



Progression and assessment in Computing



Computing Intent

We do have discreet timetable time for the development of ICT skills but our approach is to integrate ICT into all lessons: the use of laptops and other hardware such as cameras and iPads is as much part of our learning tools as pencils and pens. Subject specific software, from one-off programmes to learning platforms, support teaching and learning across all years. The children develop their skills, starting in Reception with mouse control, keyboard skills, saving and printing work. They draw pictures, write and use the internet to carry out research. They then progress to more complex skills such as data analysis and coding, as well as using technology to present their ideas in a creative way. Pupils are taught to use technology safely and identify where to go for help and support when they have concerns. E-safety is something that is taught in formal lessons, but is also discussed in the context of other lessons (such as PSHE). We believe it is important to address E-safety issues as regularly as possible, openly discussing how to deal with any issues and showing the children how to use reporting and blocking features. We also aim to work with parents, providing information on the latest apps and websites that their children may be accessing, and advising them on how to adjust privacy settings to keep their child safe.

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|---------------|------------------|------------------------|------------------|---------|
| Colour | | | | |
| Area of study | Computer Science | Information Technology | Digital Literacy | ESafety |

Developing, Securing, Mastering explained:

| Depth of Learning | Cognitive challenge | Nature of progress | Typically, pupils will | Predominant teaching style |
|-------------------|--|----------------------------|--|----------------------------|
| Developing | Low level cognitive demand. Involves following instructions. | Acquiring | name, describe, follow instructions or methods, complete tasks, recall information, ask basic questions, use, match, report, measure, list, illustrate, label, recognise, tell, repeat, arrange, define, memorise. | Modelling Explaining |
| Securing | Higher level of cognitive demand. Involves mental processing beyond recall. Requires some degree of decision making. | Practising | apply skills to solve problems, explain methods, classify, infer, categorise, identify patterns, organise, modify, predict, interpret, summarise, make observations, estimate, compare. | Reminding Guiding |
| Mastering | Cognitive demands are complex and abstract. Involves problems with multi-steps or more than one possible answer. | Deepening Understanding | Requires justification of answers. solve non-routine problems, appraise, explain concepts, hypothesise, investigate, cite evidence, design, create, prove. | Coaching Mentoring |



