

**Progression in Computing Skills**

Focus area	EYFS	Year 1 and Year 2	Year 3 and Year 4	Year 5 and Year 6
<b>Creating Media</b>	<ul style="list-style-type: none"> <li>-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</li> <li><b>Autumn:</b> find a brush and make marks</li> <li><b>Spring:</b> Can change brush and colour of brush with support</li> <li><b>Summer:</b> can change brush and colour of brush and make marks for a purpose.</li> <li>Can log on to a laptop</li> <li><b>Autumn:</b> Can find correct intake number and letters for name with support</li> <li><b>Spring:</b> can log on with support</li> <li><b>Summer:</b> Can log in with no support</li> </ul>	<ul style="list-style-type: none"> <li>- Draw lines, make marks on a screen, use the square and line tool, and explain which tool they used</li> <li>- Use paint tools with purpose to draw a picture and recreate the work of an artist</li> <li>- Make appropriate colour choices and tool choices</li> <li>- Change the colour and brush size to create picture with dots in the style of an artist independently</li> <li>- Recognise and find keys on a keyboard</li> <li>- Use backspace, letter, number and space keys</li> <li>- Use bold, italics and underline as well as use capital letters</li> <li>- Change font</li> <li>- Select all of the text by clicking and dragging</li> <li>- Select a word by double clicking</li> <li>- Use 'undo' to remove changes</li> <li>- Recognise devices that take photographs and know how to access an appropriate program to do so</li> <li>- Take photos in both landscape and portrait and be able to explain why they would choose a particular orientation</li> <li>- Know what is wrong with a photo and improve a photograph by retaking it</li> <li>- Experiment with different light sources</li> <li>- Use a tool to achieve a desired effect on a photograph</li> <li>- Know how to change a picture using effects in different apps</li> <li>- Create a rhythm pattern using a computer using three notes</li> <li>- Refine my musical pattern on a computer</li> <li>- Save my work</li> <li>- Reopen my work</li> </ul>	<ul style="list-style-type: none"> <li>- Create an effective flip book-style animation</li> <li>- Create effective stop frame animation</li> <li>- Plan an animation</li> <li>- Use onion skinning to help make small changes between frames</li> <li>- Change font style, size and colours for a given purpose</li> <li>- Edit text to communicate more clearly</li> <li>- Create a template for a particular purpose</li> <li>- Create placeholders for a purpose in a template</li> <li>- Choose the best locations for my content</li> <li>- Make changes to content after its been added</li> <li>- Paste text and images to create a magazine cover</li> <li>- Choose a suitable layout for a given purpose</li> <li>-Use a device to record and play sounds back and know what inputs and outputs are required to play or record audio sound</li> <li>-Plan and write content for a podcast</li> <li>-Save a digital recording as a file</li> <li>-Edit sections of an audio recording</li> <li>-Plan a digital recording from a file</li> <li>-Use editing tools to arrange sections of audio</li> <li>-Explore how images can be changed in real life</li> <li>-Choose appropriate tools to retouch an image</li> <li>-Consider the effects of adding other elements to images</li> </ul>	<ul style="list-style-type: none"> <li>- Plan a video project using a storyboard</li> <li>- Choose the most suitable digital device for recording a project</li> <li>- Locate and identify, the working features of a digital device that can record video</li> <li>- Demonstrate the safe use and handling of devices</li> <li>- Select suitable device and software to capture video</li> <li>- Record a video that demonstrates some of the features of an effective video</li> <li>- Select the correct tools to make edits to own video</li> <li>- Store, retrieve and export my records to a computer</li> <li>- Move, resize and rotate object that have been duplicated</li> <li>- Use tools to achieve a desired effect</li> <li>- Modify objects to create different effects</li> <li>- Use zoom tool to help add detail to own drawing</li> <li>- Copy part of a drawing by duplication several objects</li> <li>- Group to create a single object</li> <li>- Reuse a group of object to further develop vector drawings</li> <li>- Create alternatives to vector drawings</li> <li>- Explore a website</li> <li>- Find copyright-free images</li> <li>- Add content to own web page</li> <li>- Preview what their web page looks like</li> <li>- Make multiple web pages and link them using hyperlinks</li> <li>- Use a computer to create and manipulate (select, move and delete) 3D digital objects</li> <li>- Resize a 3D object</li> <li>- Position 3D objects in relation to each other</li> <li>- Rotate a 3D shape</li> <li>- Select and duplicate multiple 3D shapes</li> <li>- Group a digital 3D shape and a placeholder to create a hole in an object</li> <li>- Choose which 3D objects needed to construct a model</li> <li>- Modify multiple 3D object</li> <li>- Plan, design and create a digital 3D mode</li> </ul>
