CURRICULUM MAPPING FOR: COMPUTING

<table>
<tr><th>EYFS</th><th>Term 1</th><th>Term 2</th><th>Term 3</th><th>Term 4</th><th>Term 5</th><th>Term 6</th></tr>
<tr><td>Themes</td><td>Settling into school
Autumn</td><td>Colour and magic
Diwali
Christmas</td><td>Winter
Space
Chinese New Year</td><td>Pets
Spring
Easter and Eggs</td><td>Growing/Gardening
Farms
When I Grow Up</td><td>The World
Journeys & Maps
Celebration of cultures
Summer</td></tr>
<tr><td>Development Matters</td><td colspan="6">Communication and Language: learn new vocabulary, use new vocabulary through the day
Personal, Social and Emotional Development: Show resilience and perseverance in the face of challenge, build constructive and respectful relationships, think about the perspectives of others
Physical Development: use tools competently, safely and confidently
Expressive Arts and Design: return to and build on their previous learning, refining ideas and developing their ability to represent them</td></tr>
<tr><td>EYFS Statutory Framework and ELG</td><td colspan="6">Understanding the World, statutory framework: “foster their understanding of our culturally, socially, technologically and ecologically diverse world. “
Personal, Social and Emotional Development, ELG: show an understanding of their own feelings and those of others, and begin to regulate their behaviour accordingly; set and work towards simple goals, being able to wait for what they want and control their immediate impulses when appropriate; work and play cooperatively and take turns with others</td></tr>
<tr><td rowspan="2">How this is achieved and skills are developed in EYFS at Paulton Infant School:</td><td colspan="2">Autumn Term:
Introduction to online safety
Learn to use technology (iPads, IWB, Coomber) gently and carefully (e.g. use away from water, one button at a time, gentle use of touch screen)
Begin to explore age appropriate apps on iPads (Lego/Duplo; Tux Paint, DoodleBuddy)
Begin to use an interactive whiteboard</td><td colspan="2">Spring Term:
Continued discussion around online safety
Continue to use age appropriate apps on iPads and access technology within the classroom (Vooks, Epic Books)
Begin to explore simple robots including Beebots and Ozobots
Introduce the idea of ‘programming’ through giving/writing instructions and controlling simple robots</td><td colspan="2"><u>Summer Term:</u>
Continued discussion around online safety
Continue to use age appropriate apps on iPads and technology within the classroom (Lego/Duplo; Tux Paint, DoodleBuddy, Vooks, Epic Books)
Know and talk about sensible amounts of ‘screen time’ to support health and wellbeing
Further develop understanding of uses of technology and programming</td></tr>
<tr><td colspan="6"><u>Vocabulary</u>

Technology, iPad, tablet, app or program, interactive white board (IWB), safe, online, safety, beebot, command, floor robot</td></tr>
</table>

CURRICULUM MAPPING FOR: COMPUTING

KS1 Computing NC Four areas: Programming Wider use of technology Building skills Internet Safety

