

Kindness

Enjoyment

Achievement

Key Stage Two Progression and Skills

DIGITAL LITERACY							
Computer Systems and Networks							
Year Three		Year Four		Year Five		Year Six	
Knowledge	Skills	Knowledge	Skills	Knowledge	Skills	Knowledge	Skills
<ul style="list-style-type: none"> Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration Know how to keep safe online Know what is meant by the term 'identity' Know ways in which someone might change their identity depending on what they are doing online 	<ul style="list-style-type: none"> Explain how a computer network can be used to share information Explain how digital devices function Recognise the physical components of a network Identify input and output devices Explain how people can represent themselves in different ways online Explain the importance of giving and gaining permission before sharing things online 	<ul style="list-style-type: none"> Know about networks and understand that the internet is a series of networks that needs to be kept secure Know the WWW is part of the internet Know how to keep safe online Know how my online identity can be different to my offline identity. Know how to be respectful to others online and can recognise healthy and unhealthy behaviours 	<ul style="list-style-type: none"> Describe how networks physically connect to other networks Recognise how networked devices make up the internet Explain how websites can be shared on WWW and how it can be added to and accessed. Recognise that the content is created and shared by people Evaluate the consequences of unreliable content. Explain how to keep safe online Explain that others online can pretend to be someone else, including my friends, and can suggest reasons why they might do this 	<ul style="list-style-type: none"> Know how information is transferred between systems and devices Know how identity online can be copied, modified or altered. Know different examples of technology-specific forms of communication 	<ul style="list-style-type: none"> Explain that computers can be connected to form systems. Recognise the role of the computer in our lives, identifying tasks that are managed by systems that have a human input. Recognise how information is shared over the internet Explain how sharing information lets people in different places work together Evaluate different ways of working online. Demonstrate how to make responsible choices about having an online identity, depending on context. Explain how someone can get help if they are having problems and identify when to tell a trusted adult 	<ul style="list-style-type: none"> Know the WWW is a communication tool. Know what a search engine is and how it works Know that you can influence a search via a search engine. Know what issues online could make someone feel sad, worried, uncomfortable or frightened Know how to get help, both online and offline Know that sharing online can have either a positive or negative impact 	<ul style="list-style-type: none"> I can use a search engine I can describe how search engines work and how results are ranked Describe ways in which the search engine result can be influenced Evaluate methods on online communication and decide what should and should not be shared. Explain the importance of asking until I get the help needed Describe how things shared privately online can have unintended consequences for others

Key Stage Two Progression and Skills

Information Technology							
Data Handling Creating Digital Content Multi-Media Images							
Year Three		Year Four		Year Five		Year Six	
Knowledge	Skills	Knowledge	Skills	Knowledge	Skills	Knowledge	Skills
<ul style="list-style-type: none"> Know that data and information can be collected, analysed, evaluated and presented Know that software can be used on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals Know terms templates and orientation Know the term copywrite and ownership Know how software can be used to design a program to a given goal Know the term on skin with regards to media 	<ul style="list-style-type: none"> Identify object attributes needed to collect relevant data Create branching data using yes/no questions and explain why it needs to be well structured Identify objects using a branching database Compare information shown in a pictogram (YR2) with a branching database. Explain that data can be used to answer questions Recognise how text and images convey Information 	<ul style="list-style-type: none"> Know that data can be collected over time Know that dataloggers are a device that collects data Know that devices can be used to record digital audio Know to use technology safely Know ways to report concerns re contact and content Know that people may make themselves look different online Know that changing an image will have an impact either positively or negatively. 	<ul style="list-style-type: none"> Collect data using a digital device. Recognise that a sensor can be used as an input device for data collection Explain that data gathered over time can be used to answer questions Use a computer program to sort data by one attribute Present data, analyse and make conclusions Press buttons to start and stop recordings Save and open recordings as a file Edit and alter recorded audio 	<ul style="list-style-type: none"> Know how flat file data base can be used to organise data in records Know the history of moving images Know the terms visual and audio Know terms zoom angle and pan (movement) Know how to report content to two separate ways and the what happens as a result Know how to further use different software to create content to a given goal know the terms layered and modified Know the term copywrite and what happens if this is done without permission 	<ul style="list-style-type: none"> Use a form to collect information Navigate a flat- file database and explain the terms field and record Outline how grouping and sorting data allows us to answer questions Explain how tools can be used to select specific data including AND / OR Select appropriate charts to visually compare data Use knowledge of a database to ask and answer real world questions Identify features of a good video 	<ul style="list-style-type: none"> The that maths combined with computers can help collate, analyse and evaluate data Know what a webpage is and how they can be accessed Know what an HTML code is Know consequences of breaking copywrite Know the term 3D Know where 3D programs are used in school and in the wider community Know the ways in which anyone can develop a positive online reputation Know how to capture 	<ul style="list-style-type: none"> Identify questions that can be answered using data Create a spreadsheet for a purpose Apply a formula that can be used to produce calculated data Recognise data can be calculated using different operations Evaluate results in comparison to the question asked Choose suitable ways to presents data Recognise common features of a webpage Plan features of a webpage Consider ownership and use of images