<b>Programming</b>	<ul style="list-style-type: none"> <li>Can program toys – Beebots/ mice etc, including using the BeeBot app on the ipad and start to use directional language including forward, backwards, left and right</li> <li><b>Autumn:</b> Can use the language of forward and backwards independently with using the language left and right with support</li> <li><b>Spring:</b> can find the appropriate button which matched the appropriate language with support</li> <li><b>Summer:</b> : can find the appropriate button which matched the appropriate language and make the bot move using 3 commands</li> </ul>	<ul style="list-style-type: none"> <li>- Run a command on a device</li> <li>- Recall words that can be active out</li> <li>- Combine forward and backwards commands to make a sequence including having a start point</li> <li>- Combine four direction commands to make sequences</li> <li>- Plan and debug a simple program</li> <li>- Find more than one solution to a problem – get to the same place using more than one way</li> <li>- Move a sprite with commands</li> <li>- Use a Start block in a program</li> <li>- Use more than one block by joining them together</li> <li>- Create an effect by changing a value</li> <li>- Add blocks to each sprite as well as delete sprites or add in additional sprites</li> <li>- Select appropriate artwork for project</li> <li>- Create an algorithm for each sprit</li> <li>- Test programs that have been created</li> <li>- Use sprites to match design</li> <li>- Give clear and unambiguous instructions</li> </ul>	<ul style="list-style-type: none"> <li>- Identify, create objects in Scratch and program each sprite</li> <li>- Create a sequence of connected commands</li> <li>- Start a program in different ways</li> <li>- Combine sound commanders and order notes in a sequence</li> <li>- Make design choices for artwork</li> <li>- Implement an algorithm as a code and relate a task description to a design</li> <li>- Improve a program through the event or action</li> <li>- Choose a suitable size for a character in a maze and program its movement</li> <li>- Choose block to set up a program and consider the real world when making design choices as well as use programming extensions</li> <li>- Choose suitable keys to turn on additional features</li> <li>- Match, modify and test a program against a given design</li> <li>- Implement a design</li> <li>-Create a code snippet for a purpose</li> <li>-Program a computer by typing commands</li> <li>-Use a template to create a design for a program</li> </ul>	<ul style="list-style-type: none"> <li>- Build a simple circuit to connect a microcontroller to a computer</li> <li>- Program a microcontroller to light an LED</li> <li>- Connect more than one output device to a microcontroller</li> <li>- Decide which output device they can control with a count-controlled loop</li> <li>- deign sequence for given output device</li> <li>- program a microcontroller to respond to an input</li> <li>- Use selections "if...then..." statements to direct the flow of a program</li> <li>- use a selection to produce an intended outcome</li> <li>- Write an algorithm to control lights and a field</li> <li>- Modify a condition in a program</li> <li>- Create a program with different outcomes using selection</li> <li>- Use selection in an infinite loop to check a condition</li> <li>- Design the flow of a program which contains 'if...then...else...'</li> <li>- show that a condition can direct program flow in one of two ways</li> <li>- outline a given task</li> <li>- Use a design format to outline my project</li> <li>- implement an algorithm to create the first section of their own program</li> </ul>