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| | Foundation Stage | Year 1/2 | Year 3/4 | Year 5/6 |
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| | <p>Pupils should be taught to:</p> <p>Make connections between control devices and information on the screen.</p> <p>Use web or mobile applications to manipulate something on the screen.</p> <p>Respond to simple instructions to control a device.</p> <p>Begin to choose equipment and application for a familiar activity.</p> <p>Recognise that a range of technology is used in homes and in schools.</p> | <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> understand what algorithms are; how they are implemented as programs on digital devices and that programs execute by following precise and unambiguous instructions create and debug simple programs use logical reasoning to predict the behaviour of simple programs | <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> design write and debug programs that accomplish specific goals,.....solve problems by decomposing them in smaller parts use sequence, selection and repetition in programs use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs | <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> design, write and debug programs that accomplish specific goals; including controlling or simulating physical systems and solving problems by decomposing them into smaller parts use sequence, selection and repetition in programs; work with variables and various forms of input and output use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs |
| Computer Science | <p><u>SIMPLE CITY AND MATHS CITY</u></p> <ul style="list-style-type: none"> Use the drag and drop activities on the interactive whiteboard to share activities for the children to work together on. Talk to the children about taking turns and working at the whiteboard one at a time. <p>Choose the drag and drop activity you want the children to create e.g. a garden.</p> <ul style="list-style-type: none"> Talk to the children about the picture that they are going to make, show them how to drag the object onto the screen and to watch carefully to see if anything happens. | <p><u>Year 1 Purple Mash – MAZE EXPLORERS</u></p> <p>To emphasise the importance of following instructions. To follow and create simple instructions on the computer. To consider how the order of instructions affects the result. To understand the functionality of the basic direction keys. To be able to use the direction keys to complete challenges successfully. To understand the functionality of the basic direction keys. To understand how to create and debug a set of instructions (algorithm). To use the additional direction keys as part of their algorithm. To understand how to change and extend the algorithm list. To create a longer algorithm for an activity. To provide an opportunity for the children to set challenges for each other.</p> <p><u>Y1 CODING</u></p> <p>To understand what coding means in computing.</p> <ul style="list-style-type: none"> To create unambiguous instructions like those required by a computer. To build one- and two-step instructions <p>To use Design Mode to add and change backgrounds and characters. They will use the Properties table to change the look of the objects. To design a scene for a program.</p> <ul style="list-style-type: none"> To use code blocks to make the characters move automatically when the green Play button is clicked. To add an additional character who moves when clicked. <p>To explore the When Key and When Swiped commands (on tablets if available).</p> <ul style="list-style-type: none"> To use the Stop button to make characters stop when the background is clicked. <p>To explore a method to code interactivity between objects.</p> <ul style="list-style-type: none"> To use Collision Detection to make objects perform actions. To use the sound property. <p><u>Year 2 CODING</u></p> <p>Children can explain that an algorithm is a set of instructions.</p> <ul style="list-style-type: none"> Children can describe the algorithms they created. Children can explain that for the computer to make something happen, it needs to follow clear instructions. <p>To compare the Turtle and Character objects.</p> <ul style="list-style-type: none"> To use the button object. To understand how use the Repeat command. To understand how to use the Timer command. <p>Children can explain what debug (debugging) means.</p> | <p><u>Year 3 CODING</u></p> <p>To review coding vocabulary that relates to Object Action, Output, Control and Event.</p> <ul style="list-style-type: none"> To use 2Chart to represent a sequential program design. To use the design to write the code for the program <p>To design and write a program that simulates a physical system.eg moving a vehicle To look at the grid that underlies the design and relate this to X and Y properties.</p> <ul style="list-style-type: none"> To introduce selection in their programming by using the if command. To combine a timer in a program with selection. <p>To understand what a variable is in programming.</p> <ul style="list-style-type: none"> To use a variable to create a Timer <p>To create a program with an object that repeats actions indefinitely.</p> <ul style="list-style-type: none"> To use a timer to make characters repeat actions. To explore the use of the repeat command and how this differs from the timer. <p>To know what debugging means.</p> <ul style="list-style-type: none"> To understand the need to test and debug a program repeatedly. To debug simple programs. To understand the importance of saving periodically as part of the code development process <p><u>Year 4 CODING</u></p> <p>To review coding vocabulary.</p> <ul style="list-style-type: none"> To use a sketch or storyboard to represent a program design and algorithm. <p>To introduce the If/else statement and use it in a program.</p> <ul style="list-style-type: none"> To create a variable. To explore a flowchart design for a program with an if/else statement To create a program which responds to the If/else command, <p>Children can show how a character repeats an action and explain how they caused it to do so.</p> <ul style="list-style-type: none"> Children can make a character respond to user keyboard input. <p>To make timers and counting machines using variables to print a new number to the screen every second. To explore how 2Code can be used to investigate control by creating a simulation. To know what decomposition and abstraction are in computer science.</p> | <p><u>Year 5 CODING</u></p> <p>To review coding vocabulary.</p> <ul style="list-style-type: none"> To use a sketch or storyboard to represent a program design and algorithm. To use the design to create a program. <p>To design and write a program that simulates a physical system.</p> <p>To review the use of number variables in 2Code.</p> <ul style="list-style-type: none"> To explore text variables. <p>To create a playable, competitive game.</p> <ul style="list-style-type: none"> To combine the use of variables, If/else statements and Repeats to achieve the desired effect in code. To read code so that it can be adapted, personalised and improved. <p>To explore the launch command and use buttons within a program that launch other programs or open websites.</p> <ul style="list-style-type: none"> To create a program to inform others <p><u>YEAR 6 CODING</u></p> <p>To review good planning skills.</p> <ul style="list-style-type: none"> To design programs using their choice of objects, attributing specific actions to each using their new programming knowledge. To use variables within a game to keep track of the properties of objects. <p>To use functions and understand why they are useful in 2Code.</p> <ul style="list-style-type: none"> To debug a program and organise the code into tabs. To organise code into functions and Call functions to eliminate surplus code in the program <p>To explore the options for getting text input from the user in 2Code.</p> <ul style="list-style-type: none"> How to include interactivity in programming. To use flowcharts to test and debug a program. To create a simulation of a room in which devices can be controlled. <p>To explore how 2Code can be used to make a text-based adventure game.</p> <p><u>Year 6 Text Adventures</u></p> <p>To find out what a text adventure is. To plan a story adventure. Children can use the full functionality of 2Create a Story Adventure mode to create, test and debug using their plan.</p> |

