks, transitions, Animations <i>Cross curricular opportunities:</i>	<b>Unit: Photostory</b> <b>(2 lessons)</b> Take pictures to tell a story  <u>App-</u> Skitch or Pic Collage  <i>Cross curricular opportunities:</i>	<b>Unit: Audio</b> <b>(2 lessons)</b>  Audacity, Record an audio story. Capturing composed music  <i>Cross curricular opportunities:</i>	<b>Unit: Video</b> <b>(2 lessons)</b>  Video of still pictures, add sound effects and music App: iMovie  <i>Cross curricular opportunities:</i>

		<i>opportunities:</i> <b>Maths:</b> Data Handling	Present templates				
	<b>E –Safety</b>	<b>Units: Internet Safety, Information Literacy</b> (4 lessons note Lesson 3 & 4 link with Topic work) <b>and Cyberbullying</b> (1 lessons) To link with Anti Bullying week (Oct – Nov)		<b>Units: Privacy Self-Image and Identity Digital Footprint and reputation</b> (2 lessons)		<b>Units: Relationships and communication Cyberbullying</b> (2 lessons)	
<b>S2 – Evenlode &amp; Thames</b> NB Children not repeat this stage if S2 Cherwell & Windrush has been used	<b>CS</b>	<b>Unit: Simple Algorithms</b> Creating algorithms, sequencing, problem solving.  <u>App-</u> Fix the Factory and Daisy the Dino  (2 lessons) <u>Software-</u> Purple Mash- 2 Code-Chimp Level (2 lessons)	<b>Unit: Complex Algorithms</b> (Masking Tape Co-ordinates grid. Stone – Iron Age, change algorithm to visit points in different orders)  <u>Software-</u> Purple Mash- 2 Code-Chimp Level /2 DIY 3D make a maze game design first in an unplugged lesson. (2 lessons)  <i>Cross Curricular opportunities:</i> <b>Maths:</b> Co- ordinates <b>History:</b> Stone – Iron Age	<b>Unit: Tynker First Coding</b> <u>App-</u> Tynker (Hour Code) Candy Quest, (4 lessons)	<b>Unit: Computer Functions</b> History and how a computer works, junk model  <i>Cross curricular opportunities:</i> <b>Art:</b> Modelling <b>DT:</b> Modelling (2 lessons)  <b>Unit Algorithms</b> Program, monitor and control <u>Software-</u> Lego <i>Cross curricular opportunities:</i> <b>Art:</b> Modelling <b>DT:</b> Modelling (2-3 lessons)	<b>Unit: Databases</b> (2 lessons)  <u>Software-</u> Purple Mash- 2 Investigate search Mini beasts / Pond on lake fish database and make a simple database  <i>Cross curricular opportunities:</i> <b>Maths:</b> Data Handling <b>Science:</b> living things and Habitats	<b>Unit: Scratch Basics</b> Familiarisation basic blocks, sprite and backdrops (4-5 lessons)  <u>App-</u> Scratch Jnr  <i>Cross curricular opportunities:</i> <b>English:</b> Narrative story telling WWI <b>History:</b> WWI
	<b>DL</b>	<b>Unit: Spreadsheets</b> Data Handling – Examples -Shopping prices, tables, Sum / (1-2 lessons)  <i>Cross curricular opportunities:</i> <b>Maths:</b> Data	<b>Unit: Word</b> (2 lessons)  <i>Cross curricular opportunities:</i>  layout for genre. 2 Present templates	<b>Unit: Power Point</b> (2 lessons)  <i>Cross curricular opportunities:</i>  Topic link, hyperlinks, transitions,	<b>Unit: Photostory</b> Take pictures to tell a story /iPad: Skitch or Pic Collage (2 lessons)  <i>Cross curricular opportunities:</i>	<b>Unit: Audio</b> (2 lessons)  Audacity, Record an audio story. Capturing composed music  <i>Cross curricular opportunities:</i>	<b>Unit: Video</b> (2 lessons)  Video of still pictures, add sound effects and music App: iMovie

