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| **Happiness Responsibility Friendship Respect Courage** | | | | |
| **DIGITAL LITERACY** | | | | |
| **Computer Systems and Networks** | | | | |
|  | **Technology Around Us** | | **IT Around Us** | |
| **EYFS** | **Year One** | | **Year Two** | |
|  | Knowledge | Skills | Knowledge | Skills |
| I know a range of technology is used in places such as home and schools.  I can operate technology such as IWB, iPads and toys with knobs, pulleys and buttons.  I can draw pictures on IWB and begin to change colours.  I can type my name on a keypad. | I know what the term ‘technology’ means.  I know what the main parts of a desktop or laptop are called.  I know that different computers use different mice but that they perform the same function.  I know that I can write on a computer using a keyboard and this is called typing.  I know that I can save my work on a computer.  I know that I can reopen work I have previously saved.  I know that I can edit work that I have already saved.  I know that I need to follow Computer Safety rules to keep myself safe online. | I can locate examples of technology in my classroom and explain how it helps me.  I can log onto a computer.  I can use a mouse to click and drag.  I can use a mouse to open a program.  I can use a mouse to create a picture.  I can type my name using a keyboard.  I can find the save icon to save my work.  I can open my work from a file.  I can use the arrow keys to move the cursor.  I can use the delete key to edit my text.  I can identify rules for when I am using technology in school and at home.  I can discuss how I benefit from following these rules. | I know that ‘information technology’ is a computer or anything that works with a computer.  I know the different examples of IT within the school setting.  I know that IT is used in the wider world (outside of the school)  I know that IT devices can work together.  I know that I have to follow rules to use IT safely. | I can identify that a computer is part of IT.  I can sort school IT by what it is used for.  I can identify which IT can be used in more than one way.  I can sort IT by where it is found.  I can explain why we use IT in different settings.  I can explain if actions are using IT or not.  I can talk about different rules for using IT safely.  I can explain how these rules keep me safe. |
| **Key vocabulary:** technology, IWB (Interactive White Board), type, keypad, iPad, pulley, button | **Key vocabulary:** technology, desktop, laptop, computer, mice, mouse, keyboard, type, save, reopen, open, edit, log on, click, drag, program, keys, cursor | | **Key vocabulary:** IT (information technology), computer, devices | |
|  | **INFORMATION TECHNOLOGY** | | | |
|  | **Creating Media** | | | |
|  | **Digital Painting (optional)** | |  | |
| **EYFS** | **Year One** | | **Year Two** | |
|  | Knowledge | Skills | Knowledge | Skills |
| I can select and use technology for the correct purpose such as using iPad for photos. | I know how we paint using computers.  I know that pictures can be painted with and without digital devices. | I can use different freehand tools to make marks, draw lines and draw a picture.  I can use the shape and line tools.  I can use a range of shape tools.  I can make colour choices.  I can use the brush tools.  I can use the tools to make marks and recreate the work of an artist.  I can spot the differences between painting on a computer and on paper.  I can say whether I prefer painting using a computer or using paper. | iPad deployment | I can use technology to create, organise, store, manipulate and retrieve content. |
| **Key vocabulary:** technology, iPad, photo | **Key vocabulary:** computer, digital, device, paint, picture, tool, shape, line, brush, recreate | | **Key vocabulary:** iPad, technology, create, organise, store, manipulate, retrieve, content | |
|  | **COMPUTER SCIENCE** | | | |
|  | **Programming A** | | | |
|  | **Moving a robot** | | **Robot Algorithms** | |
| **EYFS** | **Year One** | | **Year Two** | |
|  | Knowledge | Skills | Knowledge | Skills |
