Subject Overview: Computing

Year R	Online Safety	Computer Systems and Networks 1: Using a Computer/iPad	Programming 1: All about Instructions	Computer Systems and Networks 2: Exploring Hardware	Programming 2: All about BeeBots	Data Handling: Introduction to Data	
	The children will learn about the importance of staying safe online and the importance of finding a balance between screen time and playing with friends	The children will learn the parts of a computer and the parts of an iPad. They will learn how to login and logout	The children will learn to give and receive instructions and the importance of clear instructions	The children will tinker with equipment and learn to take photos of the world around them	The children will learn all about directions and experiment with programming directions into a Beebot programmable robot	The children will learn to sort and categorise data into pictograms	
	Curriculum Links	**Curriculum Links**	**Curriculum Links**	**Curriculum Links**	**Curriculum Links**	**Curriculum Links**	
	Personal, social and emotional development	Name writing and letter recognition (Literacy) Recognising images and symbols as having meaning	Developing listening and speaking skills (Literacy)	Describing what they see, hear and feel in the world through photography (Understanding the World)	Position and direction (Maths)	Handling data (Maths)	

Year 1	Computer Systems/ Online Safety The children will learn the parts of an iPad and how to access apps. They will learn about keeping safe online. **Curriculum Links** Safer Internet Day	Creating Media Digital Imagery The children will learn how to take a good photo, search for images and create a collage **Curriculum Links** Taking photos of buildings (Geography) Planning interiors (D&T)	Skills Showcase Rocket to the Moon The children will learn how to sketch, input data and type using the iPad keyboard **Curriculum Links** Neil Armstrong and moon landing (History) Space collages (Art)	Data Handling Intro to data The children will learn to input simple data and analyse their findings **Curriculum Links** Documenting investigations (Science)	Programming A – Algorithms/robots The children will learn about simple algorithms: how to debug and programme a robot **Curriculum Links** Directions – How to find gold (English text)	Programming B – Simple animations The children will learn how to video and fill content in front of a Green Screen **Curriculum Links** Creating advertisements for smoothies using puppets (D & T)	
Year 2	Computer Systems/ Online Safety The children will learn the parts of an iPad and identify inputs and outputs. The	Creating Digital Media-Stop Motion The students will learn about simple animation and plan and create a short stop	Computing Systems – Word Processing The students will learn about simple typing skills on the iPad keyboard and how to copy and paste text	Data Handling – International Space Station The children will learn how to interpret data and understand the role of technology in	Programming A – Algorithms/ Debugging The children will learn how to programme and debug simple algorithms **Curriculum Links**	Programming B – Scratch Jr The students will learn how to use the application Scratch Jr to create musical instruments,	

	will learn about keeping safe online **Curriculum Links** Safer Internet Day	motion movie **Curriculum Links** Creating stop motions of The Jolly Postman (English Text)	**Curriculum Links** Creating fact files of Andy Warhol (Art) Researching Florence Nightingale/Mary Seacole (Science)	space **Curriculum Links**	Create maps to get the animals to the correct biomes (Science)	jokes and stories **Curriculum Links** The Three Little Pigs story telling (English Text)	
Year 3	Computer Systems/ Online Safety The students will learn about the journey of information and what happens to the information we send **Curriculum Links** Safer Internet Day	Programming Scratch The children will learn to programme, create music and stories and tinker with a familiar programme **Curriculum Links** Predicting, testing and reviewing (Science) Recognising	Creating Media – Video Trailers The children will develop their filming and editing skills through the creation of storyboards and book/movie trailers **Curriculum Links** Book trailers for Stone Age Boy (English Text)	Computing Systems/ emailing The children will learn how to send emails with attachments and how to be a responsible digital citizen **Curriculum Links** Sending email letters from Tom to his father (English	Data Handling – Comparisons The children will learn how to sort and filter through relevant data they will learn about digital and non-digital databases **Curriculum Links** Reviewing data from historical periods and making comparisons (History)	Computing Systems and Networks The children will build on their knowledge of how a computer works by creating paper parts of the models. **Curriculum Links**	

	loops and repetition in pieces of music (Music)		Text) Sending emails to authors to ask questions (English)			
Year 4	Computer Systems/ Online Safety The children will learn to collaborate on shared documents such as; slides, forms and spreadsheets **Curriculum Links** Shared fact files/ slide presentations on Ancient Greece (History) Creating shared instructional booklets for	Creating Media – Website Design The children will develop their word processing skills and learn to change layouts, embed videos and link between pages **Curriculum Links** Creating tourist websites about the UK countries and regions and what you can do in each place (Geography)	Skills Showcase – HTML The children will learn to edit the HTML and CSS of a website and will replace images and text to create fake news stories **Curriculum Links** Create fake news stories linking to Beowolf by Michael Morpurgo (English Text)	Programming – Further Coding with Scratch The children will revisit the Scratch application and how to code effectively they will learn how to introduce variables **Curriculum Links** Ongoing multiplication skills practice (Maths)	Programming – Computational Thinking The children will learn about the 4 skill areas of 'computational thinking' and how to use them to solve problems **Curriculum Links** Applying problem solving skills to solve problems with measures and money (Maths)	Data Handling – Investigating Weather The children will learn to research and store data using spreadsheets. They will use green screens to present weather forecasts **Curriculum Links** Weather and climate (Geography) Pulleys powered by air/wind (D&T)	

	electricity and circuits (Science)					
Year 5	Computer Systems/ Online Safety

The children will learn to search effectively, learn about keywords and phrases and how to identify inaccurate information

Curriculum Links

Safer Internet Day | Creating Media – Stop Motion Animation

The children will take inspiration from Wallace and Gromit to plan and create their own stop motion movies

Curriculum Links

Creating short mystery movies (English)

Creating short animal documentary movies of England and Madagascar (Geography) | Programming – Music

The children will use Sonic Pi to programme different sounds, beats and melodies and share their work through a battle of the bands

Curriculum Links

Looking at instruments from the Tudor times and programming these sounds into their musical piece (History) | Data Handling – Mars Rover 1

The children will research The Mars Rover and develop their understanding of how data travels and binary code

Curriculum Links

Earth and Space (Science)

Binary Numbers (Maths) | Programming – Micro: Bit

The children will develop their understanding of the meaning and purpose of programming

Curriculum Links

Programming a pedometer - Healthy me (PSHE) | Skills Showcase – Mars Rover 2

The children will deepen their understanding of how computers work and develop 3D design skills

Curriculum Links

Mechanical and electrical systems (D&T) | |
| Year 6 | Computer Systems/ | Creating Media – History of | Programming – | Data Handling 1 | Data Handling 2 – Big | Skills Showcase – Inventing a | |

Online Safety	Computers	Intro to Python	– Big Data	Data 2	Product	
The children will learn about Bletchley Park and will develop their code breaking and hacking skills. **Curriculum Links** Safer Internet Day Creating presentations about Bletchley park in WWii (History)	The children will write, record and edit radio plays set in WWii. **Curriculum Links** Build on students' knowledge from last half term (History)	The children will learn to use the programme Logo to tinker, input algorithms and programme **Curriculum Links** Creating computer based art pieces (Art)	The children will learn about how companies use data. They will identify how barcodes and QR codes work **Curriculum Links** Analysing data (Maths)	Students will learn how data can be used to develop and design. They will design a smart school. **Curriculum Links** Presentation skills (English)	The children will use a software programme to design their own products they will adapt and debug code to make it suitable **Curriculum Links** Persuasive writing for creating adverts (English Text)	