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| Assessment Criteria and KPIs | <ul style="list-style-type: none"> • Children have a clear idea of how to use a design document to start debugging a program. • Children can debug simple programs. • Children can explain why it is important to save their work after each functioning iteration of the program they are making. <p>To create programs using different kinds of objects whose behaviours are limited to specific actions.</p> <ul style="list-style-type: none"> • To predict what the objects will do in other programs, based on their knowledge of what the object is capable of. • To discuss how logic helped them understand that they could only predict specific actions, as that is what the objects were limited to. <p>Children can plan and use algorithms in programs successfully to achieve a result.</p> <ul style="list-style-type: none"> • Children can plan and use algorithms in programs successfully to achieve the desired a result. • Children can code a program using a variety of objects, actions, events and outputs successfully. | <ul style="list-style-type: none"> • To take a real-life situation, decompose it and think about the level of abstraction. • To design a decomposed feature of a real-life situation <p>Year 4 LOGO.</p> <p>To learn the language of Logo. To input simple instructions on Logo. For the children to use Logo to create letters. To use the Repeat function in Logo to create shapes. To use the Build feature in Logo.</p> | <ul style="list-style-type: none"> • Children split their adventure-game design into appropriate sections to facilitate creating it. <p>To introduce map-based text adventures. Children create their own text-based adventure based upon a map.</p> <ul style="list-style-type: none"> • Children can use coding concepts of functions, two-way selection (if/else statements) and repetition in conjunction with one another to code their game. • Children make logical attempts to debug their code when it does not work correctly. |
| | <p>Year 1 Expected Can they create a simple series of instructions - left and right? • Can they record their routes? • Do they understand forwards, backwards, up and down? • Can they put two instructions together to control a programmable device? • Can they begin to plan and test their instructions?</p> <p>Year 2 Expected Can they predict the outcomes of a set of instructions? • Can they program using sequences of instructions to implement an algorithm? • Can you create an algorithm for your partner to debug? • Can they test and amend a set of instructions?</p> | <p>Year 3 Expected Can they experiment with variables to control models? • Can they give an on-screen robot directional instructions (e.g. 90/45 degree turns)? • Can they write more complex programs (leading to varying outcomes)? • Do they understand input and output? • Can they use commands to draw a shape (e.g. square, rectangle and other regular shapes on screen)?</p> <p>Year 4 Expected Can they use repeat instructions to draw regular shapes on screen, using commands? Can they experiment with variables to control models? Can they make turns specifying the degrees? Can they make accurate predictions about the outcome of a program they have written? Can they give an on-screen robot specific directional instructions that takes them from x to y?</p> | <p>Year 5 Expected Can they combine sequences of instructions and procedures to turn devices on or off? Do they understand input and output? Can they explore 'What is' questions by playing adventure or quest games? Can they plan a solution to a problem using decomposition (e.g. developing a computer game, creating a website)?</p> <p>Year 6 Expected Can they explain how an algorithm works? Can they detect errors in a program and correct them? Can they explore 'what if' questions by planning different scenarios for controlled devices? Can design, write and debug their own computer control application?</p> |



