Computing End Points

INTENT	To enhance our children's digital competence and enable them to use computational thinking, whilst exploring and answering the questions, "What does it mean to be digitally literate?" and "How do I keep myself and others safe online?"		
PUPILS ARE ENABLED TO…	Make informed judgements about when and where to use ICT to best effect, and to consider responsibility.		
EYFS	Key Stage 1	Lower Key Stage 2	Upper Key Stage 2
1. Skills – Understanding & Using a Computer • To start to use and understand different digital devices and also understand you can 'do things' on a digital device. • To begin to use a mouse or a touchscreen to make choices. • To recognise parts of a laptop such as a mouse, screen, keypad, numbers and letters. • To begin to understand that 'things' information can be saved on a device. E.g. photographs. **2. Text, Images & Multimedia** • To use a digital device with support to complete a task	**1. Skills – Understanding & Using a Computer** • To understand how to verify information using multiple sources • To be able to name different devices correctly. • To explain what basic parts of a laptop are used for – E.g. mouse, keyboard. • To be able to use a password and understand why it is needed. • To understand that you can find information from a website. • To name a range of digital devices, both for input (E.g. mouse, keyboard) and output (E.g. printer, speakers) and begin to understand that a range of devices in everyday life also contain computers. • To being to know how to save work in a certain place. • To understand how to save and retrieve digital work independently	**1. Skills – Understanding & Using a Computer** • To understand how to select appropriate software for a purpose. • To understand how to decompose problems • To use a range of digital devices with growing confidence – typing, saving, keyboard knowledge. • To be able to name work and to save work to a specific place with growing confidence. • To start to understand what a network of computers is – i.e. the school network. • To explore a range of programs with growing confidence and accuracy. E.g. Word, PPT, on Scratch and other coding programs. • To use the different clicks on a mouse/keypad with growing understanding and confidence. • To understand the need for secrecy with individual passwords. **2. Text, Images & Multimedia**	**. Skills – Understanding & Using a Computer** • To confidently use a range of digital devices and programs with good accuracy. • To use software across multiple devices. • To be able to type confidently. • To know how to use some common keyboard shortcuts. • To understand that computers have different operating systems. E.g. Windows, iOS, Android. • To create, use and remember a strong password and keep it secret. • To accurately save and organise work into folders. • To create programs using Scratch with variables, inputs and outputs. **. Text, Images & Multimedia** • To be able to select suitable hardware and software to complete a given task. • To use 3D modelling & web design. • To combine software to solve problems. • To remix and edit existing content, both their own and of others, to create new content. E.g. record music they make, and

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• To choose a digital device to complete a specific task. E.g. from the programs in Scratch. **3. Understanding & Sharing Data** • To be able to access content such as images and music with support. • To digitally sort objects into 1 or more groups. • To be able to answer basic questions about digital images. E.g. more or less, descriptions. • To be able to see that there are different things on a digital device such as an image, a video and audio. • To be able to collect simple data such as likes/dislikes on a topic. **4. Programming & Computational Thinking** • To begin to learn to explore a digital program. • To understand that we control computers.	**2. Text, Images & Multimedia** • To understand how to create stop-frame animations and digital narratives. • To understand how to organise, manipulate and retrieve digital content • To use a digital device more independently and begin to complete tasks without support. • To understand that digital content can be changed by editing and to be able to make choices about what to edit. E.g. for a certain effect. • To begin to combine different kinds of media with support. E.g. text and images. • To comment on choices made by peers and be able to make editing suggestions to improve. **3. Understanding & Sharing Data** • To understand how to search safely and check accuracy • To understand how to identify an object by asking yes/no questions. • To recognise charts, pictograms and tables, understand that they contain	• To understand how to create content using simulations. • To understand how to combine software to achieve goals • To create, edit and evaluate their own digital work and that of their peers to make improvements. • To find and save work with growing accurately and confidence. • To design and create digital content for a specific purpose. Such as a poster for a topic or science. • To use a widening range of tools to edit and enhance media. • To collect, organise and present data using a range of media. E.g. Word and PPT. • To being to understand copyright. **3. Understanding & Sharing Data** • To begin to understand that different programs are required for different kinds of data. E.g. text and number. • To understand how to complete data representation • To understand that there is a difference between data and information. • To begin to understand the benefits of creating data on a computer. E.g. charts and databases. • To understand that information can be stored on a computer and shared online.	edit it digitally, maybe by adding other musical effects. • To think about an audience when creating digital content for a specific purpose. E.g. music for a film to create a particular effect. • To design and construct 3D digital models. • To produce and analyse spreadsheets. • To understand the pros and cons of using technology to collaborate with others. • To be aware of different services on the internet and what they do. E.g. email, Skype, IP address. • To evaluate their own content against success criteria and make improvements accordingly. • **Understanding & Sharing Data** • To begin are required for different kinds of data. E.g. text and number. • To understand the difference between data and information. • To understand the benefits of creating data on a computer. E.g. charts and databases. • To design and create web pages for a given audience. • To understand that information can be stored on a computer and shared online. • To understand that data can be stored in various ways. • To understand that search engines store information. • Train simple AI models and evaluate their strengths and weaknesses.