Year 1

	TERM 1	TERM 2	TERM 3	TERM 4	TERM 5	TERM 6
Teach Computing Thread	**Computing systems and networks** 1.1 Technology around us *Recognising technology in school and using it responsibly*	**Creating Media** 1.2 Digital painting *Choosing appropriate tools in a program to create art, and making comparisons with working non-digitally.*	**Programming A** 1.3 Moving a robot *Writing short algorithms and programs for floor robots, and predicting program outcomes*	**Data and Information** 1.4 Grouping Data *Exploring object labels, then using them to sort and group objects by properties*	**Creating Media** 1.5 Digital Writing *Using a computer to create and format text, before comparing to writing non-digitally.*	**Programming B** 1.6 Programming Animations *Designing and programming the movement of a character on screen to tell stories.*
NATIONAL CURRICULUM	Use technology safely and respectfully, keeping personal information private. Identify where to go for help and support about content or contact on the Internet or other online technologies. Recognise common uses of information technology beyond school. Use technology purposefully to create, organise, store, manipulate and retrieve data.	Use technology to purposefully create, store, manipulate and retrieve digital content.	Understand what algorithms are. Understand how (simple) algorithms are implemented as programs on digital devices. Know that programs execute by following precise and unambiguous instructions. Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs Recognise common uses of information technology beyond school.	Use technology purposefully to create, organise, store, manipulate and retrieve data. Use technology safely and respectfully, keeping personal information private.	Use technology purposefully to create, organise, store, manipulate and retrieve data. Use technology safely and respectfully, keeping personal information private.	Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs.
SKILLS	- locate examples of technology in the classroom. - switch on and log into a computer or iPad. - use a keyboard to type my name. - save my work. - talk about ways to stay safe online.	- select an appropriate app for digital painting. - make marks on a screen and use appropriate tools to draw a picture. - select shape and line tools and use them to make marks. - choose appropriate tools and colours to recreate the work of an artist. - change the colour and brush size. - explain that pictures can be made in lots of different ways.	- match a command to an outcome. - predict the outcome of a command on a device. - run a command on a device. - follow instructions. - give directions. - predict the outcome of a series of commands. - experiment with different commands to move a robot. - plan a sequence of commands to create a program and explain what it should do. - debug my program.	- identify a label for a group of objects. - count objects. - group objects. - record how many objects are in a group. - record and share my findings.	- identify and find keys on a keyboard. - open a word processor. - enter texts into a computer. - use backspace to remove text. - identify the toolbar and use bold, italic and underline. - change the font. - make changes to text on a computer.	- choose a command for a given purpose. - run a program on a programming app. - use commands to move a spite in Scratch Jr. - use a start block in a program. - join programming blocks together to make a series of commands. - change the value of a programming block. - choose appropriate artwork for my project. - create an algorithm for a sprite. - delete a sprite. - test and debug programs I have created.

CURRICULUM MAPPING FOR: COMPUTING

KNOWLEDGE	Know what technology is. Know what a computer is.	Know what freehand tools are. Know that different paint tools do different jobs.	Know that a Beebot is a device. Know what a command is. Know that commands can make a sequence called a program. Know that debug means to identify a problem and find a solution in a sequence of commands.	Know that objects can be counted. Know that information can be recorded in different ways. Know that objects can be grouped by similarity.	Know that a computer can be used to produce text and store information. Know that text can be created, edited and saved. Know the difference between writing and typing.	Know what a sprite is. Know that a programming block gives a command. Know that commands can make a sequence called a program. Know that debug means to identify a problem and find a solution in a sequence of commands. Know what happens when the value of a programming block is changed.
KEY TECHNOLOGY	iPad Bluetooth keyboards Word processing software Paintz.app	iPads Tux app Doodle Buddy app	Bee Bots Ozobots	iPad Google slides or PowerPoint	iPad Bluetooth keyboards Word processing software	iPads Scratch jr app
VOCABULARY	Technology Computer Mouse Keyboard Screen Double-click Typing	Paint program Tool Paintbrush Erase Fill Undo Primary colours Shape tool Line tool Fill tool	Forwards Backwards Turn Clear Go Commands Instructions Directions Left Right	Object Label Group Search Image Label Property Colour Size Shape Value Data set More Less Most Fewest The same	Word processor Keyboard Keys Letters Type Numbers Space Backspace Text cursor Capital letters Toolbar Bold Italic Underline Select Font Undo Redo Format Compare Typing Writing	Scratch Jr Beebot Command Sprite Compare Programming Programming area Block Value Design Joining Start block Run Background Delete Reset Algorithm Predict Effect Change Debug
ASSESSMENT OPPORTUNITIES	Learners will be able to identify examples of technology within the classroom. Learners will be able to turn on an iPad or computer. Learners will be able to type their name using a physical keyboard. Learners will be able to talk about how to use technology safely, including online.	Learners will be able to open a paint program/app. Learners will be able to use tools to create a simple painting.	Learners will be able give instructions to partner and follow instructions. Learners will be able to give forwards and backwards commands to a floor robot. Learners will be able to input commands to move a robot to a given location.	Learners will be able to match an object to a predefined group. Learners will be able to identify the property of an object. Learners will be able to describe groups of objects and record how many are in each group. Learners will be able to answer questions about their data.	Learners will be able to open a word processor. Learners will be able to use the keyboard to add text to a document. Learners will be able to demonstrate their understanding of the keys they have learnt about. Learners will be able to demonstrate their knowledge of formatting tools they've learnt about.	Learners will be able to use a given algorithm to create a simple program. Learners will be able to predict the outcome once a program is run. Learners will be able to design their own program, test and debug it.
LINKS TO EDUCATION FOR A CONNECTED WORLD	**Health, well-being and lifestyle**			**Privacy and security**	**Copyright and Ownership** I know that work I create belongs to me	

