

Key End Points - for end of year



Subject: Computing

Ready to Progress Criteria...

	Knowledge	Skills
EYFS	<p>Computer Systems & Networks 1:</p> <ul style="list-style-type: none"> I understand what a computer keyboard is and what some keys do I know how to log in and out of a computer <p>Programming 1</p> <ul style="list-style-type: none"> I know how to give and follow simple instructions <p>Computer Systems & Networks 1:</p> <ul style="list-style-type: none"> I know that you use an iPad or camera to take photos <p>Programming 2:</p> <ul style="list-style-type: none"> I know what debugging and an algorithm mean <p>Data Handling:</p> <ul style="list-style-type: none"> I know how to why sorting information is important using a pictogram I know that using yes/no is known as a branching database 	<p>Computer Systems & Networks:</p> <ul style="list-style-type: none"> I can use a mouse to click, drag and create simple drawings <p>Programming 1</p> <ul style="list-style-type: none"> I can give instructions in the right order <p>Computer Systems & Networks 1:</p> <ul style="list-style-type: none"> I can hold a camera still and ensure the subject is in shot when I take a photo <p>Programming 2:</p> <ul style="list-style-type: none"> I can program a bee bot with simple commands
Year 1	<p>Computer Systems & Networks 1:</p> <ul style="list-style-type: none"> I know what it means to log and log out I know that passwords are important for security <p>Programming 1</p> <ul style="list-style-type: none"> I understand what an algorithm is I know what input and output devices are I know what decomposition and debugging is <p>Skills Showcase</p> <ul style="list-style-type: none"> I know that sharing something created on a computer is easier than paper I know that a spreadsheet is an electronic table <p>Programming 2:</p> <ul style="list-style-type: none"> I know that algorithms move a bee bot to chosen location <p>Creating Media:</p> <ul style="list-style-type: none"> I know why searching safely online is important <p>Data Handling:</p> <ul style="list-style-type: none"> I know that computers have different types of input 	<p>Computer Systems & Networks 1:</p> <ul style="list-style-type: none"> I can use a mouse to click, drag, select, fill, select and also add backgrounds, text, layers and shapes <p>Programming 1</p> <ul style="list-style-type: none"> I can give instructions in the right order <p>Skills Showcase</p> <ul style="list-style-type: none"> I can use the simple graphic design features of an online software <p>Programming 2:</p> <ul style="list-style-type: none"> I can carry out the basic functions of a bee bot I can use an iPad or camera to make simple videos. <p>Creating Media:</p> <ul style="list-style-type: none"> I can use a camera and change the lighting to change the quality of an image I can edit, crop and filter photographs <p>Data Handling:</p> <ul style="list-style-type: none"> I can create charts and pictograms on a computer I can create a branching database
Year 2	<p>Computer Systems & Networks 1:</p> <ul style="list-style-type: none"> I know the difference between a desktop and laptop I know that computers often work together <p>Programming 1</p> <ul style="list-style-type: none"> I know what machine learning is I know what a loop and abstraction is <p>Computer Systems & Networks 2:</p> <ul style="list-style-type: none"> I know that touch-typing is the fastest way to type. I know what copy and paste does <p>Programming 2:</p> <ul style="list-style-type: none"> I know what coding is I understand a character in Scratch is controlled by programming blocks <p>Creating Media:</p> <ul style="list-style-type: none"> I understand what animation is I understand the small changes in a frame will create a smoother animation <p>Data Handling:</p> <ul style="list-style-type: none"> I understand that spreadsheet is electronic table for data To know what data to use to answer questions. 	<p>Computer Systems & Networks 1:</p> <ul style="list-style-type: none"> I can name some input devices that give a computer instructions on what to do <p>Programming 1</p> <ul style="list-style-type: none"> I can program a loop I can remove unnecessary instructions in a program to help solve a problem <p>Computer Systems & Networks 1</p> <ul style="list-style-type: none"> I can make a text a different, size, color and font I can copy and paste <p>Programming 2:</p> <ul style="list-style-type: none"> I can write program to move a character I can write a program to get a character to play an instrument or tell a joke. <p>Creating Media:</p> <ul style="list-style-type: none"> I can create a simple stop motion animation I can improve a simple stop motion animation <p>Data Handling:</p> <ul style="list-style-type: none"> I can enter data into a spreadsheet I can follow steps to create an algorithm