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		<ul style="list-style-type: none"> <li>- Create different algorithms for a range of sequences (using the same commands)</li> <li>- Show difference in outcomes between two sequences that consist of the same commands</li> <li>- Use algorithms to program a sequence on a floor robot</li> <li>- Identify and test routes around a mat</li> <li>- Create an algorithm to meet a goal and program</li> <li>- Plan algorithms for different parts of a task</li> <li>- Put together different parts of a program, test and debug each part of the program</li> <li>- Show how to run a program</li> <li>- Change the outcome of a sequence of commands</li> <li>- Build the sequences of blocks needed to meet a design and work out the actions of a sprite in an algorithm</li> <li>- Choose a background, character and create a program based on the new design</li> <li>- Compare my project to my design</li> <li>- Debug own program and improve project by adding features</li> </ul>	<ul style="list-style-type: none"> <li>- Write an algorithm to produce a given part of a sequence (eg brushing teeth, dance moves etc)</li> <li>- Use a count-controlled loop to produce a given outcome</li> <li>- Choose which values to change in a loop</li> <li>- Recognise the effect of changing the number of times, a task is repeated</li> <li>- Identify 'chunks' of actions in the real world</li> <li>- Use a procedure in a program</li> <li>- Design a program that includes count-controlled loops</li> <li>- Develop a program by debugging it</li> <li>- Use a design to write a program</li> <li>- Modify a snippet of code to create a given outcome in count-controlled loops</li> <li>- Modify loops to produce a given outcome</li> <li>- choose which actions will be repeated for each object</li> <li>- re-use existing code snippets on new sprites</li> <li>- Develop own design explaining what their project will do</li> <li>- Select key parts of a given project to use in their own design</li> <li>- Build a program that follows their own design</li> <li>- Refine an algorithm in their own design</li> </ul>	<ul style="list-style-type: none"> <li>- Share program with other</li> <li>- Test program</li> <li>- Define a 'variable' as something that is changeable</li> <li>- Make use of an event in a program to set a variable</li> <li>- Design a project that builds on a given example</li> <li>- Design and create own project by choosing artwork, creating algorithms and test code that they have written</li> <li>- Test my program on an emulator</li> <li>- Transfer program to a controllable device</li> <li>- Use variable in an "if...then...else..." statement</li> <li>- experiment with different physical inputs</li> <li>- Use a condition to change a variable</li> <li>- Modify a program to achieve different outcomes</li> <li>- Use an operand (e.g &lt;=&gt;) in an if...then... statement</li> <li>- Design the algorithm for a project as well as design the program flow for it</li> <li>- Test program against design</li> <li>- Use a range of approaches to find and fix bugs</li> </ul>
<b>Data and Information</b>	<p>Can count objects and put the correct key digit next to an already written name of object/s</p> <p>Can group objects by 'kinds'</p> <p><b>Autumn:</b> Can count object with increasing confidence and sort objects into groups with support</p> <p><b>Spring:</b> Can count object with increasing confidence and sort objects into groups with support and find the appropriate key on a keyboard with support</p> <p><b>Summer:</b> Can count object confidence and sort objects into groups with support and find the appropriate key on a keyboard with support</p>	<ul style="list-style-type: none"> <li>- Match, group, count, describe objects and label them</li> <li>- Collect and record data in different formats</li> <li>- Create a pictogram with data collected</li> <li>- Represent information in different ways</li> </ul>	<ul style="list-style-type: none"> <li>- Create two groups of objects separated by one attribute (yes/no)</li> <li>- prove a branching database works</li> <li>- Select objects to arrange in a branching structure</li> <li>- Compare information show in a pictogram with a branching database</li> <li>- Use data from a sensor to answer a given question</li> <li>- Find a suitable place to collect data and intervals used to collect such data</li> <li>- Import a data set</li> <li>- Use computer program to sort data</li> <li>- Use a computer program to view data in different ways</li> <li>- Collect data using a data logger</li> <li>- Propose a question that can be answer using 'logged data'</li> </ul>	<ul style="list-style-type: none"> <li>- Order, sort and group data cards</li> <li>- Choose which field to sort data by to answer a given question</li> <li>- Navigate a flat-file database to compare different views of information</li> <li>- Group information to answer questions</li> <li>- Choose which field and value are required to answer a given question</li> <li>- Outline how 'AND' and 'OR' can be used to refine data selection</li> <li>- Refine a chart by selecting a particular filter</li> <li>- Select an appropriate chart to visually compare data</li> <li>- Present findings to a group</li> <li>- Refine a search in a real-world context</li> <li>- Apply appropriate number format to a cell</li> <li>- Build a data set in a spreadsheet application</li> <li>- Create a formula which includes a range of cells</li> <li>- Apply a formula to calculate the data needed to answer questions</li> <li>- Create a spreadsheet to plan an event</li> <li>- Produce a graph from data</li> <li>- Choose suitable way to present data</li> </ul>
