ICT - KS3 ASSESSMENT DESCRIPTORS

	Discovering 'Learning'	Growing	Emerging	Developing	Secure	Mastered
Scratch programming	Is familiar with the Scratch interface and can create a background	Can create a script using at least 3 blocks and can describe the effect	Can create a script by following an algorithm and can explain what a script does by interpreting what the blocks do	Can use input, output and storage scripts to create a working calculator which adds, subtracts, multiplies or divides numbers	Can create and use variables in a script	Can confidently create a script which uses sequence, selection and iteration.
Computer Hardware	To understand how computers function as input, process and output systems	Can identity a wide range of different input and output device	Can explain the difference between Computer systems hardware and software.	Can identify the different types of hardware components found inside a computer system. Can convert binary digits to denary and denary to binary	Can explain the purpose of the types of hardware component inside a computer. Includes components such as memory, graphics cards, display screens and disk drives.	Can confidently convert binary and denary numbers. Can describe how the CPU cycles work; fetch, decode and execute. Can explain why computer uses binary, ASCII and Unicode.
Introduction to HTML	Understand what is HTML. Learn to use HTML tags to write a basic web page and understand how to save with the correct file extension.	Can create a webpage with text formatted in a number of ways and change font using HTML code.	Can insert an image onto your webpage and Understand how HTML is used to link webpages together.	Can create a professional looking page consisting of at least two pages that are linked together using hyperlinks.	Can Consolidate their understanding of how to use HTML to write a web page with a range of formatting.	Can confidently create a webpage using HTML codes to improve appearance.
Scratch Platform Game Maker	Can program a sprite to move in different directions by using arrow keys	Can program a sprite to move to different locations on the stage by using different motion blocks	can create actions by making two or more sprites interact	Can use variables to create a score count	Can create a game where two or more sprites interact, include score and change levels by creating different backgrounds	Can create own game using movements, variables, selections, iterations and conditions
Advanced Scratch	Can describe the different event blocks in scratch	Can use different event blocks within a script	Can use the random function with relevant blocks to manipulate a sprite	Can create a meaningful script using events, inputs, outputs, selection and iteration and explain how they work	Can plan and create a magic 8 game which uses events, random function, variables, selections, inputs and outputs	Can confidently program own conversion calculator by creating different sprites, variables, selections, iterations and explain how it works.
Micro Bit Madness	Can program a basic function using blocks with assistance.	Can program a basic function without assistance	Can program advanced functions using blocks with assistance from resource, peers teacher etc.	Can program advanced functions using blocks and is able to compile code with little assistance	Can program advanced functions using blocks and is able to compile code. Can assist others with issues they may face.	Can confidently spot issue with functions/blocks and eradicate these issues. Can compile multiple functions onto micro: bit.
My Digital World	Understand not all websites are can perform basic web searches. Can identify some dangers when using the Internet. Understand Copyright but not able to explain the law behind it.	Understand some websites are more trustworthy than others and how a search engine works. Can identify some examples of cyber abuse and ways to avoid online dangers.	Can evaluate websites using criteria. Can use a Boolean operator (AND OR or NOT) to improve search results. Can identify ways people break Copyright law. Can identify examples of combat cyber abuse and give advice on how to avoid these.	Understands how all 3 Boolean operators work to improve search results. Is aware of what the consequences of breaking copyright law. Can identify a range of cyber abuse examples and give advice on how to avoid these.	Can list all 6 criteria to evaluate a website against and can select the most appropriate Boolean operator to refine search results. Know how to avoid breaking Copyright law and can correctly identify all online dangers and cyber abuse and list a wide range of ways to avoid each of them.	Can fully evaluate a website. Understand how Boolean operators work when searching and can justify choice. Can give worthy examples of how to ensure Copyright Law is not broken. Can justify methods to avoid online and cyber abuse dangers.