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	information and be able to explain the information with growing independence.		• **<u>Programming & Computational Thinking</u>**

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• To recognise the success or failure of an action and to repeat the action when necessary to achieve success. • To be able to input a short sequence of simple instructions (with some support) to control a device. • To try different ways to achieve a goal. **5. Online Safety & Digital Literacy** • To being to be aware that information on a computer can be public or private. • To understand that some online content is inappropriate, be able to recognise this and understand the need to tell an adult.	• To collect data on a topic (such as a traffic survey) and be able to present this information in simple charts. E.g. bar charts. • To begin to recognise that you can get the same information from different formats. E.g. words and video. **4. Programming & Computational Thinking** • To understand how programs follow precise instructions • To understand that we control computers when we give them instructions. • To understand that humans make computers and the programs and apps on them. • To create a simple program. (control a beebot) • To understand and create a simple algorithm. (a set of rules to be followed in calculations or other problem-solving operations on a computer) • To begin to understand that the order of instructions in an algorithm is important. (you have to do things in a set order for a program to work – coding in scratch • To understand how to execute precise instructions on digital devices	• To be able to collect data and create a questionnaire from it. • To understand that data can be stored in various ways. • To understand what a network of computer is. • To understand the difference between a computer, the internet and 'WWW.' **4. Programming & Computational Thinking** • To be able to change and remix an existing program to create a new outcome. (E.g. change a photograph digitally.) To understand how to test predictions using simulations. • To understand how to test variables, input & output. • To use repetition to make programs more efficient. (E.g. duplicate, copy & paste in Word/PPT) • To use coding Code/Scratch and to be able to predict an outcome. • Create a program using a range of events/inputs to control what happens. **5. Online Safety & Digital Literacy** • To understand that there are a variety of ways to search for	To recognise that different solutions exist for the same program and there are different ways to achieve the same outcome. • To predict what could happen in a program when the input changes. • To create programs using 'repeat until' loops. • **Online Safety & Digital Literacy** • To understand copyright and what can be used with/without permission and to know where to find copyright free content. E.g. images and audio. • To be able to demonstrate responsible use of online services and sites, recognise inappropriate content and behaviour and know a range of ways to report concerns. • To be able to evaluate websites of reliability of information and authenticity. • To understand, and be able to create, a strong password and to understand why this is important at school, home and in the wider world. • To understand that passwords can be stolen and possible consequences of this. • To become increasingly aware of algorithms that track online activities and that they target people with advertising and information. • To understand that there are laws around the purchase of games, images, music and

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			what is written online. • To understand that search results are selected and ranked. • To understand the benefits and drawbacks of artificial intelligence.

	• To begin to learn how to debug an error in a simple algorithm or programme (E.g. send a floor robot the wrong way.) • To begin to evaluate the success of an algorithm or program and identify/correct any errors. (E.g. using floor robots.) **5. Online Safety & Digital Literacy** • To understand how AI is created by people and may not always be accurate. • To understand how to check whether online information is reliable. • To understand that digital content can be shared online. • To understand 'personal information' and what information must be kept private. • To understand that if they have any worries, they must tell an adult. • To begin to understand copyright and that digital content belongs to the person who first created it. E.g. a photograph or a song. • To understand that we might need to ask permission to use digital content that belongs to somebody else. E.g. a photo or a song. • To understand why we need and use passwords and that	information and that what we type when we search can give us different outcomes. • To understand how to recognise both the potential and limitations of AI. • To understand how to report concerns using a range of methods • To understand that you can check information is true by looking at different sources. • To understand what unacceptable content/contact online is and know where to go for help. • To understand the need for private personal information. • To understand why games, apps, websites and films have different ratings. • To understand the need to have permission to use digital content created by others and that there is a 'Creative Commons' license that can give permission. • To be aware that some people can lie online and not be who they say they are. • To understand the need for a strong password and that it must be kept secret.	

	they must be kept private.		

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	• To understand the need to be as kind and thoughtful online as in the real world. • To understand that spending a long time on a computer can be unhealthy. • To know that not everything online is true. • To understand that content online cannot always be deleted.		