<b>Computing Systems and Networks</b>	<p>Can recognise technology in the classroom</p> <p>Can type own name</p> <p><b>Autumn:</b> can name different simple technology with support for unfamiliar technology.</p> <p>Can start to recognise letters in own name on a keyboard with support</p> <p><b>Spring:</b> can name different simple technology.</p> <p>Can recognise letters in own name on a keyboard with support</p> <p><b>Summer:</b> can name different simple technology including new ones.</p>	<ul style="list-style-type: none"> <li>- Able to locate examples of technology in the classroom</li> <li>- Switch on and log into a computer.</li> <li>- Use a mouse/trackpad to click and drag objects, create a picture and open a programme</li> <li>- Save my work to a file</li> <li>- Type my name on a computer-</li> <li>- Delete letters</li> <li>- Open my work from a file</li> <li>- Use the keyboard to move the cursor</li> <li>- Identify examples of IT</li> <li>- Sort School IT by what it is used for</li> <li>- Demonstrate how IT devices work together</li> <li>- Able to talk about different rules for using IT</li> <li>- Use IT for different types of activities</li> </ul>	<ul style="list-style-type: none"> <li>- Follow a process of inputs and outputs</li> <li>- Classify input and output devices as well as design a digital device</li> <li>- Recognise what digital device for a different purposes</li> <li>- Recognise different connections as well as the importance of a network switch</li> <li>- Demonstrate how information can be passed between devices</li> </ul>	<ul style="list-style-type: none"> <li>- Send information over the internet in different ways</li> <li>- Complete a web search to find specific information</li> <li>- Relate a search term to the search engines</li> <li>- Choose a method of communication to suit particular purposes</li> <li>- Compare different methods of communication on the internet</li> </ul>

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	Can recognise letters in own name on a keyboard and type this into a document			
<b>Fundamental Skills</b>	<p>Can access links through a QR code using an ipad</p> <p><b>Autumn:</b> can find the camera app and click on the link when hovering over the QR code with support</p> <p><b>Spring:</b> can find the camera app and click on the link when hovering over the QR code with less support</p> <p><b>Summer:</b> can find the camera app and click on the link when hovering over the QR code</p>	<ul style="list-style-type: none"> <li>-Find and locate Teams</li> <li>-Create own file in class team and store work in there, naming appropriate files</li> <li>- Organise work into appropriate files on Teams – naming files as subject names and work as according to the lesson – eg Graphs etc</li> </ul>	<ul style="list-style-type: none"> <li>- Find and open up OneNote through teams on a laptop</li> <li>- Find work that has been distributed into individual spaces on ON</li> <li>- Use forms in the content library</li> <li>- Copy and paste from the content library into their own space</li> <li>- Draw and extend a margin</li> <li>- Change letter sizing appropriately, font colour and type</li> <li>-Can use a split screen</li> <li>-Can insert audio next to pictures or in own work.</li> <li>-Can take pictures and insert them into OneNote</li> <li>-Can insert a variety of programs and work into own space eg doing work in excel and pasting it in.</li> </ul>	<ul style="list-style-type: none"> <li>-Consistently lay work out as would be expected in a book independently</li> <li>-Can record videos and insert this into my work</li> <li>-Can use a range of media and insert this into OneNote ie videos, websites, citation etc</li> <li>- Can see organisation through files and work presented on OneNote</li> <li>- Can manage their own searches safely</li> <li>- Can research independent and interpret information given</li> <li>-</li> </ul>