Meridian Trust

Progression in Computing Skills

Focus area	EYFS	Year 1 and Year 2	Year 3 and Year 4	Year 5 and Year 6
Creating Media	-Make marks using lines and brushes using 'sketches' on the ipad and with support/group work on a laptop or big screen using paint through Teacher laptop **Autumn**: find a brush and make marks **Spring:** Can change brush and colour of brush with support **Summer:** can change brush and colour of brush and make marks for a purpose. Can log on to a laptop **Autumn:** Can find correct intake number and letters for name with support **Spring:** can log on with support **Summer:** Can log in with no support	- Draw lines, make marks on a screen, use the square and line tool, and explain which tool they used - Use paint tools with purpose to draw a picture and recreate the work of an artist - Make appropriate colour choices and tool choices - Change the colour and brush size to create picture with dots in the style of an artist independently - Recognise and find keys on a keyboard - Use backspace, letter, number and space keys - Use bold, italics and underline as well as use capital letters - Change font - Select all of the text by clicking and dragging - Select a word by double clicking - Use 'undo' to remove changes - Recognise devices that take photographs and know how to access an appropriate program to do so - Take photos in both landscape and portrait and be able to explain why they would choose a particular orientation - Know what is wrong with a photo and improve a photograph by retaking it - Experiment with different light sources - Use a tool to achieve a desired effect on a photograph - Know how to change a picture using effects in different apps - Create a rhythm pattern using a computer using three notes - Refine my musical pattern on a computer - Save my work - Reopen my work	- Create an effective flip book-style animation - Create effective stop frame animation - Plan an animation - Use onion skinning to help make small changes between frames - Change font style, size and colours for a given purpose - Edit text to communicate more clearly - Create a template for a particular purpose - Create placeholders for a purpose in a template - Choose the best locations for my content - Make changes to content after its been added - Paste text and images to create a magazine cover - Choose a suitable layout for a given purpose -Use a device to record and play sounds back and know what inputs and outputs are required to play or record audio sound -Plan and write content for a podcast -Save a digital recording as a file -Edit sections of an audio recording -Plan a digital recording from a file -Use editing tools to arrange sections of audio -Explore how images can be changed in real life -Choose appropriate tools to retouch an image -Consider the effects of adding other elements to images	- Plan a video project using a storyboard - Choose the most suitable digital device for recording a project - Locate and identify, the working features of a digital device that can record video - Demonstrate the safe use and handling of devices - Select suitable device and software to capture video - Record a video that demonstrates some of the features of an effective video - Select the correct tools to make edits to own video - Store, retrieve and export my records to a computer - Move, resize and rotate object that have been duplicated - Use tools to achieve a desired effect - Modify objects to create different effects - Use zoom tool to help add detail to own drawing - Copy part of a drawing by duplication several objects - Group to create a single object - Reuse a group of object to further develop vector drawings - Create alternatives to vector drawings - Explore a website - Find copyright-free images - Add content to own web page - Preview what their web page looks like - Make multiple web pages and link them using hyperlinks - Use a computer to create and manipulate (select, move and delete) 3D digital objects - Resize a 3D object - Position 3D objects in relation to each other - Rotate a 3D shape - Select and duplicate multiple 3D shapes - Group a digital 3D shape and a placeholder to create a hole in an object - Choose which 3D objects needed to construct a model - Modify multiple 3D object - Plan, design and create a digital 3D mode
Programming	Can program toys – Beebots/ mice etc, including using the BeeBot app on the ipadand start to use directional language including forward, backwards, left and right **Autumn:** Can use the language of forward and backwords independently with using the language left and right with support **Spring:** can find the appropriate button which matched the appropriate language with support **Summer: :** can find the appropriate button which matched the appropriate language and make the bot move using 3 commands	- Run a command on a device - Recall words that can be active out - Combine forward and backwards commands to make a sequence including having a start point - Combine four direction commands to make sequences - Plan and debug a simple program - Find more than one solution to a problem – get to the same place using more than one way - Move a sprite with commands - Use a Start block in a program - Use more than one black by joining them together - Create an effect by changing a value - Add blocks to each sprite as well as delete sprites or add in additional sprites - Select appropriate artwork for project - Create an algorithm for each sprit - Test programs that have been created - Use sprites to match design - Give clear and unambiguous instructions	- Identify, create objects in Scratch and program each sprite - Create a sequence of connected commands - Start a program in different ways - Combine sound commanders and order notes in a sequence - Make design choices for artwork - Implement an algorithm as a code and relate a task description to a design - Improve a program through the event or action - Choose a suitable size for a character in a maze an program its movement - Choose black to set up a program and consider the real world when making design choices as well as use programming extensions - Choose suitable keys to turn on additional features - Match, modify and test a program against a given design - Implement a design -Create a code snippet for a purpose -Program a computer by typing commands -Use a template to create a design for a program	- Build a simple circuit to connect a microcontroller to a computer - Program a microcontroller to light an LED - Connect more than one output device to a microcontroller - Decide which output device they can control with a count-controlled loop - deign sequence for given output device - program a microcontroller to respond to an input - Use selections "if…then…"statements to direct the flow of a program - use a selection to produce an intended outcome - Write an algorithm to control lights and a field - Modify a condition in a program - Create a program with different outcomes using selection - Use selection in an infinite loop to check a condition - Design the flow of a program which contains 'if…then…else…' - show that a condition can direct program flow in one of two ways - outline a given task - Use a design format to outline my project - implement an algorithm to create the first section of their own program