Binary Bits and Bobs	Understand the binary number system and why it is important in computing. Able to convert binary to denary and vice versa.	Able to add two binary numbers together by converting to denary and then adding.	Able to add two binary numbers without converting first. Understand that a character is represented in a computer as a binary number.	Able to find characters represented by binary numbers in order to crack codes. Can create their own ASCII coded message.	Can explain why images are represented in binary on computer systems. Can create a simple image in binary and decode a binary image.	Understand the digital process of applying mathematical calculations to binary values which represent a recorded sound. Can create a Sound and explain how sound on a computer is represented in binary numbers.
Introduction to Python	Knows what a programming language is and what a program is and can identify what syntax is and why indentation is so important.	Knows how to program inputs and outputs in python.	Can create variables and use inputs to store variables. Can combine variables and strings in outputs.	Can store multiple user inputted variables and perform mathematical calculations on them using +, -. * and /. Can display results of mathematical calculations in strings.	Can program decisions in Python using IF statements. Knows how to comment code and understands the importance of commenting code.	Can change the data type of a variable. Can program multiple decisions using nested ELIF statements.
HTML and CSS	Understands what HTML and CSS stand for. Understands what HTML and CSS are used for.	Can create a basic HTML code in Notepad. Can save a basic HTML code as a webpage. Can understand what the different tags within the HTML code stand for.	Can identify the tags for CSS and their position within the HTML code.	Can include CSS code between the style tags within the HTML code.	Can create a mini website which contains some information, background colour and images. Can create more than one website and link them together.	Can develop their own website using different CSS attributes by researching from the internet.
Shooter Game Maker	Is able to link scratch blocks together.	Can correctly create a program that is functional with the use of a help sheet or teacher assistance.	Can independently create a functioning program without assistance.	Can answer Scratch block questions without using scratch to validate.	Knows when to use loops in scratch and when not to. Develops program without assistance from teacher.	Can identify when the use of loops are necessary to develop a fully functioning program without assistance. Can extend on program to make it more sensible and affective. Is able to assist other students.
My Digital World	To understand what is meant by a variable. Write a small program using a variable.	Run a simple Python program in Interactive mode using the input and print functions	Write, save and run program. Able to use different techniques for debugging programs with syntax errors	Know the rules for variable names and use variables in a program. Write a program involving input, calculation and output	Understand the importance of using correct data types: string, integer or float. Use the int, str and float functions. Perform arithmetic using the BIDMAS rule	Use selection statements if, else and elif in a program. Learn how to use different comparison operators. To know the difference between syntax errors, run-time errors and logic errors
Binary Bits and Bobs	Understands messages can be encrypted using ciphers. Can apply logic to make decisions in real life.	Can use a cipher key to decipher codes. Can create a simple web page. Can use Boolean logic with basic binary inputs 1 and 0.	Can use a variety of ciphers to decipher codes. Can use hyperlinks to create a website. Can interpret a simple logic gate (AND, OR and NOT).	Can use basic CSS to improve the appearance of a webpage. Can create a simple logic gate (AND, OR and NOT).	Can use CSS to improve the appearance of a webpage by adding in links to other websites. Can interpret complex logic circuits (AND, OR and NOT). Can solve problems using logical thinking.	Can apply CSS throughout a website to create a consistent feel to a website and add images. Can create complex logic circuits by combining AND, OR and NOT gates. Can perform a bubble sort on a set of data

Introduction to Python	Understand that a computer network is a collection of computers working together. Tell the difference between the internet and the World Wide Web.	To know the difference between types of networks. e.g. LAN and WAN. To understand the difference between wireless and wired network connection	Able to explain some of the advantages and disadvantages of computer network. Example. File share and network security issues.	Understands the hardware associated with networking computer systems, including WANs and LANs, understands their purpose and how they work, including MAC addresses	Knows the purpose of the hardware and protocols associated with networking computer systems. Understand how data is transported on the Internet using IP address and packet switching.	Knows the names of network hardware e.g. hubs, routers, switches, and they with IP address and mac address. Explain the hardware needed to setup wired and wireless networks
HTML and CSS	Can code a basic program mostly from own knowledge. Able to explain fully and in detail how the code works	Can code a flying object which shoots bullets, and explain fully and in detail how the gravity and bullet code works.	Can add a scoring system to a coded object and explain fully and in detail how the scoring system and object code works.	Can code a set of new levels which have new backgrounds and 'ground sprites. Can explain fully and in detail how the 'new level scripts' work.	Able to decide on the objectives and theme of a game. Can design each level, the characters and any scoring items for the identified game.	Can build / code each level, the characters and any scoring items produce and ensures the product meets the success criteria identified in the design.
Shooter Game Maker	Can create the basic structure of a HTML page with assistance. Can convert a txt file into a html file.	Can develop content on a HTML page with the use of body tags .	Can structure a basic HTML page and style using CSS. May require a little assistance.	Can develop a HTML page with the use of CSs and make page interactive using basic JavaScript functions using resources such as W3Schools	Can develop multiple HTML pages with use of CSS and JS.	Can completely independently develop dynamic HTML pages with use of JS and CSS. Requires no assistance from staff. Assists other pupils in class.