	EYFS – HT1 **Introduction to Technology**	**EYFS- HT2** **Exploring Cause and Effect**	**EYFS – HT3** **Sequencing and Instructions**	**EYFS – HT4** **Creative Technology**	**EYFS – HT5** **Problem Solving with Technology**	**EYFS – HT6** **Consolidation and Digital Citizenship**
Learning Objectives **E-Safety**	Recognise tech in environment Understand tech has a purpose - Recognise that technology can show people - Everyone is unique and special - Ask an adult before going online.	Explore cause and effect - Know we can talk to people using devices - Tell a trusted adult if something worries us	- Understand sequences - Use "first, next, then" - Understand what we share can be seen by others - Be kind online	Use tech to create (draw, record) - Explore digital creativity - Know unkind behaviour online is wrong - Know who to talk to	- Solve problems with tech - Predict simple outcomes - Not everything online is true - Ask questions about what we see	Revisit key skills - Discuss staying safe online - Balance time on and off devices - Recognise when we need a break
Suggested Activities	Tech treasure hunt - Explore role-play tech - Talk about home tech	Follow simple device instructions - Use cause-effect toys/apps - Move Bee-Bot forward/back	- Sequence routines with cards - Step-by-step Bee-Bot plans	Paint apps - Record audio stories - Take and review photos	- Plan/test Bee-Bot routes - Matching & building apps	- E-safety poster - Share digital creations - Review favourite apps
E-Safety Focus	- Who do we see on screens? - Draw ourselves on a tablet - Story time with tech characters	- Role play sending a message - Sorting game: safe or not safe? - Discuss trusted adults	- Picture cards: kind or unkind? - Puppet show with kind messages - Talk about sharing photos	- Talk about sharing photos - Make a kindness tree - Emotions chart from online scenarios - Trusted adult discussion	- True or not true game - Explore silly/fake content - Who can help us check?	- Make a daily tech routine - Screen break songs - Talk about how screens make us feel
EYFS Links	Understanding the World	Physical Development	*Communication & Language*	*Expressive Arts & Design*	*Understanding the World*	*PSED*
Key Vocabulary	Technology, screen, device, button, tablet, phone, camera	Cause, effect, tap, press, go, stop, forward, back	Sequence, order, first, next, step, robot, move	Create, draw, photo, record, colour, save, sound	Predict, solve, test, try, route, match, build	Safe, rules, help, share, trusted, tell, smart, private

Computing in the EYFS is centred around play-based, unplugged (no computer) activities that focus on building children's listening skills, curiosity and creativity and problem solving. Allowing children the opportunity to explore technology in this carefree and often child-led way, means that not only will they develop a familiarity with equipment and vocabulary but they will have a strong start in key stage 1 Computing and all that it demands.

Barefoot Computing
ProjectEvolve

Year 1 – HT1 **E-safety** **Computing systems & networks- Technology around us**	**Year 1 – HT2** **Digital media- Digital paintings**	**Year 1 – HT3** **Programming – Moving a robot**	**Year 1 – HT4** Data and Information – Grouping data	**Year 1 – HT5** **Creating media – Digital writing**	**Year 1 – HT6** **Programming - animations**
Know • I can explain how technology can help us. • I can use a keyboard to type on a computer. • I can use a mouse in different ways. • I can save my work to a file.	**Know** • I can use a computer to paint my own picture. • I know that different paint tools do different jobs. • I know how to change the colour and brush size.	**Know** • I know how to run a command on a device. • I know how to use turn and move commands to move a robot. • I know how to plan a simple program	**Know** • How to describe objects using labels. • I can count a group of objects. • I can choose how to group objects. • I know how to group objects to answer a question.	**Know** • How to find keys on a keyboard. • How to use the letter number and space keys. • I can type in capital letters. • I can change the font. • I can use undo to remove changes. • I know how to make changes to text on a computer.	**Know** • I know how to run my program. • I can predict the outcome of a sequence of commands. • I know how to select the blocks I need to build a design. • I know how to choose the background. • I can create an algorithm. • I can debug my program.
