Planning and Progression: Computing

FS		Y1/2		Y3/4		Y5/6	
My World, Seasons and Celebrations Where Does the Snow Go? Traditional Tales, Marvellous Mini-beasts Fun on the Farm	**Topics**	CYCLE A London Move It, Me On My Map Scented Garden, Seaside	CYCLE B Toys, Under the Sea Springfield to India Wriggle and Crawl	CYCLE A Natural Disasters Explorers, South America (Rainforest) Water (Rivers), Ancient Egypt	CYCLE B The Mayan Civilisation, Chocolate Grimsby's Fishing Industry, Our Local Area Prehistoric Britain, Coastlines	CYCLE A WW2 Extreme Environments, Shackleton Olympic Legacies	CYCLE B Town and Country, Guy Fawkes Viking Raiders, Fair Trade Keen To Be Green
Understanding The World **E:Safety:** Discuss how to treat people on the internet/who to trust with information, etc. Describe ways that some people can be unkind online. Know what to say to somebody who asks to do something that makes him or her feel uncomfortable. Explain how this could be in real life or online. Offer examples of how this can make others feel. **IT Beyond School:** Discuss people who can help us on the internet. Discuss people who can help us if we needed help with our devices. Discuss people who can help us if we had any problems with communication online. **Digital Art and Design:** Move a mouse with some control to point and click. Use the mouse to click and drag. Find the letters in my name on a computer keyboard and type my name. Use 2Create to draw a picture. Use an iPad to capture photos and videos. **Logical Thinking:** Know that work created belongs to me. Name my work so that others know it belongs to me. Name parts of a computer and know what they are used for. Shut down a computer appropriately. Collect images from Google and save them to a folder?	**E:Safety**	To explain how something online might make someone feel worried or sad To identify the effect of people's actions online and consider ways of keeping others and myself safe To describe the rules for staying safe online To make safe choices when using the internet To describe positive behaviour on the internet To use the internet safely To search the internet for suitable pictures To describe how to take ownership of work online To discuss how to stay safe online- Avatar and profile safety To discuss how to stay safe online- keeping stuff safe To identify computers in everyday lives To discuss how computers make our lives easier To follow the rules when using computers To safely use a device	To agree to the pledge To recognise ways people steal personal information To recognise when someone is trying to steal personal info To analyse how computer bots can impact on daily life To recognise if online information is credible To develop skills to detect fake news and disinformation To put my learning into practice To express themselves through digital art To discuss what information should be kept private To identify ways information can be found online about people To create a positive online presence To discuss levels of privacy Thinking about what to keep away from the online world To create a safe password To understand what types of situations call for getting help or talking things out with a trusted adult. To consider what options there are for being brave and why bringing adults into the conversation is important. To know they have options: There are different ways to be brave and take action. To understand they're not on their own when they see content online that makes them feel uncomfortable	To agree to the pledge To respond to bullying online The discuss different ways to respond to bullying To turn negative interactions not positive ones To interpret emotions behind texts and messages To model behaviour to others To put my learning into practice To respond to bullying online To discuss different ways to respond to bullying To turn negative interactions not positive ones To interpret emotions behind texts and messages To model behaviour to others To put my learning into practice and to read and sign the Be Internet Awesome pledge and Test your e safety knowledge in Band Runner To understand how someone else's actions can affect you! To create a strong password To customise privacy settings To put my learning into practice To agree to the Be Internet Awesome pledge To recognise that seeking help for oneself or others is a sign of strength. To know about apps and services' community standards, or terms of service. To be aware of online tools for reporting abuse. To consider when to use them. To talk about why and when to report the abuse
	Information Technology Basic Skills	To organise, store and manipulate digital content. To learn how to access and use a mobile word processor How to save and use word processing files To use a different word processing app and to compare the experience To transfer word processing skills to create a presentation. To complete a presentation with animations and transitions To use a different presentation app and to compare the experience To take a good photo To save and organise photos Using a photo edit app To create a PicCollage using edited photos To present my photos To be able to use sending techniques such as Airdrop. To understand photo editing is done in layers. To understand the concept of transparent in photo editing. To add and edit layers. Copy paste. Change visibility of layers To use programs for a particular purpose To read and sign the pledge To describe what an illustration is To plan an illustration To create and save an illustration To edit To create an eBook To add illustrations to an eBook To use Google search to find images To save images from the internet To create and rename folders To rename files To move files To present my image gallery	To understand what a computer network is, and how they can provide multiple services, such as the world wide web, and opportunities for collaboration and communication. To understand the components of a computer network. To show how information is exchanged between devices. To understand that the internet is the physical connection between computers and networks. To understand how data travels throughout a network. To understand that devices on a network have a unique address To understand how email travels and how to retrieve it. To send and reply to emails. To create a word document Opening ad editing a word document Creating a presentation Opening an editing a PowerPoint Photo editing To develop skills of formatting using keyboard commands and organising work To describe how the internet connects people To discuss how products are sold online To communicate safely To create, edit and save word documents To locate a previously saved document, edit and resave the document To create a short ppt to present To understand how to create a list of instructions. To reinforce the use of the word algorithm To visualise an algorithm before running the code. To fix any mistakes (Debugging)	To present data and information To discuss identity theft and how to protect about it. To understand 2 factor authentications. I can explain that web pages are written using HTML; use basic HTML tags; remix webpages using X-Ray Goggles Understand that Python is the language that powers websites and apps To understand that anything in an image can be digitally added, removed, or altered. To add/remove a person from an image. To add a celebrity's head onto a photo To record a video and add effects To create documents and collaborate using word and publisher To identify the key elements of a spreadsheet How SS can be used to perform quick, accurate calculations To enter labels and numbers into a spreadsheet Exploring spreadsheet models that allow the exploration of possible outcomes To use SUM to calculate a set of numbers in a range of cells That mathematical problems can be explored using a spreadsheet To understand how hashtag searching works. To describe, demonstrate and code using commands and sequences. To debug with code To use functions and loops