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| Digital Literacy | <p>Use computing to interact with other pupils and adults.</p> <p>Gather information from different sources.</p> <p>Find similar information in different formats (such as in photographs, books, websites or television programmes).</p> <p>Use a simple application on a computer or mobile device.</p> | <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> recognise common uses of information technology beyond school | <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> recognise common uses of information technology beyond school | <p>Pupils should be taught to:</p> <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 |
| | <p>ELG Technology Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.</p> <p>MiniMash Talk to the children about how they use different technology in school.</p> <ul style="list-style-type: none"> Why do the teachers use computers to help them to do their job? Why do you need a computer in the school office? What do we use at home every day? What other types of technology are used around school? Photocopier Microwave | <p><i>Pupils learn about some of the uses of the internet</i></p> <p>Year 1 Purple Mash Children understand what is meant by 'technology'. Children have considered types of technology used in school and out of school. Children have recorded 4 examples of where technology is used away from school.</p> <p>Year 2 To understand the terminology associated with searching. Children can identify the basic parts of a web search engine search page. Children have learnt to "read" a web search results page. Children can search for answers to a quiz on the internet. To create a leaflet to help someone search for information on the Internet.</p> | <p><i>Pupils learn to collaborate electronically by blogging - mailing and working on shared documents</i></p> <p>Year 3 EMAIL To think about the different methods of communication. To open and respond to an email. To write an email to someone, using an address book. To learn how to use email safely. To add an attachment to an email. To explore a simulated email scenario.</p> | <p><i>Pupils learn to collaborate electronically by blogging -mailing, and working on shared documents. This can be extended to working with other schools</i> <i>Pupils learn that connected devices exchange packets of data and this can convey a range of information from a text to a video call</i></p> <p>Year 6 Blogging To identify the purpose of writing a blog. To identify the features of successful blog writing. To plan the theme and content for a blog. To understand how to write a blog. To consider the effect upon the audience of changing the visual properties of the blog. To understand the importance of regularly updating the content of a blog. To understand how to contribute to an existing blog. To understand how and why blog posts are approved by the teacher. To understand the importance of commenting on blogs. To peer-assess blogs against the agreed success criteria.</p> <p>Year 6 – Networks Children know the difference between the World Wide Web and the internet. To find out what a LAN and a WAN are. To find out how we access the internet in school. To research and find out about the age of the internet. To think about what the future might hold.</p> |
| | KPIs – Digital literacy | | <p>Year 1 Expected Do they recognise the different forms of digital communication (e.g. email address)? • Can they understand the appropriate vocabulary according to equipment available? • Can they develop awareness and use of keyboard layout and use navigation skills appropriately (e.g. backspace, enter, spacebar, mouse)?</p> <p>Year 2 Expected Can they communicate safely online (e.g. reply to email)? • Can they create, edit and format text (insert/delete words, use bold/italics/underline)?</p> | <p>Year 3 Expected Can they open and send an attachment? • Can they find relevant information by browsing a menu? • Can they search for an image, then copy and paste it into a document? • Can they copy and paste text into a document? • Do they know how to manipulate text (e.g. underline text, centre text, change font and size)? • Can they save files (e.g. word doc, pictures) to an appropriate folder?</p> <p>Year 4 Expected Can they identify the benefits of ICT to send messages and to communicate? Can they use the automatic spell checker to edit spellings? Can they use a search engine to find a specific website? Do they know how to manipulate text (e.g. underline text, centre text, change font and size)? Can they navigate using an internet browser (e.g. use tabbed browsing to open two or more web pages at the same time, open a link to a new window)?</p> |