	I can identify rules that help keep us safe and healthy in and beyond the home when using technology. I can give some simple examples. **Copyright and Ownership** I know that the work I create belongs to me I can name my work so that others know it belongs to me			I can give reasons why I should only share information with people I chose to and can trust.	I can name my work so that others know it belongs to me	

CURRICULUM MAPPING FOR: COMPUTING

KS1 Computing NC Four areas: Programming | Wider use of technology | Building skills | Internet Safety

Year 2

	TERM 1	TERM 2	TERM 3	TERM 4	TERM 5	TERM 6
Teach Computing Thread	**Computing systems and networks** 2.1 Information technology around us *Identifying IT and how its responsible use improves our world beyond school*	**Creating Media** 2.2 Digital Photography *Capturing and changing digital photographs for different purposes.*	**Programming A** 2.3 Programming Robot Algorithms *Creating and debugging programs and using logical reasoning to make predictions.*	**Data and information** 2.4 Pictograms *Collecting data in tally charts and using attributes to organise and present data on a computer*	**Creating Media** 2.5 Making Music *Using a computer as a tool to explore rhythms and melodies, before creating a musical composition*	**Programming B** 2.6 Programming Quizzes *Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz.*
NATIONAL CURRICULUM	Use technology to purposefully create, store, manipulate and retrieve digital content. Use technology safely and respectfully, keeping personal information private. Identify where to go for help and support about content. Recognise common uses of information technology beyond school.	Use technology purposefully to create, organise, store, manipulate and retrieve data. Recognise common uses of information technology beyond school. Use technology safely and respectfully, keeping personal information private. Identify where to go for help and support about content or contact on the Internet or other online technologies.	Review what an algorithm is. Implement (increasingly complex) algorithms to program software. Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs Use technology safely and respectfully, keeping personal information private. Identify where to go for help and support about content or contact on the Internet or other online technologies.	Use technology to purposefully create, store, manipulate and retrieve digital content. Use technology safely and respectfully, keeping personal information private. Identify where to go for help and support about content.	Use technology to purposefully create, store, manipulate and retrieve digital content.	Review what an algorithm is. Implement algorithms to program software. Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs.
SKILLS	- describe some uses of computers. - identify examples of technology. - identify examples of information technology. I recognise common types of technology. - explain why we use technology.	- capture a digital photo. - explain how to take a photograph. - take photos in landscape and portrait format. - improve a photo by retaking it. - experiment with different lighting. - identify which photos are real and which are not or have been edited.	- give instructions. - follow instructions. - create an algorithm using commands. - program a sequence on a floor robot. - predict the outcome of a sequence of commands. - create an algorithm to meet a goal. - design a map for a floor robot.	- record data in a tally chart. - compare totals in a tally chart. - enter data onto a computer. - use a computer to view data in a another format. - use a pictogram to answer simple questions about objects. - use a tally chart to create a pictogram. - answer more/less than and most/least questions about an attribute. - choose a suitable attribute to compare people. - collect the data I need. - create a pictogram using the data I have collected.	- describe how music makes me feel. - identify some differences in music. - create a rhythm pattern. - create and refine my musical pattern on a computer. - use a computer to make a musical pattern using three notes. - explain my choices. - save my work.	- identify the start of a sequence. - run a program. - change the outcome of a sequence of commands. - predict the outcome of a sequence of commands. - build sequences of blocks. - choose appropriate blocks to meet a design. - design a project. - compare my project to my design. - debug my program.