E-safety • I can discuss why we need rules to help us use technology safely and responsibly. • I know where to go for help if I am unsure or concerned. • Ask an adult before going online	**E-safety** • Login safely with help and keep my password safe.	**E-safety** • Recognise personal information (name,address, school) and know not to share it online.	**E-safety** • Be kind online, just like in real-life.	**E-safety**	**E-safety** • I can discuss why we need rules to help us use technology safely and responsibly
Vocabulary: Electronic equipment, worried, secret, Help, belonging to you, work with others	Vocabulary: Draw, mouse, pencil tool, keyboard, delete, flood fill, backspace, icon, spacebar, brush size	Vocabulary: Forwards, backwards, turn, clear, go, commands, instructions, route, plan, algorithm, program, direction	Vocabulary: Object, label, group, property, colour, size, value, data set, fewest, least, shape	Vocabulary: Word processor, keyboard keys, letters, type, numbers, capital letter, mouse, underline, undo, redo, compare select, bold,	Vocabulary: ScratchJr, command, sprite, programming, block, run, test, predict, instruction, design, value, block, background

Year 2 – HT1 Computing systems and networks – IT around us	**Year 2 – HT2** **Creating media - Digital photography**	**Year 2 – HT3** Programming - Robot algorithms	**Year 2 – HT4** **Data and information - Pictograms**	**Year 2 – HT5** **Creating media – Digital music**	**Year 2 – HT6** Programming – Programming quizzes
Know • I can recognise common uses of information technology beyond school. • I can identify examples of computers • I can recognise the choices that I make when using IT	**Know** • I can take photographs in both portrait and landscape. • I can recognise that my image can be changed by using a tool. • I can apply a range of photography skills to capture a photo.	**Know** • I can give clear instructions. • I can use an algorithm to program a sequence on a floor robot. • I can predict the outcome of a sequence. • I can create an algorithm to meet my goal. • I can test and debug each part of the program.	**Know** • I can record data in a tally chart. • I can enter data onto a computer. • I can use a tally chart to create a pictogram. • I can answer more than/less than and most/least questions about an attribute. • I can collect the data I need. • I can create a pictogram and draw conclusions from it. • I can give examples of why information should not be shared.	**Know** • I can say what I do and don't like about a piece of music. • I can play an instrument following a rhythm pattern. • I can use a computer to experiment with pitch. • I can create an animal rhythm on a computer.	**Know** • I know how to start my program. • I can predict the outcome of sequence of commands. • I can decide which blocks to use to meet the design. • I can choose a background for my design • I can choose characters for the design. • I can create an algorithm • I can debug my program.
E-safety • I can discuss why we need rules to help us use technology safely and responsibly. • I can explain why I need to keep my information private. • Use simple passwords and never share them. • I know to ask consent before taking someone's photo. • I know that different apps/games or websites are for different ages. • I know where to go for help if I am unsure or concerned.	**E-safety** • I know to use technology responsibly and take regular breaks.	**E-safety** • I can understand that computers can make mistakes if training data is limited or lacking variety • I know that computers can learn how to complete tasks.	**E-safety** • I can search online using keywords and use child safe search engines.	**E-safety** • Understand that not everything I see online is real or true.	**E-safety** • I can explain the rules for staying safe online.