<p>Year 3</p>	<p><u>Computer Systems & Networks 1:</u></p> <ul style="list-style-type: none"> • I know what a network is and how the school network is organized • I know how the internet uses networks to share files • I know that router connects us to the internet • I know what a packet is <p><u>Programming 1</u></p> <ul style="list-style-type: none"> • I understand how decomposition is used in programming <p><u>Computer Systems & Networks 2</u></p> <ul style="list-style-type: none"> • I understand the email stands for electronic mail • I know what an attachment is • I understand that emails should contain appropriate and respectful content <p><u>Computer Systems & Networks 3:</u></p> <ul style="list-style-type: none"> • I know the roles input and outputs play on computers • I know what some of the components inside a computer are • I know the difference between a tablet, laptop and desktop <p><u>Creating Media:</u></p> <ul style="list-style-type: none"> • I know the effect of different camera shots on the quality of video. <p><u>Data Handling:</u></p> <ul style="list-style-type: none"> • I know what a database is • I understand the uses of a computer database • I know that different visuals for data can be made on a computer 	<p><u>Computer Systems & Networks 1:</u></p> <ul style="list-style-type: none"> • I can explain a websites journey <p><u>Programming 1</u></p> <ul style="list-style-type: none"> • I can use some of the basic programming features of scratch • I can program a loop • I can remix and adapt existing code <p><u>Computer Systems & Networks 2</u></p> <ul style="list-style-type: none"> • I can log in and out of an email • I can send, edit and receive email • I can add attachments <p><u>Computer Systems & Networks 3:</u></p> <ul style="list-style-type: none"> • I can explain what an algorithm is • I can make comparisons between different types of computers <p><u>Creating Media:</u></p> <ul style="list-style-type: none"> • I can edit and import videos • I can add transitions and text to my video <p><u>Data Handling:</u></p> <ul style="list-style-type: none"> • I can put values into a spreadsheet • I can compare paper and computerized databases • I can sort, filter and interpret data on a spreadsheet • I can create a graph on excel
<p>Year 4</p>	<p><u>Computer Systems & Networks 1:</u></p> <ul style="list-style-type: none"> • I understand that software can be used collaboratively online for teamwork • I understand what types of comments are helpful on a shared document <p><u>Programming 1</u></p> <ul style="list-style-type: none"> • I know what a variable is • I know what conditional statement is • I understand that variable can be used to create a quiz on Scratch <p><u>Programming 2</u></p> <ul style="list-style-type: none"> • I know what computational thinking skills are • I know what pattern recognition is • I understand the uses of an algorithm <p><u>Skills Showcase :</u></p> <ul style="list-style-type: none"> • I understand what HTML is • I understand what changing the HTML and CSS of a website does • I understand what copyrighted means • I understand what fake news is and how to tell what is and isn't. <p><u>Creating Media:</u></p> <ul style="list-style-type: none"> • I know that a website is a collection of pages that are all connected • I understand the features of a website • I understand that website should be informative and interactive. <p><u>Data Handling:</u></p> <ul style="list-style-type: none"> • I understand that computers use different forms of input to sense weather • I understand that a weather machine is automated to respond to changes • I understand that weather forecasted use scripts and specific language 	<p><u>Computer Systems & Networks 1:</u></p> <ul style="list-style-type: none"> • I can use images, text, transition and animations in presentation slides • I can create a shared document • I can create a google form to be shared. <p><u>Programming 1</u></p> <ul style="list-style-type: none"> • I can create a variable and use it to record a score • Create a simple script in scratch <p><u>Programming 2</u></p> <ul style="list-style-type: none"> • I can create a simple game • I can create a scratch program that draws a square and one other shape <p><u>Skills Showcase :</u></p> <ul style="list-style-type: none"> • I can identify HTML tags • I can change the HTML and CSS of a website • I can use the inspect element tool • I can change the elements of website such as image, text and color • I can add text between a heading and main paragraph on a website <p><u>Creating Media:</u></p> <ul style="list-style-type: none"> • I can use most of the tabs on Google Sites • I can create a clear plan for a website and create it • I can create an informative website with four interactive webpages <p><u>Data Handling:</u></p> <ul style="list-style-type: none"> • I can design a weather machine that gathers and records sensor data • I can design an automated machine that responds to sensor data • I can create a video which included weather forecast information

