



Year 1	Year 2	Year 3
Knowledge and Skills	Knowledge and Skills	Knowledge and Skills
<p><b><u>Vocabulary</u></b> Instruction, algorithm, program, debug, click, drag, save, record, search, personal information, private, safety</p> <p><b><u>Knowledge/ Skills</u></b></p> <p><b>Algorithms and programming</b></p> <ul style="list-style-type: none"> <li>Children can give a set of instructions orally</li> <li>Children can use symbols to represent actions (e.g. forward, backwards, left, right)</li> <li>Children can give instructions to make a programmable toy move</li> </ul> <p><b>Information Technology</b></p> <ul style="list-style-type: none"> <li>Children can decide how to group objects to answer a question</li> <li>Children can compare groups of objects</li> </ul> <p><b>Digital Literacy</b></p> <ul style="list-style-type: none"> <li>Children can click and drag with a mouse or trackpad.</li> <li>Children can launch an application by double clicking it</li> <li>Children can take photographs and record video</li> <li>Children can use art software to create images.</li> </ul> <p><b>Online Safety</b></p> <ul style="list-style-type: none"> <li>Children understand the meaning of personal information</li> <li>Children know to speak to an adult if they are unsure/upset about something they see online</li> </ul>	<p><b><u>Vocabulary</u></b> Algorithm, debug, tinker, precise, software, images, edit, content, pictogram</p> <p><b><u>Knowledge/ Skills</u></b></p> <p><b>Algorithms and programming</b></p> <ul style="list-style-type: none"> <li>Children understand the need for precise instructions.</li> <li>Children know how to program a Beebot and debug errors in their algorithms.</li> <li>Children can make predictions using logical reasoning.</li> </ul> <p><b>Information Technology</b></p> <ul style="list-style-type: none"> <li>Children can enter data onto a computer</li> <li>Children can use a computer program to present information in different ways</li> <li>Children can use pictograms to answer simple questions</li> </ul> <p><b>Digital Literacy</b></p> <ul style="list-style-type: none"> <li>Children can use software to edit photographs.</li> <li>Children can use technology to create, store, manipulate, and retrieve digital music content</li> <li>Children can use search engines to locate specific information.</li> </ul> <p><b>Online Safety</b></p> <ul style="list-style-type: none"> <li>Children can identify uses of technology both inside and outside of school.</li> <li>Children know and understand the school online safety rules.</li> <li>Children can explain what to do if they are concerned about online content.</li> </ul>	<p><b><u>Vocabulary</u></b> Algorithm, debug, Input, output, research, software, video, cut, paste, safety</p> <p><b><u>Knowledge/ Skills</u></b></p> <p><b>Algorithms and programming</b></p> <ul style="list-style-type: none"> <li>Children know how to write an algorithm to control a Beebot or online sprite.</li> <li>Children can match a piece of code to an outcome.</li> <li>Children understand the role of debugging and can modify an algorithm following a test</li> </ul> <p><b>Information Technology</b></p> <ul style="list-style-type: none"> <li>Children can collect information by designing questions and content.</li> <li>Children can create and use branching databases</li> </ul> <p><b>Digital Literacy</b></p> <ul style="list-style-type: none"> <li>Children can search and find images on the web in different ways.</li> <li>Children can explain the difference between text and images</li> <li>Children can recognise that text and images can communicate messages clearly</li> <li>Children can identify use of desktop publishing in the real world.</li> <li>Children can use software to design and create a stop motion animation.</li> <li>Children know the difference between inputs (video cameras and microphones) and outputs (the video images and sound)</li> </ul> <p><b>Online Safety</b></p> <ul style="list-style-type: none"> <li>Children can explain and demonstrate how to use technology safely.</li> <li>Children know what to do when they encounter a problem online.</li> </ul>



Year 4	Year 5	Year 6
Knowledge and Skills	Knowledge and Skills	Knowledge and Skills