Vocabulary:Information Technology (IT), computer, scanner.scan	**Vocabulary:**Device, camera, photograph, capture, image, landscape, portrait, compose, light-sources, flash, focus, background, editing	**Vocabulary**: Instruction, sequence, algorithm, program, order, prediction, artwork, design, route, debugging, decomposition	Vocabulary: more than , less than, common, popular, object, tally, chart, votes, total, pictogram, enter, data, compare, count, explain, attribute, group, same, conclusion, block diagram, sharing	Vocabulary: music, quit, loud, feelings, emotions, pattern, rhythm, pulse, pitch, tempo, notes, create, emotions, beat, instrument, open, edit	Vocabulary: sequence, command, program, run, start, outcome, predict, blocked, design, actions, sprite, project, modify, change, algorithm, build, match, compare, debug, features, evaluate, decomposition, code

Year 3 – HT1 E-safety Computing systems and networks – Connecting computers	Year 3 – HT1 Creating media – Stop frame animation	Year 3 – HT3 Programming – sequencing sounds	Year 3 – HT4 Data and information - Branching databases	Year 3- HT5 Creating media – Desktop publishing	Year 3 – HT6 Programming – Events and actions in programs
Know • I understand how the internet connects us. • I can classify input and output devices. • I can recognise similarities between using digital devices and non-digital devices. • I can recognise that a computer network is made up of a number of devices. • I can identify networked devices around me.	**Know** • I can create a simple stop-frame animation. • I can use an onion-skinning to help make small changes between frames. • I can improve my animation based on feedback. • I can evaluate my final film.	**Know** • I can explain that objects in Scratch have attributes. • I can recognise that commands in Scratch are represented as blocks. • I can create a sequence of connected commands. • I can combine sound commands. • I can implement my algorithm as code.	**Know** • I can make yes/no questions about a group of objects. • I can group object using yes/no questions. • I can create questions that will enable objects to be uniquely identified. • I can create a branching database that reflects my plans.	**Know** • I can change font style, size and colour for a given purpose. • I can make changes to content after I've added it. • I can paste text and image to create a magazine cover. • I can choose a suitable layout for a purpose. • I can explain why desktop publishing might be useful.	**Know** • I can choose a character for my project. • I can program movement. • I can choose suitable keys to turn on additional features • I can test and debug a program against a given design. • I can evaluate my program.
E-safety • I can explain how best to be safe and responsible online. • I know it is important to choose carefully what we play and view online. • Keeping personal information secure is important to keep ourselves safe. • Influencers create content that is designed to get them likes and followers.	**E-safety** • I can explain the difference between a 'belief', an 'opinion' and a 'fact'. • I understand what criteria have to be met before something is a 'fact'.. • I can identify how to get help from a trusted adult if needed.	**E-safety** • I can explain how to keep my personal information safe.	**E-safety** • I can explain how I can represent myself in different ways online.	**E-safety** • I can explain why I should be kind online vs. unkind • I know how I should act online	**E-safety** • I can explain the rules for staying safe online.
Vocabulary: digital device, input, process, output, program, digital, non-digital, connection, network, switch, server, wireless access point, cables, sockets	Vocabulary: animation, flip book, stopframe, frame, sequence, image, photograph, setting, character, events, onion skinning, consistency, evaluation, delete, media, import, transition	Vocabulary: Scratch, programming, blocks, commands, code, sprite, costume, stage, backdrop, motion, turn, point in direction, go to, glide, sequence, event, task, design, run the code, order, note, chord, algorithm, bug, debug, code.	Vocabulary: attribute, value, questions, table, objects, branching, database, objects, equal, even, separate, structure, compare, order, organise, selecting, information, decision tree.Avatar	Vocabulary: text, images, advantages, disadvantages, communicate, font, style, landscape, portrait, orientation, placeholder, template, layout, content, desktop publishing, copy, paste, purpose, benefits	Vocabulary: motion, event, sprite, algorithm, logic, move, resize, extension block, pen up, set up, pen, design, action, debugging, errors, setup, code, test, debug, actions.