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| | Foundation Stage | Year 1/2 | Year 3/4 | Year 5/6 |
|-----------------|---|---|---|--|
| E-Safety | <p>Communicate about the uses of computing.</p> <p>Use computing devices to interact with age-appropriate applications.</p> | <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content on the internet or other online technologies | <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> Use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concerns about content and contact | <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concerns about content and contact |
| | <p>Mashcams</p> <ul style="list-style-type: none"> Let the children explore with each other taking photographs by using the Mashcams and creating their own pictures. Talk to the children about taking photographs and find out how many children like /dislike having photographs taken Let the children use the computer independently to login. Give the children opportunities to work as a pair on different activities within Mini Mash and Purple Mash. Talk to the children about taking turns and sharing the resources. Talk about making choices and allowing each other to make choices, not always expecting to be the first one to choose. Let the children take turns using the mouse and take turns to choose the activity that they want to do. Use the big sand timer to help the children to mark an amount of time to have on the computer. | <p><i>Pupils learn that the Internet is a great place to develop rewarding online relationships and learn to recognise websites that are good for them to visit; but they also learn to be cautious and to check with a trusted adult before sharing private information</i></p> <p><i>Pupils are introduced to the concept that real people send messages to one another on the Internet and learn how messages are sent and received. They recognise that it may be difficult to distinguish between someone who is real and someone who is not</i></p> <p><i>Pupils are introduced to the basics of online searching</i></p> <p><i>Pupils learn to explore websites and to say whether they like them or not and why</i></p> <p>Y1 Online Safety</p> <p><i>To login safely.</i></p> <p><i>To start to introduce to the children the idea of 'ownership' of their creative work</i></p> <p><i>To know how to find saved work in the Online Work area and find teacher comments.</i></p> <p><i>To know how to find resource and become familiar with the icons and types of resources available in the Topics section.</i></p> <p><i>To start To explore the Tools section of Purple Mash and to learn about the common icons used in Purple Mash for Save, Print, Open, New.</i></p> <p><i>To understand the importance of logging out when they have finished.</i></p> <p>Year 2 Online Safety</p> <p><i>To know how to refine searches using the Search tool.</i></p> <p><i>To know how to share work electronically using the display boards.</i></p> <p><i>To use digital technology to share work on Purple Mash to communicate and connect with others locally.</i></p> <p><i>To have some knowledge and understanding about sharing more globally on the Internet</i></p> <p><i>To introduce Email as a communication tool using 2Respond simulations.</i></p> <p><i>To understand how we talk to others when they aren't there in front of us.</i></p> <p><i>To open and send simple online communications in the form of email.</i></p> <p><i>Children can explain what a digital footprint is.</i></p> <p><i>Children can give examples of things that they wouldn't want to be in their digital footprint.</i></p> | <p><i>Pupils learn to make good passwords for their accounts, learn about spam and how to deal with it. They begin to understand the implications for the information that they share online and how some websites might use that information without their knowledge</i></p> <p><i>Pupils are introduced to their roles as digital citizens in an online community, where they reflect on how they are responsible not only for themselves but for others, in order to create a safe and comfortable environment</i></p> <p><i>Pupils learn that the Internet is a public space and then develop the skills to protect their privacy and respect the privacy of others</i></p> <p>Year 3 Online Safety</p> <p><i>To know what makes a safe password, how to keep passwords safe and the consequences of giving your passwords away.</i></p> <p><i>To understand how the Internet can be used to help us to communicate effectively.</i></p> <p><i>To understand how a blog can be used to help us communicate with a wider audience.</i></p> <p><i>continued</i></p> <p><i>Pupils explore how they interact with others and are introduced to the concept of cyberbullying. They also learn how to communicate to be a responsible member of a connected culture effectively in order to prevent miscommunication</i></p> <p><i>Use search technologies effectively, appreciate how results are selected and ranked and be discerning in evaluating digital content</i></p> <p><i>Pupils are introduced to the basics of online searching, including how to use effective keywords.</i></p> <p><i>They also learn to conduct searches that provide them with the most helpful and relevant information</i></p> <p>Y3 Online Safety</p> <p><i>For children to consider if that they read on websites is true?</i></p> <p><i>To look at some 'spoo' websites. To create a 'spoo' webpage.</i></p> <p><i>To think about why these sites might exist and how to check that the information is accurate.</i></p> <p><i>To learn about the meaning of age restrictions symbols on digital media and devices.</i></p> <p><i>To discuss why PEGI restrictions exist.</i></p> <p><i>To know where to turn for help if they see inappropriate content or have inappropriate contact from others.</i></p> <p>Year 4 Online Safety</p> <p><i>To understand how children can protect themselves from online identity theft.</i></p> <p><i>Understand that information put online leaves a digital footprint or trail and that this can aid identity theft.</i></p> <p><i>To Identify the risks and benefits of installing software including apps.</i></p> <p><i>To understand that copying the work of others and presenting it as their own is called 'plagiarism' and to consider the consequences of plagiarism.</i></p> <p><i>To identify appropriate behaviour when participating or</i></p> | <p><i>Pupils explore their roles as digital citizens in an online community, where they reflect on their responsibilities and learn that good digital citizens are responsible and respectful in the digital world</i></p> <p><i>Pupils begin to explore the nature of online audiences and permanency of information online. They begin to understand the significance of published information and personal information</i></p> <p><i>Pupils understand what it means to be a good digital citizen as they interact with others online by understanding how to prevent and respond to cyberbullying. They also learn how to communicate effectively to prevent miscommunication in order to be a responsible member of a connected culture</i></p> <p>Year 5 Online Safety</p> <p><i>To gain a greater understanding of the impact that sharing digital content can have.</i></p> <p><i>To review sources of support when using technology.</i></p> <p><i>To review children's responsibility to one another in their online behaviour.</i></p> <p><i>To know how to maintain secure passwords.</i></p> <p><i>To understand the advantages, disadvantages, permissions and purposes of altering an image digitally and the reasons for this.</i></p> <p><i>To be aware of appropriate and inappropriate text, photographs and videos and the impact of sharing these online.</i></p> <p><i>To learn about how to reference sources in their work</i></p> <p><i>To search the Internet with a consideration for the reliability of the results of sources to check validity and understand the impact of incorrect information.</i></p> <p><i>Ensuring reliability through using different methods of Communication</i></p> <p>Year 6 Online Safety</p> <p><i>Identify benefits and risks of mobile devices broadcasting the location of the user/device, e.g. apps accessing location.</i></p> <p><i>Identify secure sites by looking for privacy seals of approval, e.g. https, padlock icon.</i></p> <p><i>Identify the benefits and risks of giving personal information and device access to different software.</i></p> <p><i>To review the meaning of a digital ootprint and understand how and why people use their information and online presence to create a virtual image of themselves as a user.</i></p> <p><i>To have a clear idea of appropriate online behaviour and how this can protect themselves and others from possible online dangers, bullying and inappropriate behaviour.</i></p> <p><i>To begin to understand how information online can persist and give away details of those who share or modify it.</i></p> <p><i>To understand the importance of balancing game and screen time with other parts of their lives, e.g. explore the reasons why they may be tempted to spend more time playing games or find it difficult to stop playing and the effect this has on their health.</i></p> <p><i>To identify the positive and negative influences of technology on health and the environment.</i></p> <p><i>continued</i></p> <p><i>Pupils begin to consider the impact of their online presence on their own self- image and the way others see them and explore</i></p> |

