Computing Knowledge Progression Map

Bromley Heath Infant School
To be the best I can be....

EYFS	Unit	Objectives	Loops of learning	Key Vocabulary	Suggested Resources
Term 1 **Where am I?**	Introduction to technology at school- *Take photos using the school Ipad*	-Recognise that a range of technology is used in places such as homes and schools.	Continuous provision allows for children to be exploring different types of technology and also taking photos of their learning.	Camera iPad, Lens Point Capture Picture, Image Photograph Blurry	Ipads
Term 2 **Let's Celebrate!**	**Networks 2: Including using a camera**	-Explore and tinker with hardware and introduce relevant vocabulary. -Learn how to operate an Ipad and use it to take photos.		Mouse, Buttons Keyboard, Click, Push, Pull, Twist, Shut, Technology Power Electricity Batteries Camera iPad, Lens Point Capture Picture, Image Photograph Blurry	• A selection of disconnected computer hardware: mouse, keyboard, motherboard, USB stick, system fan, hard drive, monitor, computer tower, speakers • Tools: screwdrivers, magnifying glasses. • A digital camera, iPad or tablet

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Term 3 Cracking Ideas!	**Online safety-Internet safety day** **Networks 1: Main parts of a computer**	-Recognising and identifying familiar letters and numbers on a keyboard. -Develop basic mouse skills (Ipads)		Computer,Monitor, Keyboard, Mouse, Letters, Numbers, Uppercase, Lowercase, Type, Arrow Cursor, Click, Move, drag, Drop	Ipads and computer
Term 4 What a Wonderful World!	**Programming 1: All about instructions**	-Follow instructions as part of a game -Learn to give simple instructions		Blindfold, Step over, Walk around Turn, Left ,Right To the side Straight on Stand still, Stop, Duck, Under Bend down, Walk Hop, Tiptoe,Shuffle Skip	-Equipment to use as obstacles, -Blindfolds (per pair of pupils). -A selection of clothes and accessories (oversized/adult sizes work best): hats, scarves, boots, coats, socks, bags etc. -A soft ball or beanbag. -A digital timer (or sand timer). -Handwashing equipment for the adult: a bowl, water, soap and a towel or paper towel.
Term 5 How Does Your Garden Grow?	**Programming 2: Beebots**	-Use reasoning to understand simple instructions and predict the outcome. -Experiment with programming a Beebot and learn how to give simple commands.		Forwards, backwards, left, right, straight on, arrow, directions, turn, program,	Beebots

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Term 6 Looking Back, Looking Forward	**Data Handling: Branching databases and pictograms**	-Represent data through sorting and categorising objects		Sort, category, count, colour, size, pictogram, most popular, least popular, record, collect,	Classroom items

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Year 1	Unit	Objectives	Loops of learning	Key Vocabulary	Suggested Resources
Term 1 **Where Am I?**	**Online safety**	-To know what the internet is and how to use it safely -To understand how to treat other online -To understand different feelings when using the internet.	Parts of a computer, and the different types of technology used in different places. (eyfs)	Connection, Consoles, Devices Digital footprint Internet safety Laptop, Online Personal information Posting, Respect Sharing, Smartphone Smart TV Smartwatch Stranger, Tablet Wireless	Online resources, Smarty the Penguin story
Term 2 **Let's Celebrate!**	**-Computing systems and networks – improving mouse skills (drawing – link Kandinsky T1 art)**	-Use computers more purposefully. -Log in and navigate around an Ipad. Drag, drop, click and control a cursor on an Ipad. -Use software tools to create art on the computer.	Recapping online safety (T1)	Log in pointer Click Keyboard Screen Menu Drag Drag and drop, Undo Cursor	Sketchpad
Term 3 **Cracking Ideas**	**-Online Safety recap- Safer Internet Day** **Skills showcase: design a rocket and rocket to the moon (link space topic)**	-Use a computer to make a list -Use a basic range of tools on graphics editing software to design a rocket Sequence instructions Follow instructions to build their model rocket Input data about their rockets into a table or spreadsheet	Online safety (T1) Drawing software (T2)	Cells, Components, Data Debug, Digital content Digital image, Edit, Evaluate Folder, Input Instructions Program, Order Robot, Save Sequence, Spreadsheet, Table	Sketchpad