Year 4 – HT1 E-safety Computing systems and networks – The internet	Year 4 – HT2 Programming – Repetition in shapes	Year 4 – HT3 Creating media – Audio production	Year 4 – HT4 Data and information - Data logging	Year 4 – HT5 Creating media – Photo editing	Year 4 – HT6 Programming – Repetition in games
Know • I can describe the internet as a network of networks. • I can describe how to access website on the WWW. • I can recognise that the WWW contains websites and web pages.	**Know:** • I can write an algorithm to produce a given outcome. • I can use a count-controlled loop to produce a given outcome. • I can identify the effect of changing the number of times a task is repeated. • I can explain that a computer can repeatedly call a procedure. • I can develop my program by debugging it.	**Know:** • I can use a computer to record audio. • I can plan appropriate content for a podcast. • I can re-record my voice to improve my recording. • I can open my project to continue working on it. • I can edit my recording and add effects. • I can suggest improvements to an audio recording.	**Know:** • I can choose a data set to answer a given question I can suggest questions that can be answered using a given data set • I can explain what data can be collected using sensors • I can use data from a sensor to answer a given question • I can talk about the data that I have captured • I can sort data to find information • I can use a data logger to collect data • I can draw conclusions from the data that I have collected	**Know:** • I can use photo editing software to crop an image • I can experiment with different colour effects • I can add to the composition of an image by cloning I can identify how a photo edit can be improved • I can remove parts of an image using cloning • I can experiment with tools to select and copy part of an image I can choose suitable images for my project I can create a project that is a combination of other images • I can combine text and my image to complete the project • I can review images against a given criteria I can use feedback to guide making change	**Know:** • I can list an everyday task as a set of instructions including repetition I can predict the outcome of a snippet of code • I can choose when to use a count-controlled and an infinite loop • I can choose which action will be repeated for each object • I can explain what the outcome of the repeated action should be • I can re-use existing code snippets on new sprites • I can develop my own design explaining what my project will do • I can build a program that follows my design
E-safety • I can identify a range of ways to report concerns about content and contact • I can explain why strong passwords are important and create them. • I can explain why I need to think carefully before I share or reshare content. • I can recognise that not all information online is reliable.	**E-safety** • I can use technology safely, respectfully and responsibly I can recognise acceptable/unacceptable behaviour • Recognise cyberbullying and explain how to respond.		**E-safety** • Understand that too much screen time is unhealthy and take breaks.		**E-safety** • I can explain the rules for staying safe online.
Vocabulary: internet, network, router, security, switch, server, wireless access point (WAP), website, web page, web address, routing, web browser, World Wide Web, content, links, files, use, download, sharing, ownership, permission, information, accurate, honest, content, adve	**Vocabulary:** Logo (programming environment), program, turtle, commands, code snippet, algorithm, design, debug, pattern, repeat, repetition, count-controlled loop, value, trace, decompose, procedure.	**Vocabulary:** audio, microphone, speaker, headphones, input device, output device, sound, podcast, edit, trim, align, layer, import, record, playback, selection, load, save, export, MP3, evaluate, feedback	**Vocabulary:** data, table, layout, input device, sensor, logger, logging, data point, interval, analyse, dataset, import, export, logged, collection, review, conclusion.	**Vocabulary:** image, edit, digital, crop, rotate, undo, save, adjustments, effects, colours, hue, saturation, sepia, vignette, image, retouch, clone, select, combine, made up, real, composite, cut, copy, paste, alter, background, foreground, zoom, undo, font.	**Vocabulary:** Scratch, programming, sprite, blocks, code, loop, repeat, value, infinite loop, count-controlled loop, costume, repetition, forever, animate, event block, duplicate, modify, design, algorithm, debug, refine, evaluate.

Year 5 – HT1 **E-safety** **Computing systems and networks – systems and searching**	**Year 5 – HT5** Creating media – video production	**Year 5 – HT3** **Programming- Selection in physical computing**	**Year 5 – HT4** **Data and information – Flat file database**	Year 5 – HT2 Creating media – Introduction to vector graphics	**Year 5 – HT6** **Programming – Making quizzes**