	Early Programming: Name items we control in the everyday environment. Use every day ICT devices. Explore on screen activities by clicking (cause and effect). Use on screen simulations and compare with real life activities (click and drag). **Problem Solving:** To press buttons on a BeeBot to make things happen (exploring cause and effect). Discussing what path you will take before you perform the action. Give ch a specific set of rules (move to the pig then the cow) and ask them to plan out their journey. Maze games, reach the most animals, shortest route.	**Computer Science Programming**	To animate a sprite To make sprites appear and disappear To use a repeat block To control a sprite's actions To change the size of a sprite To use messaging to control a sprite To create a game Attend to precision when creating instructions To program a character to grow and shrink To use instructions to make characters move at different speeds and distance. To use a repeat instruction to make a sequence of instructions run more than once and predict the behaviour. To create programs that play a recorded sound. To use speech in a program using the Broadcast code To use sequencing in a program To understand an algorithm is a list of instructions To add sprites To make a sprite move To change the background To make my program repeat To use speech in a program To use sequencing in a program	How to create a spite (Maze) from Scratch Create a sprite to traverse the maze. Sized and controlled by the user. Using a repeat block and "sensing" to send the sprite back to the start if they touch a wall To use a "broadcast" to unlock a secret door. To use a "broadcast" to go to level 2. To debug Level 2 To change the backgrounds and sprites to the user creativity. Understand and identify algorithms Identify bugs and how to approach fixing them Thinking efficiently and identifying loops. Understanding decomposition to solve problems. Understand abstraction to solve problems Understand how functions can make coding efficient. Understand conditional statements for different contexts. Thinking about loops and how to use and identify nested loop (Loops within loops) Variables, Input and Output. Design User Interface To understand the concept of coding, and describe key terms To describe sequences, construct simple sequences To build sequences and understand orders To understand what a loop is, coding with loops To understand basic debugging To understand Events and Actions To work out a plan of action before seeing something disturbing online To Understand basic conditions To create a simple algorithm To understand how to create simple movement with blocks. Bounce on edge. How to make sprites to follow the mouse pointer. To understand the 2 axis of the workspace. To understand what minus numbers do to code. To move the spite using direction code. To understand basic conditions To create a simple algorithm To introduce HTML coding To use HTML code to show how phone/tablet apps are coded.	To understand how to start an app building project. To understand how to use the insert and resize feature. How to create buttons with website links. How to create different Screens in the app and how to link to them. How to see and test your build in real time. Test and debug the app to fix any issues. How to upload the created app to a cloud location. (If time allows) How to create custom assets. How to save and import internet assets Code all sprites correctly so they make a working game. How to create a score system and lives system. How to tell the game to stop when all lives are gone. Create a countdown timer. To play test the game and debug any problems. Make the game harder if need by adding more aliens. To create a music file and use in our game. To export the music file. To import the music file to our program. To create a title screen and a game over screen. To create a Game over screen. How to use the Kodu tools to create a 3D environment. How to create and control sprites in this game world. Control with input or automatically. Including shooting, following a path, random wandering. How to create scenery such as trees, factories, clouds, and lakes. Change the scenery settings Building a maze game 1 – How to build a maze with different colour walls. Building a maze game 2 – How to use smart tools to create our maze. Building a maze game 3 – How to fill our maze with collectibles and enemies. Building a maze game 4 – How to create a multi-level maze game using different levels. To describe, demonstrate and code using commands and sequences To describe, demonstrate and debug with code To use functions and loops To design programmes to solve challenges with functions and loops To demonstrate and code using algorithms To use conditional code and logic
		Digital Literacy	To describe how the internet works To understand that computers are in lots of different inventions. To identify computers' icons. To discuss the different uses of computers. Understanding how we use computers to stay safe while we're online. To type without looking at the keyboard with correct finger placement To be able to move our typing hands To practice and learn logging in on Windows computer. To practise mouse skills (Clicking Dragging) Using a device to touch type Using a device to touch type To explore how iPad touch, select, copy and paste is different to Windows functions. To create rules for using technology responsibly	To select, use and combine a variety of software on a range of digital devices To develop camera skills To develop manipulation skills To practise simple photography skills To use a variety of method to create a news report	To draw a 2D shape or line. I can manipulate 2D shapes into 3D shapes. To use the measure tool to draw shapes. I can use inference points to draw lines and shapes. To double click to copy, push/pull, and offset. To import models from the 3D warehouse. I can copy and manipulate 3D models. To select the tools I need for different features. I can use the main tools independently To use all the main tools on the Sketch Up toolbar. Use still images to produce an animation To Combine individual frames to perceive movement Creating custom-made, creative animations I can evaluate webpages I can create a webpage layout I can add text and images to a webpage I can add hyperlinks into a webpage I can publish and share my webpage