		Handling <u>Software-</u> Purple Mash- 2 Simple Graph / Excel		Animations	<b>English:</b> Narrative – Traditional Tales / Stories from other Cultures		
	<b>E –Safety</b>	<b>Units: Internet Safety, Information Literacy, Creative Copywrite (3-4 lessons) &amp; Cyberbullying (Oct – Nov)</b>		<b>Units: Privacy Self-Image and Identity Digital Footprint and reputation (2 lessons)</b>		<b>Units: Relationships and communication Cyberbullying (2 lessons)</b>	
<b>S3- Evenlode &amp; Thames</b>	<b>CS</b>	<b>Unit: Scratch Cards</b>  <u>Program-</u> Internet Scratch: Skills cards to build full algorithms (Online help section in Scratch)	<b>Unit: Lightbot Loops</b> Lightbot Loops Proc 1 & 2 Web: Hour of code version App: Lightbot Hour of code	<b>Unit: Logo</b> Logo: Drawing lines of reflection with Mirrors (Purple Mash, 2 Simple)  Software: FMS Logo - Laptops	<b>Unit: Scratch Spiro</b> Scratch Spirograph. Make shapes, create complex pictures from shapes  Scratch online or program	<b>Unit: Kodu</b> Basic game making, one sprite point scoring, landscapes	<b>Unit: Scratch Story</b> Scratch Animated story book. (The Black Hole / stimulus e.g. picture)  Simple scene form a book two sprites tell story uses all coding blocks
	<b>DL</b>	<b>Unit: Word</b> Words Vs Pages: Create table: Greek Gods Top Trump	<b>Unit: Spreadsheets</b> Excel Vs Numbers: Class survey on shoe size, produce graph, interpret <i>Cross curricular opportunities:</i> <b>Maths:</b> Data Handling Excel	<b>Unit: Video</b>  Power Point Vs Keynote: Insert video or animations	<b>Unit: Design</b>  2 Design & Make DT & Maths Nets, appearance of car designs	<b>Unit: Email</b>  How to e-mail and include attachments. E-Safety, Phising emails	<b>Unit: Video</b>  Record video and edit sounds in Audacity Software: Movie Maker App: iMovie
	<b>E –Safety</b>	<b>Units: Internet Safety, Information Literacy, Creative Copywrite (3-4 lessons) &amp; Cyberbullying (Oct – Nov)</b>		<b>Units: Privacy Self-Image and Identity Digital Footprint and reputation (2 lessons)</b>		<b>Units: Relationships and communication Cyberbullying (2 lessons)</b>	
<b>S4 – Evenlode &amp; Thames</b>	<b>CS</b>	<b>Unit: Scratch Game Remix</b> Scratch: Remix of the racing car game, create own track to race	<b>Unit: Logo</b> Building design: Sequence to draw the letters for a new type font. Masking tape on floor first	<b>Unit: Tynker</b> Intermediate level – Code Commander & Debugger  Website: Tynker	<b>Unit: Understanding how internet works</b> False internet pages. Pacific Northwest Tree	<b>Unit: Scratch</b> Scratch Cards and project  Scratch online or program	<b>Unit: Data flow in Network</b> Infrastructure Server, cabling, data around the world

				Hour of Code App: Tynker	octopus, trusting information, reliable sources		TIO Consultant to support teachers
	<b>DL</b>	Newsletter from class learning from term  Pupils pick appropriate program: Word, Pages, Publisher	Calculate total cost of ingredients in recipe divide per person. Compare ingredients in three super markets	Prezi Multimedia presentation (Note: projects save online and are open to public. NO personal information and discuss e-safety)  Geography – Why is London a cool place to live?	Web research: Enter given URL, research answers to questions Purple Mash Web design template	Multimedia Create year book or celebration Compose in Garage band and cut together in iMovie	SketchUp 2D Design plan view of dream bedroom
	<b>E –Safety</b>	<b>Units: Internet Safety, Information Literacy, Creative Copywrite (3-4 lessons) &amp; Cyberbullying (Oct – Nov)</b>		<b>Units: Privacy Self-Image and Identity Digital Footprint and reputation (2 lessons)</b>		<b>Units: Relationships and communication Cyberbullying (2 lessons)</b>	

CS = Computing Science (Coding)

DL = Digital literacy

E-Safety

#### INTERNET SAFETY

Pupils and students explore how the internet offers an amazing way to collaborate with others worldwide, while staying safe through employing strategies such as distinguishing between inappropriate contact and positive connections. These foundational skills are just the beginning!