<p><b><u>Vocabulary</u></b> Algorithm, debug, tinkering, decomposition, variable, data, input, output</p> <p><b><u>Knowledge/ Skills</u></b></p> <p><b>Algorithms and programming</b></p> <ul style="list-style-type: none"> <li>Children can explain the meaning of a variable within coding.</li> <li>Children can write algorithms to accomplish specific tasks.</li> <li>Children can use computational thinking to make predictions.</li> <li>Children can identify errors in their code and take steps to correct it.</li> </ul> <p><b>Information Technology</b></p> <ul style="list-style-type: none"> <li>Children can collect, analyse, evaluate and present data and information in a variety of forms.</li> <li>Children can collect data using a data logger and interpret the data that has been collected.</li> </ul> <p><b>Digital Literacy</b></p> <ul style="list-style-type: none"> <li>Children can select, use and combine a variety of software (including internet services) on a range of digital devices, including inputs and outputs.</li> <li>Children can combine text, images and audio.</li> <li>Children can develop key questions and use key words to search for specific information when carrying out research.</li> </ul> <p><b>Online Safety</b></p> <ul style="list-style-type: none"> <li>Children can identify ways to stay safe online.</li> <li>Children can explain why certain online behaviours are acceptable/unacceptable.</li> </ul>	<p><b><u>Vocabulary</u></b> Algorithm, debug, tinker, decomposition, code, selection, cell, formula, sort, filter, function, data, vector drawing</p> <p><b><u>Knowledge/ Skills</u></b></p> <p><b>Algorithms and programming</b></p> <ul style="list-style-type: none"> <li>Children can design, write, and debug programs that accomplish specific goals, including controlling or simulating physical systems – Crumble bots.</li> <li>Children can use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.</li> <li>Children can use selection (an ‘if...then...’ statement) to direct the flow of a program</li> </ul> <p><b>Information technology</b></p> <ul style="list-style-type: none"> <li>Children can use Excel to build a spreadsheet.</li> <li>Children understand that a spreadsheet is presented in rows and columns and that individual boxes are called cells.</li> <li>Children understand that a formula is a calculation based on the contents of cells or a total of a combination of cells.</li> <li>Children understand that information can also easily be sorted and filtered by a spreadsheet.</li> <li>Children identify uses for spreadsheets in real life and understand how they can be useful tools.</li> </ul> <p><b>Digital literacy</b></p> <ul style="list-style-type: none"> <li>Children can identify that drawing tools can be used to produce different outcomes</li> <li>Children can create a vector drawing by combining shapes.</li> <li>Children can capture video using a range of techniques.</li> <li>Children understand how a green screen works</li> <li>Children can turn a storyboard into a video</li> <li>Children can combine video, sound effects and music</li> <li></li> </ul> <p><b>Online safety</b></p> <ul style="list-style-type: none"> <li>Children can explain how to apply online safety rules to given scenarios.</li> <li>Children understand that not everything they see online is true.</li> </ul>	<p><b><u>Vocabulary</u></b> algorithm, debug, decomposition, tinkering, computational thinking, procedure, field, record, flat-file database, hyperlink, navigation path</p> <p><b><u>Knowledge/ Skills</u></b></p> <p><b>Algorithms and programming</b></p> <ul style="list-style-type: none"> <li>Children can design a solution by breaking the problem up.</li> <li>Children can create procedures to use within algorithms.</li> <li>Children can use logical reasoning to detect and debug errors in algorithms.</li> <li>Children can control an external device.</li> <li>Children recognise that different solutions can exist for the same problem.</li> </ul> <p><b>Information Technology</b></p> <ul style="list-style-type: none"> <li>Children can explain what a field and a record is in a database.</li> <li>Children can navigate a real-world flat-file database to answer questions.</li> <li>Children can explain how ‘AND’ and ‘OR’ can be used to refine data selection.</li> </ul> <p><b>Digital Literacy</b></p> <ul style="list-style-type: none"> <li>Children can use a wide range of word processing skills.</li> <li>Children can combine text and images on a range of devices.</li> <li>Children can make multiple pages and link them using hyperlinks.</li> <li>Children can create and explain the importance of navigation paths.</li> </ul> <p><b>Online Safety</b></p> <ul style="list-style-type: none"> <li>Children can review their personal use of technology and online activity.</li> <li>Children develop understanding of T&amp;C of social media apps.</li> <li>Children consider the pros and cons of social media use.</li> <li>Children recognise the impact of social media use on mental well-being.</li> <li>Children can identify how to minimise risks online.</li> </ul>