

Medium Term Plan - Year 2 – Computing

HT1 – Computing Systems and Networks - Technology around us	
Recall	<p>What is technology, what is not technology</p> <p>What is...</p> <p>Computing Systems</p> <p>Technology</p> <p>Information</p> <p>Networks</p> <p>Safety</p> <p>Digital</p> <p>Tablet</p> <p>Camera</p>
End Point (National Curriculum Statements)	<p>recognise common uses of information technology beyond school</p> <p>use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</p>
Prior learning	Y1 – HT1
<p>Sequence of Learning / Contextual Knowledge</p> <p>(Lesson ideas)</p> <p><b>Disciplinary Knowledge</b></p>	<p>I can recognise the uses and features of information technology.</p> <p>I can identify information technology at home.</p> <p>I can identify information technology beyond school.</p> <p>I can explain how information technology benefits us.</p> <p>I can show how to use information technology safely.</p> <p><b>I can recognise that choices are made when using information technology.</b></p> <p>" -I can describe some uses of computers</p> <p>- I can identify examples of computers</p> <p>- I can identify that a computer is a part of IT"</p> <p>" -I can identify examples of IT</p> <p>- I can identify that some IT can be used in more than one way</p> <p>- I can sort school IT by what it's used for"</p> <p>" -I can find examples of information technology</p>

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	<ul style="list-style-type: none"> <li>- I can sort IT by where it is found</li> <li>- I can talk about uses of information technology"</li> <li>" -I can demonstrate how IT devices work together</li> <li>- I can recognise common types of technology</li> <li>- I can say why we use IT"</li> <li>" -I can list different uses of information technology</li> <li>- I can say how rules can help keep me safe</li> <li>- I can talk about different rules for using IT"</li> <li>" -I can explain the need to use IT in different ways</li> <li>- I can identify the choices that I make when using IT</li> <li>- I can use IT for different types of activities"</li> </ul>
Next Steps	Y3 – HT1
Key Vocabulary	Computing Systems Technology Information Networks Safety Digital Tablet Camera
Teacher Assessment	
Possible Misconceptions	
Class Teacher Notes	

HT2 & HT3 – Creating Media – HT2 – Digital Photography HT3 Making Music (Chrome Music Lab)	
Recall	What is the difference between text and images

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	<p>What is...</p> <p>device</p> <p>camera</p> <p>photograph</p> <p>capture</p> <p>image</p> <p>digital</p> <p>landscape and portrait</p> <p>lighting</p>
<p>End Point</p> <p>(National Curriculum Statements)</p>	<p>Ensure pupils are responsible, competent, confident and creative users of information and communication technology.</p>
<p>Prior Learning</p>	<p>Y1 HT2</p>
<p>Sequence of Learning / Contextual Knowledge</p> <p>(Lesson ideas)</p> <p><b>Disciplinary Knowledge</b></p>	<p><u>Digital Photography</u></p> <p>I know what devices can be used to take photographs.</p> <p>I can use a digital device to take a photograph.</p> <p>I can describe what makes a good photograph.</p> <p>I can decide how photographs can be improved.</p> <p>I can use tools to change an image.</p> <p>I recognise that images can be changed.</p> <p><u>Making Music</u></p> <p>I can say how music can make us feel.</p> <p>I can identify that there are patterns in music.</p> <p>I can describe how music can be used in different ways.</p> <p>I can show how music is made from a series of notes.</p> <p><b>I can create music for a purpose.</b></p> <p>I can review and refine our computer work.</p> <p>" -I can explain what I did to capture a digital photo</p> <p>- I can recognise what devices can be used to take photographs</p> <p>- I can talk about how to take a photograph"</p>

	<ul style="list-style-type: none"><li>" -I can explain the process of taking a good photograph</li><li>- I can explain why a photo looks better in portrait or landscape format</li><li>- I can take photos in both landscape and portrait format"</li><li>" -I can discuss how to take a good photograph</li><li>- I can identify what is wrong with a photograph</li><li>- I can improve a photograph by retaking it"</li><li>" -I can experiment with different light sources</li><li>- I can explain why a picture may be unclear</li><li>- I can explore the effect that light has on a photo"</li><li>" -I can explain my choices</li><li>- I can recognise that images can be changed</li><li>- I can use a tool to achieve a desired effect"</li><li>" -I can apply a range of photography skills to capture a photo</li><li>- I can identify which photos are real and which have been changed</li><li>- I can recognise which photos have been changed"</li> <li>" -I can describe music using adjectives</li><li>- I can identify simple differences in pieces of music</li><li>- I can say what I do and don't like about a piece of music"</li><li>" -I can create a rhythm pattern</li><li>- I can explain that music is created and played by humans</li><li>- I can play an instrument following a rhythm pattern"</li><li>" -I can connect images with sounds</li><li>- I can relate an idea to a piece of music</li><li>- I can use a computer to experiment with pitch"</li><li>" -I can explain how my music can be played in different ways</li><li>- I can identify that music is a sequence of notes</li><li>- I can refine my musical pattern on a computer"</li><li>" -I can add a sequence of notes to my rhythm</li><li>- I can create a rhythm which represents an animal I've chosen</li><li>- I can create my animal's rhythm on a computer"</li><li>" -I can explain how I changed my work</li></ul>
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	<ul style="list-style-type: none"> <li>- I can listen to music and describe how it makes me feel</li> <li>- I can review my work"</li> </ul>
Next Steps	Y1 – HT2
Key Vocabulary	<ul style="list-style-type: none"> <li>device</li> <li>camera</li> <li>photograph</li> <li>capture</li> <li>image</li> <li>digital</li> <li>landscape and portrait</li> <li>lighting</li> </ul>
Teacher Assessment	
Possible Misconceptions	
Class Teacher Notes	