Know • I can describe that a computer system features inputs, processes, and outputs I can explain that computer systems communicate with other devices I can identify the human elements of a computer system • I can compare results from different search engines I can make use of a web search to find specific information I can refine my web search • I can explain why we need tools to find things online I can explain that a search engine follows rules to rank results I can describe some of the ways that search results can be influenced I can explain how search engines make money	**Know** • I can experiment with different camera angles I can create and save video content • I can explain how to improve a video by reshooting and editing I can select the correct tools to make edits to my video I can store, retrieve, and export my recording to a computer I can make edits to my video and improve the final outcome	**Know** • I can create a simple circuit and connect it to a microcontroller I can explain what an infinite loop does I can program a microcontroller to make an LED switch on I can use a count-controlled loop to control outputs • I can design a conditional loop I can explain that a condition is either true or false I can program a microcontroller to respond to an input I can use selection (an 'if…then…' statement) to direct the flow of a program	**Know** I can explain how information can be recorded • I can choose which field to sort data by to answer a given question I can explain what a field and a record is in a database • I can navigate a flat-file database to compare different views of information • I can combine grouping and sorting to answer specific questions I can group information using a database • I can choose multiple criteria to answer a given question I can outline how 'AND' and 'OR' can be used to refine data selection I can select an appropriate chart to visually compare data • I can ask questions that will need more than one field to answer.	**Know** • I can recognise that vector drawings are made using shapes - I can move, resize, and rotate objects I have duplicated I can modify objects to create a new image - I can use the zoom tool to help me add detail to my drawings I can change the order of layers in a vector drawing I can use layering to create an image I can recognise when I need to group and ungroup objects I can create a vector drawing for a specific purpose	**Know** • I can identify conditions in a program. • I can modify a condition in a program • I can create a program with different outcomes using selection • I can identify the condition and outcomes in an 'if… then… else…' Statement • I can use selection in an infinite loop to check a condition • I can design the flow of a program which contains 'if… then… else…' • I can show that a condition can direct program flow in one of two ways • I can identify the outcome of user input in an algorithm •I can implement my algorithm to create the first section of my program • I can test my program • I can extend my program further and identify ways the program could be improve

		• I can describe what my project will do I can identify a real-world example of a condition starting an action • I can test and debug my project I can use selection to produce an intended outcome			
E-safety • I can explain how anyone can get help if they are being bullied online and identify when to tell a trusted adult.	**E-safety** • I can use privacy settings to protect personal information	**E-safety** • Understand that people online may pretend to be someone they are not.	**E-safety** • Explain what misinformation is and why it spreads	**E-safety** • Recognise how online activity can affect mental health and body image.	**E-safety** • I can explain the rules for staying safe online.
Vocabulary: system, connection, digital, input, process, storage, output, search, search engine, refine, index, bot, ordering, links, algorithm, search engine optimisation (SEO), web crawler, content creator, selection, ranking.	**Vocabulary:** video, audio, camera, talking head, panning, close up, video camera, microphone, lens, mid-range, long shot, moving subject, side by side, angle (high, low, normal), static, zoom, pan, tilt, storyboard, filming, review, import, split, trim, clip, edit, reshoot, delete, reorder, export, evaluate, share.	**Vocabulary:** microcontroller, USB, components, connection, infinite loop, output component, motor, repetition, count-controlled loop, Crumble controller, switch, LED, Sparkle, crocodile clips, connect, battery box, program, condition, Input, output, selection, action, debug, circuit, power, cell, buzzer	**Vocabulary:** database, data, information, record, field, sort, order, group, search, value, criteria, graph, chart, axis, compare, filter, presentation.	**Vocabulary:** vector, drawing tools, object, toolbar, vector drawing, move, resize, colour, rotate, duplicate/copy, zoom, select, align, modify, layers, order, copy, paste, group, ungroup, reuse, reflection	**Vocabulary:** Selection, condition, true, false, count-controlled loop, outcomes, conditional statement, algorithm, program, debug, question, answer, task, design, input, implement, test, run, setup, operator

Year 6 – HT1 E-safety Computing systems and networks - Communication and collaboration	**Year 6 – HT2** Creating media - Webpage creation	**Year 6 – HT3** Programming - Variables in games **Astro Pi Coding Challenge**	**Year 6 – HT4** Data and Information - Introduction to spreadsheets	**Year 6 – HT5** Creating Media 3D Modelling	**Year 6 – HT6** Programming - Sensing movement