CURRICULUM MAPPING FOR: COMPUTING

				- use a computer program to present my data in different ways.		
KNOWLEDGE	Know what technology is and where it is found. Know the difference between technology and information technology. Know how to use technology safely including going online. Know some uses of technology in school and beyond school.	Know what a photograph is and what devices can produce a photograph. Know that photos can be edited.	Know that a beebot is a floor robot. Know that an algorithm is a sequence of commands. Know that to debug an algorithm I have to find a problem and identify a solution.	Know what a tally chart is and how it can be used. Know how to enter data onto a computer program. Know why it is important to store data safely. Know why personal data should not be shared.	Know what music is. Know that music can be made on an instrument. Know that music can be made using technology. Know that music is a series of notes.	Know that a sequence of commands has a start. Know that a sequence of commands has an outcome. Know that debug means to identify a problem and find a solution in a sequence of commands.
KEY TECHNOLOGY	iPad Google slides or PowerPoint	iPad – Camera Digital Camera (where available) Pixlr app	Beebots	iPads j2e pictogram tool	iPads Chrome Music Lab	iPad Scratch Jr app
VOCABULARY	Information Technology (IT) Computer Barcode Scanner Scan	Device Camera Photograph Capture Image Digital Landscape Portrait Framing Subject Compose Light source Flash Focus Background Editing Filter Format Lighting	Instruction Sequence Clear Algorithm Program Order Commands Prediction Artwork Design Route Mat Debugging	More than Less than Most Least Organise Data Object Tally chart Votes Total Pictogram Enter Compare Count Attribute Group Same Different	Music Planets Quiet Loud Feelings Emotions Pattern Rhythm Pulse Pitch Tempo Notes Instrument Create Pulse/beat	Sequence Command Program Run Start Outcome Predict Blocks Sprite Algorithm Design Predict Actions Project Modify Change Build Match
ASSESSMENT OPPORTUNITIES	Learners will be able to sort objects into technology and information technology. Learners will be able to identify the purpose of different examples of IT and talk about its uses. Learners will be able to demonstrate how IT devices work. Learners will be able to explain how they use technology safely.	Learners will be able to explain the difference between an illustration and a photograph. Learners will be able to use a device to take a photograph. Learners will be able to suggest ways to improve a photograph. Learners will be able to make simple edits to a digital photo using an appropriate program.	Learners will be able to give clear instructions to a peer. Learners will be able to follow instructions given by a peer. Learners will be able to enter algorithms onto a floor robot. Learners will be able to test and debug an algorithm.	Learners will be able to create a tally chart and discuss the data represented. Learners will be able to enter data into a computer program to create a pictogram. Learners will be able to collect data and present this in a pictogram.	Learners will be able to talk about how music makes them feel. Learners will be able to create a rhythm pattern. Learners will be able to use a computer to change the pitch and duration of notes. Learners will be able to plan and create their own musical composition using a digital device.	Learners will be able to identify the start of a sequence. Learners will be able to predict the outcome of a small program. Learners will be able to use blocks to produce different outcomes. Learners will be able to program a quiz question.
LINKS TO EDUCATION FOR A CONNECTED WORLD	**Health, wellbeing and lifestyle** - identify rules that help keep us safe and healthy in and beyond the home when using technology.	**Self image and identity** To identify that some images are not real (fake)		**Health, wellbeing and lifestyle** - identify rules that help keep us safe and healthy in and	**Copyright and Ownership** I know that work I create belongs to me	

	- give some simple examples.			beyond the home when using technology. - give some simple examples. **Privacy and security** - identify some simple examples of my personal information (e.g. name, address, birthday, age, location). - describe the people - trust and can share this with; - explain why - trust them. - recognise more detailed examples of information that is personal to me (e.g. where I live, my family's names, where I go to school).		