Assessment Criteria and KPIs

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| | | | <p>contributing to collaborative online projects for learning. To select an appropriate website from search results and begin to consider if the content is reliable. To identify the positive and negative influences of technology on health and the environment. To understand the importance of balancing game and screen time with other parts of their lives. Year 4 Effective Searching To locate information on the search results page To use search effectively to find out information. To assess whether an information source is true and reliable</p> | <p>how to construct a positive online profile Pupils learn the 'do's and don'ts' of copying and pasting information to avoid plagiarism. They learn how to avoid plagiarism by putting information in their own words, putting excerpted information into quotes, and providing citations. They learn to show respect for other people's creations by giving them credit. Use search technologies effectively, appreciate how results are selected and ranked and be discerning in evaluating digital content Pupils explore issues relating to online searching, including how to use effective keywords, using directories and subject categories, and how to analyse the usefulness and relevancy of the results. They learn to conduct searches that provide them with the most helpful and relevant information Pupils develop skills for evaluating websites, online information and advertising by rating the trustworthiness and usefulness of websites, and learning to identify the different types of online advertising</p> |
| | | <p>Year 1 Expected Do they know that personal information should not be shared online? • Can they act if they find something they are unsure of (including identifying people who can help; minimising screen; online reporting using school system etc)?</p> <p>Year 2 Expected Can they recognise advertising on websites and learn to ignore it? • Can they begin to evaluate websites and know that everything on the internet is not true?</p> | <p>Year 3 Expected Do they recognise the difference between the work of others which has been copied (plagiarism) and restructuring and representing materials in ways which are unique and new?</p> <p>Year 4 Expected Can they recognise that cyber bullying is unacceptable and will be sanctioned in line with the school's policy? Do they understand the need for caution when using an internet search for images and what to do if they find an unsuitable image?</p> | <p>Year 5 Expected Can they independently, and with regard for e-safety, select and use appropriate communication tools to solve problems by collaborating and communicating with others within and beyond school? Do they understand they should not publish other people's pictures or tag them on the internet without permission? Do they know that content put online is extremely difficult to remove?</p> |