#### PRIVACY SECURITY

Pupils and students learn strategies for managing their online information and keeping it secure from online risks such as identity thieves and phishing. They learn how to create strong passwords, how to avoid scams and schemes, and how to analyse privacy policies.

#### SELF-IMAGE IDENTITY

These lessons are designed to help pupils and students explore their own digital lives, focusing on their online versus their offline identity. Pupils and students learn the benefits and risks of personas and the effects on their sense of self, their reputation, and their relationships.

#### RELATIONSHIPS COMMUNICATION

Pupils and students reflect on how they can use intrapersonal and interpersonal skills to build and strengthen positive online communication and communities. They delve into the concept of digital citizenship and digital ethics, and they reflect on their online interactions.

#### CYBERBULLYING

Children learn what to do if they are involved in a cyberbullying situation. They explore the roles people play and how individual actions – both negative and positive – can impact their friends and broader communities. Pupils and students are encouraged to take the active role of up stander and build positive, supportive online communities.

#### DIGITAL FOOTPRINT REPUTATION

Pupils and students learn to protect their own privacy and respect others' privacy. Our digital world is permanent, and with each post pupils and students are building a digital footprint. By encouraging pupils and students to self-reflect before they self-reveal, they will consider how what they share online can impact themselves and others

#### CREATIVE CREDIT COPYRIGHT

Living in a “copy/paste” culture, pupils and students need to reflect on their responsibilities and rights as creators in the online spaces where they consume, create, and share information. From addressing plagiarism to piracy, pupils and students learn about copyright and fair use.

#### INFORMATION LITERACY

Information Literacy includes the ability to identify, find, evaluate, and use information effectively. From effective search strategies to evaluation techniques, pupils and students learn how to evaluate the quality, credibility, and validity of websites, and give proper credit.

#### INTERNET SAFETY

Pupils and students explore how the internet offers an amazing way to collaborate with others worldwide, while staying safe through employing strategies such as distinguishing between inappropriate contact and positive connections. These foundational skills are just the beginning!

## Curriculum Resources

### Hardware

? x desktop computers

6 x iPads

4 x BeeBots,

1 x Lego Mindstorm

cameras

microphones

Old Computers – TIO to dismantle and prep

### Software

Microsoft Office: Word, Excel, PowerPoint, Publisher

2 Simple Software: 2 Paint, 2 Create A Story, 2 Publish

Ace Monkey KS1& K2

Nessy Learning 4

Clicker

Floppys Phonics

Work Shark 4

Number Shark

2 Simple Collection – Consider Purchase? ON THE PLAN 2 investigate £200 1 off 20 m/c's 2 Email £200 1 off 20 m/c's

Audacity – Install FREE

FMS Logo – Install FREE

### **Apps**

Bobo & Light – Science modelling

Essential Skeleton

Meet Science 2 – Virtual experiments

Oxford Reading Tree – Phonics

ABC Mysteriez – To delete

Duo Lingo – MFL Spanish

SketchBook – Drawing pad

Letter Lillies - Phonics

Hopscotch – KS2 Coding

Collins Ebooks – Reading and creating

Toy Story – Ebook

Aviry

Earth Viewer

Scratch Jnr – KS1 Coding

Animal – Animal soundboard

BeeBot

GarageBand – Music Creation

Beatwave – Music oops and smaples

Marvin – Ereader with books out of copyright.

Pirate Treasure Hunt – Spelling words

Doodle Maths - DELETE

Doodle Buddy

Number Kiz – Shape drawing tool

Into Science – Subscription science resources

Splash Math – All areas of maths but only geometry free

Lightbot Jnr – PURCHASE and install

A.L.E.X. – Install FREE

Fix the Factory – Install FREE

Daisy the Dino – Install FREE

Tynker Hour of Code – Install FREE

## **Websites**

Mathletics

Action Points:

General training to improve the use of:

- Mathletics. Set learning levels, use in plenary
- Word Shark, Number Shark, Clicker (Some computers)
- Dance mat typing
- SIM Writer, speech and language therapy