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Term 4 What a wonderful world!	***-Program a bee-bot to reach a specified location.*** **Online Safety recap. Programming 1: algorithms Programming 2: beebots**	-Explain what an algorithm is. -Create an achievable program. -Recognise cause and effect when pressing buttons on a Bee-Bot. -- Discuss and demonstrate how the Bee-Bot works. -Record video ensuring everyone is in the shot. -Program a Bee-Bot to reach a destination.	Online safety (T1) Beebots (eyfs)	Code, Device Directions, Input Instructions Manageable Motion, Order Organise Output Precise Programming, Robot, Sensor Sequence, Bee-Bot, Demonstration Inputting Instructions Pause, predict Program, Tinker	Beebots
Term 5 How does your garden grow?	**-Online Safety recap. Data handling (links mini-beast hunt/ branching data bases)**	-Represent animal-themed data in different ways, using objects and technology. -Represent the same data as a pictogram and a table or chart. -Click and drag objects to sort data using a branching database.	Online safety (T1) Pictograms (eyfs)	Bar chart, Block graph Branching, database Categorise, Data collection, Data, record, Information, Label, Pictogram, Record, Resize, Sort, Table	
Term 6 Looking back, looking forward	**-Digital imagery**	-Plan a pictorial story using photographic images in sequence. - ---Take photos using a device. -Edit photos by cropping, filtering and resizing. -Search for and import images from the internet. -Explain what to do if something makes them uncomfortable online.	Online safety (T1) Taking images (eyfs)	Background, Blurred, Camera, Clear, Crop, Delete, Download, Drag and drop, edit, Filter Image, Import, Internet Keyword, Online Photograph Resize, Save as Screen, Search engine, Sequence	Google Photos App

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Year 2	Unit	Objectives	Loops of learning	Key Vocabulary	Suggested Resources
Term 1 Where Am I?	**Online safety**	-Explain what is meant by online information. -Recognise what information is safe to be shared online. -Understand that they need to ask permission before sharing content online and explain why. -Say who they can ask for help with online worries. -Use some strategies to work out if online information is reliable or not.	Online safety (Y1)	Accept, Comment, Consent, Content, Deny Emojis, Password, Permission, Personal, information, Pop ups, Pressure, Private information, Reliable, Share, Trusted adult	
Term 2 Let's Celebrate!	**Programming 1: Algorithms (plus beebot revision)**	-Decompose a game to predict the algorithms. -Give a definition for 'decomposition'. -Write clear and precise algorithms. -Create algorithms to solve problems. -Use loops in their algorithms to make their code more efficient. -Explain what abstraction is.	Algorithms and Beebots (Y1 T4)	Abstraction, Algorithm, Artificial intelligence, Bug Clear, Correct, Debug Decompose, Error Key features, Loop, Predict,	Beebots/ ipads/ Scratch website
Term 3 Cracking Ideas	**-Online Safety recap- Safer Internet Day** **Creating media: stop animation**	-Create a flip book animation. -Decompose a story into smaller parts to plan a stop motion animation. -Create stop motion animations with small changes between images.	Online safety (Y1/ T1 Y2) Taking and using images (EYFS/ T6 Y1)	Animation Background Decompose Digital device Drawing, Flipbook Frames, Moving images, Object Onion skinning Plan, Still, images	Stop motion studio (app)

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Term 4 What a wonderful world!	**Data handling: international space station**	-Identify and digitally draw items which fulfil basic human needs when aboard the ISS. -Read the correct temperature on a thermometer. - Design a display showing everything that needs to be monitored by sensors on the ISS. -Create an algorithm that addresses all plants' needs.	Online safety (Y1/ T1 Y2) Branching databases (Y1 T5)	Data, Digital, content, Experiment Interactive, map International Space Centre International, Interpret Laboratory Monitor, Planet Satellite, Sensor Space, Temperature, Thermometer, Water reservoir	
Term 5 How does your garden grow?	**Programming 2: Scratch Jnr (animation)**	Explore a new application independently. -Explain what the blocks on ScratchJr do and use them for a purpose. -Use a code to create an animation of an animal moving. -Program code to run 'on tap'. -Explain the role of the blocks in a program they have created.	Online safety (Y1/ T1 Y2) Programming instructions (Y1 T4/ T2 Y2) Maths – direction and turn	Algorithm Animation, Blocks Bug, Button CGI Computer code, Debug Fluid Icon, Imitate, Instructions Loop 'On tap' Programming Repeat, ScratchJR Sequence Sound recording	Scratch
Term 6 Looking back, looking forward	**Networking**	Explain which are the home row keys and how to find them for typing. -Use the spacebar and backspace correctly. -Type and make simple alterations to text using buttons on a word processor. -Search for, import and alter appropriate images for a text document. -Explain what information is safe to be shared online.	Online safety (Y1/ T1 Y2)-what is safe to go online English – editing/ publishing work	Backspace, Bold Copy, Copyright Cut, Delete Forward, button Highlight, row, Home screen Image, Import, Italics, Keyboard, character, shortcut, Layout, Paste, Search Space bar, Text effects, Touch, typing, Underline Undo	Typing club Jungle Junior