<ul style="list-style-type: none"> • Know how to search for information about others online • Know how to use key phrases in search engines to gather accurate information online • Know why spending too much time using technology can sometimes have a negative impact on anyone 	<ul style="list-style-type: none"> • Combine text and images to share a message • Consider how different layouts can suit different purposes • Type with increased speed using age appropriate punctuation • Change orientation of text • Wrap text around an image • Recognise place holders and why they are important • Understand animation is a sequence of drawings or photographs • Relate animated movement with a sequence of images • Plan an animation, breaking the story down 	<ul style="list-style-type: none"> • Know the term retouch • Know how to find information about others by searching online • Know how to recognise if someone is upset, hurt or angry • Know different ways people can be bullied through a range of media • Know how to search for information within a wide group of technologies and make a judgement about the probable accuracy 	<ul style="list-style-type: none"> • Mix and combine audio • Evaluate choices of editing made • Use a computer to further manipulate images • Talk about images can be changed for different purposes • Identify and use appropriate tools to retouch an image • Evaluate how the changes impact an image • Explain why people need to think carefully about how content they post might affect others, their feelings and how it may affect how others feel about them • Analyse information 	<ul style="list-style-type: none"> • Know how to search for information about an individual online and know how to summarise the information found • Know how to block abusive users • Know ways technology can affect health and well-being both positively and negatively 	<ul style="list-style-type: none"> • Plan a video production using a story board • Make a video recognising features of an effective video • Consider the impact of changes made when making and sharing a video • Recognise an image is comprised of separate objects • Can move, resize and rotate duplicated objects • Recognised that objects are layered • Recognise that objects can be modified in groups • Consider the impact of choices made • Evaluate digital content and explain how to make 	<p>bullying content as evidence to share with others who can help me</p> <ul style="list-style-type: none"> • Know how to use search technologies effectively • Know the features of persuasive design and how they are used to keep users engaged 	<ul style="list-style-type: none"> • Add, preview and evaluate own webpage • Explain what is meant by a navigation path and how it is useful. • Create hyperlinks to other's work • Create 3D graphical objects on a computer • Alter a view of a 3D space • Combine 3D objects to create desired effect • Apply blank 3D place holders to create holes • Explain the importance of asking until I get the help needed • Evaluate online content relating to gender, race, religion, disability, culture and other groups, and explain why it is important to challenge and reject inappropriate representations online. • Describe issues online
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	<ul style="list-style-type: none"> • Review and improve an animation by • Evaluate the impact of adding other media to an animation • Improve my work by responding to feedback. • Explain the need to be careful before sharing anything personal • Explain how the internet can be used to sell and buy things. • Give examples of how bullying behaviour could appear online and how someone can get support 		<p>to make a judgement about probable accuracy and understand why it is important to make my own decisions regarding content and that my decisions are respected by others</p> <ul style="list-style-type: none"> • Explain how using technology can be a distraction from other things, in both a positive and negative way 		<p>choices about what is trustworthy</p> <ul style="list-style-type: none"> • Describe the differences to bullying in the physical world in comparison to the online world • Explain key concepts including: information, reviews, fact, opinion, belief, validity, reliability and evidence 		<p>that could make anyone feel sad, worried, uncomfortable or frightened.</p> <ul style="list-style-type: none"> • Explain why information that is on a large number of sites may still be inaccurate or untrue
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Key Stage Two Progression and Skills

Computer Science							
Programming							
Year Three		Year Four		Year Five		Year Six	
Knowledge	Skills	Knowledge	Skills	Knowledge	Skills	Knowledge	Skills
<ul style="list-style-type: none"> Know the links between action and events. Know that using commands actions can happen Know simple strategies for creating and keeping passwords private. Know how connected devices can collect and share anyone's information with others. 	<ul style="list-style-type: none"> Create a sequence of commands using block language Explain simple based algorithms Work with others to solve a problem Develop the program by adding features Test the program and fix to achieve the desired goal. Explain the order of commands and how these may alter Give reasons why someone should only share information with people they choose 	<ul style="list-style-type: none"> Know the term loop Know that internet use is never fully private and is monitored. Know what the digital age of consent is and the impact this has on online services asking for consent. 	<ul style="list-style-type: none"> Plan a program using block code which includes using loops to produce a pre-determined goal Debug errors of increasing complexity and explain logically Independently decompose a problem to smaller Identify repetition in a sequence Create and explain projects which demonstrate an algorithm, fixing, refining and evaluating Describe strategies for keeping personal information private, 	<ul style="list-style-type: none"> Know the terms control, circuit and component Know how many free apps or services may read and share private information (e.g. friends, contacts, likes, images, videos, voice, messages, geolocation) with others. Know what app permissions are. 	<ul style="list-style-type: none"> Use understanding of repetition to construct circuits for a given purpose. Know how conditions can be used in algorithms to control flow Explain what happens when conditions are met. Eg the action starts Use a condition in an <i>if... then ...</i> statement to produce a given outcome Detect and debug errors within more complex program Explain what a strong password is and demonstrate how to create one. 	<ul style="list-style-type: none"> Know the variable. Know the term operand Know how to store passwords securely. Know what to do if a password is lost or stolen. Know why people need to keep their software up-to-date. Know the ways in which some online content targets people to gain money or information illegally. Know that online services have terms and conditions that govern their use. 	<ul style="list-style-type: none"> Plan a program which includes variables Explain, using appropriate language, algorithms using sequencing and variables Identify how to improve a program by adding a variable I can evaluate and debug complex errors with the use of variables Use conditional statements and use an operand Use a variable to control the flow of a program Store passwords securely Can describe simple ways to increase privacy on

	<p>to and can trust.</p> <ul style="list-style-type: none">• Talk to a trusted adult if they feel pressured.		<p>depending on context.</p> <ul style="list-style-type: none">• Describe how some online services may seek consent to store information about me; and suggest ways to respond appropriately		<ul style="list-style-type: none">• Give examples of app permissions.		<p>apps and services that provide privacy settings.</p> <ul style="list-style-type: none">• Describe the strategies needed to identify scams or phishing.
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