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		- Create different algorithms for a range of sequences (using the same commands) - Show difference in outcomes between two sequences that consist of the same commands - Use algorithms to program a sequence on a floor robot - Identify and test routes around a mat - Create an algorithm to meet a goal and program - Plan algorithms for different parts of a task - Put together different parts of a program, test and debug each part of the program - Show how to run a program - Change the outcome of a sequence of commands - Build the sequences of blocks needed to meet a design and work out the actions of a sprite in an algorithm - Choose a background, character and create a program based on the new design - Compare my project to my design - Debug own program and improve project by adding features	-Write an algorithm to produce a given part of a sequence (eg brushing teeth, dance moves etc) -Use a count-controlled loop to produce a given outcome -Choose which values to change in a loop -Recognise the effect of changing the number of times, a task is repeated Identify 'chunks' of actions in the real world -Use a procedure in a program -Design a program that includes count-controlled loops -Develop a program by debugging it -Use a design to write a program -Modify a snippet of code to create a given outcome in count-controlled loops -Modify loops to produce a given outcome -choose which actions will be repeated for each object -re-use existing code snippets on new sprites -Develop own design explaining what their project will do -Select key parts of a given project to use in their own design -Build a program that follows their own design -Refine an algorithm in their own design	- Share program with other - Test program - Define a 'variable' as something that is changeable - Make use of an event in a program to set a variable - Design a project that builds on a given example - Design and create own project by choosing artwork, creating algorithms and test code that they have written - Test my program on an emulator - Transfer program to a controllable device - Use variable in an "if…then…else…" statement - experiment with different physical inputs - Use a condition to change a variable - Modify a program to achieve different outcomes - Use an operand (e.g <>=) in an if…then… statement - Design the algorithm for a project as well as design the program flow for it - Test program against design - Use a range of approaches to find and fix bugs
Data and Information	Can count objects and put the correct key digit next to an already written name of object/s Can group objects by 'kinds' **Autumn:** Can count object with increasing confidence and sort objects into groups with support **Spring:** Can count object with increasing confidence and sort objects into groups with support and find the appropriate key on a keyboard with support **Summer:** Can count object confidence and sort objects into groups with support and find the appropriate key on a keyboard with support	- Match, group, count, describe objects and label them - Collect and record data in different formats - Create a pictogram with data collected - Represent information in different ways	- Create two groups of objects separated by one attribute (yes/no) - prove a branching database works - Select objects to arrange in a branching structure - Compare information show in a pictogram with a branching database -Use data from a sensor to answer a given question -Find a suitable place to collect data and intervals used to collect such data -Import a data set -Use computer program to sort data -Use a computer program to view data in different ways -Collect data using a data logger -Propose a question that can be answer using 'logged data	- Order, sort and group data cards - Choose which field to sort data by to answer a given question - Navigate a flat-file database to compare different views of information - Group information to answer questions - Choose which field and value are required to answer a given question - Outline how 'AND' and 'OR' can be used to refine data selection - Refine a chart by selecting a particular filter - Select an appropriate chart to visually compare data - Present findings to a group - Refine a search in a real-world context - Apply appropriate number format to a cell - Build a data set in a spreadsheet application - Create a formula which includes a range of cells - Apply a formula to calculate the data needed to answer questions - Create a spreadsheet to plan an event - Produce a graph from data - Choose suitable way to present data
Computing Systems and Networks	Can recognise technology in the classroom Can type own name **Autumn:** can name different simple technology with support for unfamiliar technology. Can start to recognise letters in own name on a keyboard with support **Spring**: can name different simple technology. Can recognise letters in own name on a keyboard with support **Summer:** can name different simple technology including new ones.	- Able to locate examples of technology in the classroom - Switch on and log into a computer. - Use a mouse/trackpad to click and drag objects, create a picture and open a programme - Save my work to a file - Type my name on a computer- - Delete letters - Open my work from a file - Use the keyboard to move the cursor - Identify examples of IT - Sort School IT by what it is used for - Demonstrate how IT devices work together - Able to talk about different rules for using IT - Use IT for different types of activities	- Follow a process of inputs and outputs - Classify input and output devices as well as design a digital device - Recognise what digital device for a different purposes - Recognise different connections as well as the importance of a network switch - Demonstrate how information can be passed between devices	- Send information over the internet in different ways - Complete a web search to find specific information - Relate a search term to the search engines - Choose a method of communication to suit particular purposes - Compare different methods of communication on the internet

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	Can recognise letters in own name on a keyboard and type this into a document			
Fundamental Skills	Can access links through a QR code using an ipad **Autumn:** can find the camera app and click on the link when hovering over the QR code with support **Spring:** can find the camera app and click on the link when hovering over the QR code with less support **Summer:** can find the camera app and click on the link when hovering over the QR code	-Find and locate Teams -Create own file in class team and store work in there, naming appropriate files - Organise work into appropriate files on Teams – naming files as subject names and work as according to the lesson – eg Graphs etc	- Find and open up OneNote through teams on a laptop - Find work that has been distributed into individual spaces on ON - Use forms in the content library - Copy and paste from the content library into their own space - Draw and extend a margin - Change letter sizing appropriately, font colour and type -Can use a split screen -Can insert audio next to pictures or in own work. -Can take pictures and insert them into OneNote -Can insert a variety of programs and work into own space eg doing work in excel and pasting it in.	-Consistently lay work out as would be expected in a book independently -Can record videos and insert this into my work -Can use a range of media and insert this into OneNote ie videos, websites, citation etc - Can see organisation through files and work presented on OneNote - Can manage their own searches safely - Can research independent and interpret information given -

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