<p>Year 5</p>	<p><u>Computer Systems & Networks 1:</u></p> <ul style="list-style-type: none"> • I know how search engines work • I understand that anyone can make a website so validity should be checked • I know what web crawlers are • I understand what copyright is <p><u>Programming 1</u></p> <ul style="list-style-type: none"> • I know what a soundtrack is • I understand the use of loops in music • I how to adapt music for performing <p><u>Dash Robots:</u></p> <ul style="list-style-type: none"> • I understand how to use block based programming • I understand what an input and out are <p><u>Programming 2:</u></p> <ul style="list-style-type: none"> • I understand that a micro bit is programmable device • I know that micro bit uses a similar coding language to scratch • I know how to recognize coding structures including variables • I know what decomposition is <p><u>Creating Media:</u></p> <ul style="list-style-type: none"> • I know that decomposition is important to creating stop motion • I know that data for digital images is compressed • I know the difference between RAM and ROM • I know the various techniques that will improve the design of 3D project <p><u>Data Handling:</u></p> <ul style="list-style-type: none"> • I understand what the Mars Rover is and how it collects data • I understand what binary code looks like • I know what RAM is • I know what simple operations can be used to calculate bit patterns 	<p><u>Computer Systems & Networks 1:</u></p> <ul style="list-style-type: none"> • I can create a posted explaining what copyright and fair use mean • I can make parallels between book searching and internet searching <p><u>Programming 1</u></p> <ul style="list-style-type: none"> • I can explain the basic commands of scratch • I can create a piece of music that includes a loop, live samples and link musical concepts <p><u>Dash Robots:</u></p> <ul style="list-style-type: none"> • I can program a dash robot • I can program dash robot to complete a maze and draw letters and shapes. • I can make the Dash Robot dance <p><u>Programming 2:</u></p> <ul style="list-style-type: none"> • I can clip blocks together and predict what is going to happen • I can create my own image to make animations • I can identify inputs and outputs • I can choose appropriate blocks to complete the program • I can carry out decomposition <p><u>Creating Media:</u></p> <ul style="list-style-type: none"> • I can create a toy with simple images with a simple movement • I can create a short stop motion with small changes between the images • I can add effects such as extending parts and titles <p><u>Data Handling:</u></p> <ul style="list-style-type: none"> • I can identify some of the data that the Mars Rover can collect • I can read any number in binary up to 8 bits • I can identify input, processing and output on the mars rover • I can do binary additions • I can relate binary signals
<p>Year 6</p>	<p><u>Computer Systems & Networks 1:</u></p> <ul style="list-style-type: none"> • I understand the importance of having a secure password • I know about the first computer created at Bletchley Park and their uses • I know some historical figures and their technological contributions <p><u>Programming 1</u></p> <ul style="list-style-type: none"> • I know about text based programming languages such as Logo and Python • I know what nested loops are • I understand the use of random number and the remix of Python Code <p><u>Data Handling 1</u></p> <ul style="list-style-type: none"> • I know that data inside a QR or barcode can be used in computers • I know that infrared waves are methods of transmitting data • I know that RFID is a more private way of transmitting data • I know what data encryption is and why it is useful <p><u>Skills Showcase:</u></p> <ul style="list-style-type: none"> • I know what inventing a product involves • I know what programming software is best to achieve a purpose • I know the building blocks of computational thinking <p><u>Creating Media:</u></p> <ul style="list-style-type: none"> • I know what radio plays are • I know that sound clips are recorded using sound recording software • I know that sound clips can be clipped and trimmed <p><u>Data Handling 2:</u></p> <ul style="list-style-type: none"> • I know that data can become corrupted inside a network • I know which devices are most vulnerable to hackers • I know the difference between Wi-Fi and Mobile Data 	<p><u>Computer Systems & Networks 1:</u></p> <ul style="list-style-type: none"> • I can create a simple poster about Bletchley Park • I can present information about historical figures <p><u>Programming 1</u></p> <ul style="list-style-type: none"> • I can write use Python and iterate, test and change the existing code • I can use loops and nested loops • I can alter a drawing using Python Commands <p><u>Data Handling 1</u></p> <ul style="list-style-type: none"> • I can create and scan my own QR code • I can type formulas into a spreadsheet • I can log data into a spreadsheet • I can present collected data • I can recognize the value of analyzing real time data <p><u>Skills Showcase:</u></p> <ul style="list-style-type: none"> • I can evaluate code and adapting it for a purpose • I can debug programs to make them more effective • I can design appropriate housing for their product using CAD software • I can create a website and edited video for their product <p><u>Creating Media:</u></p> <ul style="list-style-type: none"> • I can produce a simple radio play with some effects and edits • I can create a document with correct date and time information <p><u>Data Handling 2:</u></p> <ul style="list-style-type: none"> • I can design a system for changing a school into a smart school • I can present ideas for changing a school into a smart school.