| I can use the IWB to play games and follow programmes.  I can make a bee bot go forwards.  I can follow directions with a bee bot. | I know what a given command will do.  I know that computer language needs to be precise.  I know how to program the floor robot to move.  I know that a computer program must have a purpose. | I can predict and then match the outcome of a command on a device.  I can act out a given word.  I can compare forwards and backwards movements.  I can start a sequence from the same place.  I can predict the outcome of a sequence involving forwards and backwards commands.  I can use left and right commands.  I can combine four direction commands to make sequences.  I can plan a simple program.  I can find more than one solution to a problem. | I know that an algorithm is a set of clear, unambiguous instructions.  I know that the order of instructions in a sequence is important.  I know how to design, create and test a mat for a floor robot.  I know the term decomposition. | I can describe a series of instructions as a sequence.  I can explain what happens when we change the order of instructions.  I can use logical reasoning to predict the outcome of a program.  I can use code and algorithms in my design.  I can test and debug a program I have written. |
| **Key vocabulary:** IWB (Interactive White Board), programme, BeeBot, direction | **Key vocabulary:** command, precise, computer, program, robot, purpose, device, movement, sequence, problem, solution | | **Key vocabulary:** algorithm, instruction, sequence, design, create, test, robot, decomposition, outcome, program, code, debug | |
|  | **COMPUTER SCIENCE** | | | |
|  | **Programming B** | | | |
|  | **Introduction to Animation** | | **An introduction to quizzes** | |
|  | **Year One** | | **Year Two** | |
|  | Knowledge | Skills | Knowledge | Skills |
|  | I know that Scratch Junior is a computer block code programming environment.  I know that some blocks have numbers underneath them and that changing these numbers has different effects.  I know that programs can have multiple sprites and that each sprite has its own programming area.  I know projects can have backgrounds. | I can choose commands to move a sprite.  I can use more than one block by joining them together.  I can use a Start block in a program  I can run my program.  I can say what happens when I change a value.  I can add and delete sprites.  I can add blocks to each of my sprites.  I can design the parts of a project.  I can use my algorithm to create my program. | Scratch Junior  I know that a sequence of commands has an outcome.  I know how to change a design.  I know how to use the ‘Start on tap’ and ‘Go to page’ (Change background) blocks.  I know how to design and create a quiz program.  I know how to evaluate my program. | I can predict the outcome of a sequence of commands.  I can match two sequences with the same outcome.  I can change the outcome of a sequence of commands.  I can create a program using a given design.  I can modify a given design by choosing backgrounds and characters.  I can choose the images for my own design.  I can create an algorithm.  I can build sequences of blocks to match my design.  I can compare my project to my design.  I can improve my project by adding features.  I can debug. |
|  | **Key vocabulary:** block, code, programming, sprite, project, command, program, run, value, add, delete, algorithm, design, create | | **Key vocabulary:** sequence, command, outcome, design, block, create, program, evaluate, modify, image, algorithm, build, project, feature, debug | |

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| **KS1 Key Vocabulary** | |
| **Vocabulary** | **Definition** |
| Algorithm | A precise set of ordered steps that can be followed by a human or a computer to achieve a task |
| Attribute (property) | A word or a phrase that can be used to describe an object such as its colour, size, or price |
| Code | The **commands** that a **computer** can **run** |
| Code snippet | A section of a **program** viewed in isolation |
| Command | A single instruction that can be used in a **program** to control a **computer** |
| Computer | A **programmable** machine that accepts and **processes** **inputs** and produces **outputs** (input, process, output; IPO) |
| Data | A letter, word, number etc. that has been collected for a purpose, but **stored** without context |
| Debugging | The process of finding and correcting errors in a **program** |
| Information | **Data** put into a context that provides meaning |
| Information technology | The study, use, and development of **computer systems** for storing, processing, retrieving, and sending information |
| Object | Something that can be named and has other **attributes (properties)**, which can be labelled |
| Program | A set of ordered **commands** that can be **run** by a **computer** to complete a task |
| Property (attribute) | A word or a phrase that can be used to describe an **object** such as its colour, size, or price |
| Run (execute) | To action the **commands** in a **program** |
| Technology | The use of scientific knowledge for practical purposes |