Know • I can explain that internet devices have addresses • I can explain that all data transferred over the internet is in packets • I can recognise how to access shared files stored online I can send information over the internet in different ways • I can identify different ways of working together online • I can identify that there are a variety of ways to communicate over the internet • I can compare different methods of communicating on the internet I can decide when I should and should not share information online I can explain that communication on the internet may not be private	**Know** I know that websites are written in HTML • I can draw a web page layout that suits my purpose • I can recognise the common features of a web page • I can say why I should use copyright-free images • I can add content to my own web page • I can evaluate what my web page looks like on different devices and suggest/make edits • I can preview what my web page looks like • I can explain what a navigation path is • I can make multiple web pages and link them using hyperlinks • I can evaluate the user experience of a website • I can explain the implication of linking to content owned by others	**Know** • I can identify that variables can hold numbers or letters • I can explain that a variable has a name and a value I can recognise that the value of a variable can be changed • I can make use of an event in a program to set a variable • I can recognise that the value of a variable can be used by a program • I can create algorithms for my project • I can choose a name that identifies the role of a variable • I can test the code that I have written • I can identify ways that my game could be improved	**Know** • I can collect data • I can enter data into a spreadsheet I can suggest how to structure my data • I can choose an appropriate format for a cell • I can construct a formula in a spreadsheet • I can apply a formula to multiple cells by duplicating it • I can calculate data using different operations • I can create a formula which includes a range of cells • I can apply a formula to calculate the data I need to answer questions • I can explain why data should be organised • I can use a spreadsheet to answer questions • I can use a chart to show the answer to questions	**Know** • I can add 3D shapes to a project • I can move 3D shapes relative to one another I can lift/lower 3D objects • I can recolour a 3D object • I can resize an object in three dimensions • I can duplicate 3D objects • I can group 3D objects • I can rotate objects in three dimensions • I can accurately size 3D objects • I can combine a number of 3D objects • I can show that placeholders can create holes in 3D objects • I can choose objects to use in a 3D model • I can modify my 3D model to improve it	**Know** • I can apply my knowledge of programming to a new environment • I can test my program on an emulator • I can determine the flow of a program using selection • I can use a variable in an if, then, else statement to select the flow of a program • I can experiment with different physical inputs • I can use a condition to change a variable • I can explain the importance of the order of conditions in else, if statements • I can modify a program to achieve a different outcome • I can use an operand (e.g. <>=) in an if, then statement • I can decide what variables to include in a project • I can design the algorithm for my project • I can test my program against my design • I can use a range of approaches to find and fix bugs

E-safety • I can use technology safely, respectfully and responsibly • I can recognise acceptable/unacceptable behaviour • I can identify a range of ways to report concerns about content and contact	**E-safety** I can explain how online choices affect my digital reputation I can manage my online presence safely and respectfully. I can explain how my online life connects to my future(school, jobs, law)	**E-safety** • I understand the risks of sharing images or messages including illegal behaviours.	**E-safety** • I can understand what cyberbullying is • I can recognise and know where to report unacceptable behaviours.	**E-safety** • I understand how to use online resources for research in appropriate ways including AI	**E-safety** • I can explain the rules for staying safe online.
Vocabulary: communication, protocol, data, address, Internet Protocol (IP), Domain Name Server (DNS), packet, header, data payload, chat, explore, slide deck, reuse, remix, collaboration, internet, public, private, oneway, two-way, one-to-one, one-to-many	**Vocabulary:** website, web page, browser, media, Hypertext Markup Language (HTML), logo, layout, header, media, purpose, copyright, fair use, home page, preview, evaluate, device, Google Sites, breadcrumb trail, navigation, hyperlink, subpage, evaluate, implication, external link, embed	**Vocabulary:** variable, change, name, value, set, design, event, algorithm, code, task, artwork, program, project, code, test, debug, improve, evaluate, share, assign, declare	**Vocabulary:** data, collecting, table, structure, spreadsheet, cell, cell reference, data item, format, formula, calculation, spreadsheet, input, output, operation, range, duplicate, sigma, propose, question, data set, organised, chart, evaluate, results, sum, comparison, software, tools.	**Vocabulary:** TinkerCAD, 2D, 3D, shapes, select, move, perspective, view, handles, resize, lift, lower, recolour, rotate, duplicate, group, cylinder, cube, cuboid, sphere, cone, prism, pyramid, placeholder, hollow, choose, combine, construct, evaluate, modify	**Vocabulary:** Micro:bit, MakeCode, input, process, output, flashing, USB, trace, selection, condition, if then else, variable, random, sensing, accelerometer, value, compass, direction, navigation, design, task, algorithm, step counter, plan, create, code, test, debug.