HT4 – Data and information – Pictograms	
Recall	<ul style="list-style-type: none"> <li>What is a group?</li> <li>How can you group data?</li> <li>What is...</li> <li>Tally</li> <li>Pictogram</li> </ul>

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	Comparison
End Point (National Curriculum Statements)	use technology purposefully to create, organise, store, manipulate and retrieve digital content
Sequence of Learning / Contextual Knowledge  (Lesson ideas) <b>Disciplinary Knowledge</b>	<p>I can recognise that we can count and compare objects using tally charts.                      I can recognise that objects can be represented as pictures.  <b>I can create a pictogram.</b>                      I can select objects by attribute and make comparisons.                      I can recognise that people can be described by attributes.                      I can explain that we can present information using a computer.</p> <p>" -I can compare totals in a tally chart                      - I can record data in a tally chart                      - I can represent a tally count as a total"                      " -I can enter data onto a computer                      - I can use a computer to view data in a different format                      - I can use pictograms to answer simple questions about objects"                      " -I can explain what the pictogram shows                      - I can organise data in a tally chart                      - 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 create a pictogram to arrange objects by an attribute                      - I can tally objects using a common attribute"                      " -I can choose a suitable attribute to compare people                      - I can collect the data I need                      - I can create a pictogram and draw conclusions from it"                      " -I can give simple examples of why information should not be shared                      - I can share what I have found out using a computer                      - I can use a computer program to present information in different ways"</p>
Key Vocabulary	Tally Pictogram

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	Comparison
Teacher Assessment	
Possible Misconceptions	
Class Teacher Notes	

HT5 & 6 – Programming HT5 Beebots HT6 Scratch	
Recall	What is a sequence What is... Sequence Instructions Order Sprite Algorithm
End Point  (National Curriculum Statements)	understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
Prior learning	<u>Y1 HT5</u>
Sequence of Learning / Contextual Knowledge  (Lesson ideas) <b>Disciplinary Knowledge</b>	<u>Robot Algorithms</u> 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 (series of commands). I can explain that programming projects can have code and artwork. <b>I can design an algorithm.</b> <b>I can create and debug a program that I have written.</b>

	<p><u>Quizzes</u></p> <p>I can explain that a sequence of commands has a start. I can explain that a sequence of commands has an outcome. I can create a program using a given design. I can change a given design.</p> <p><b>I can create a program using my own design.</b></p> <p>I can decide how my project can be improved.</p> <p>" -I can choose a series of words that can be enacted as a sequence - I can follow instructions given by someone else - I can give clear instructions"</p> <p>" -I can show the difference in outcomes between two sequences that consist of the same commands - I can use an algorithm to program a sequence on a floor robot - I can use the same instructions to create different algorithms"</p> <p>" -I can compare my prediction to the program outcome - I can follow a sequence - I can predict the outcome of a sequence"</p> <p>" -I can explain the choices I made for my mat design - I can identify different routes around my mat - I can test my mat to make sure that it is usable"</p> <p>" -I can create an algorithm to meet my goal - I can explain what my algorithm should achieve - I can use my algorithm to create a program"</p> <p>" -I can plan algorithms for different parts of a task - I can put together the different parts of my program - I can test and debug each part of the program"</p> <p>" -I can identify that a program needs to be started - I can identify the start of a sequence</p>
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	<ul style="list-style-type: none"> <li>- I can show how to run my program"</li> <li>" -I can change the outcome of a sequence of commands</li> <li>- I can match two sequences with the same outcome</li> <li>- I can predict the outcome of a sequence of commands"</li> <li>" -I can build the sequences of blocks I need</li> <li>- I can decide which blocks to use to meet the design</li> <li>- I can work out the actions of a sprite in an algorithm"</li> <li>" -I can choose backgrounds for the design</li> <li>- I can choose characters for the design</li> <li>- I can create a program based on the new design"</li> <li>" -I can build sequences of blocks to match my design</li> <li>- I can choose the images for my own design</li> <li>- I can create an algorithm"</li> <li>" -I can compare my project to my design</li> <li>- I can debug my program</li> <li>- I can improve my project by adding features"</li> </ul>
Next Steps	Y3 HT5
Key Vocabulary	Sequence Instructions Order Sprite Algorithm
Teacher Assessment	
Possible Misconceptions	
Class Teacher Notes	