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Information Technology

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| | Show an understanding that information can be stored on a computer. Create simple representation of events, people and objects. | Pupils should be taught to: <ul style="list-style-type: none"> use technology purposefully to create, organise, store, manipulate and retrieve digital content | Pupils should be taught to: <ul style="list-style-type: none"> select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information | Pupils should be taught to: <ul style="list-style-type: none"> select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information |
| | <p>ELG Making Relationships 2Beat and 2Explore</p> <ul style="list-style-type: none"> Use 2Beat and 2Explore on the iPad as musical instruments. Let the children explore creating music and sounds. Use the iPad to take turns to create music and sounds, let the children play each other's 'creations'. Let the children use the iPad as part of their own 'band' of musical instruments. Who is going to create sounds on the iPad first? Who will use it next? Which musical instruments will the children choose to play? Let the children decide how they are going to organise all the instruments and where they will sit to play the different sounds. Let the children take turns at using the iPad as part of their band. | <p>Year 1 Purple Mash – Animated Storybooks To sort items using a range of criteria. To sort items on the computer using the 'Grouping' activities in Purple Mash. To understand that data can be represented in picture format To contribute to a class pictogram To use a pictogram to record the results of an experiment. To be introduced to e-books and to 2Create a Story. To continue a previously saved story. To add animation and sound to a story including voice recording and music the children have created. To work on a more complex story including adding backgrounds and copying and pasting pages. To use additional features to enhance their stories. To share their e-books on a class display board.</p> <p>Year 1 Spreadsheets Children navigate around a spreadsheet. Children explain what rows and columns are. Children save and open sheets. Children enter data into cells. Children open the Image toolbox and find and add clipart. Children can use the 'move cell' tool so that images can be dragged around the spreadsheet. Children use the 'lock' tool to prevent changes to Cells. Children give images a value that the spreadsheet can use to count them. Children add the count tool to count items and add the speak tool so that the items are counted out loud. Children use a spreadsheet to help work out a fair way to share items .</p> <p>Year 2 Spreadsheets Reviewing prior use of spreadsheets Copying and Pasting Totalling tools Using a spreadsheet to add Amounts Creating a table and block graph</p> <p>Y2 2Question To show that the information provided on pictogram is of limited use beyond answering simple questions To use YES or No questions to separate information. To construct a binary tree to separate different items. To use a database to answer more complex search questions. To use the search tool to find information.</p> <p>Creating Pictures – link to ART & DESIGN To be introduced to 2Paint A Picture. To look at the impressionist style of art (Monet, Degas, Renoir). To recreate pointillist art and look at the work of pointillist artists such as Seurat. To look at the work of Piet Mondrian and recreate it using the Lines template. To look at the work of William Morris and recreate it using the Patterns template. To explore surrealism and eCollage</p> <p>Making Music To be introduced to making music digitally using 2Sequence. To explore, edit and combine sounds using 2Sequence. To add sounds to a tune they've already created to change it.</p> | <p>Year 3 Branching Databases To create a branching database of the children's choice. To complete a branching database using 2Question.</p> <p>Y3 Simulations To look at what simulations are. Children can begin to evaluate simulations by comparing them with real situations and considering their usefulness. Children can recognise patterns within simulations and make and test predictions.</p> <p>Y3 Spreadsheets To create pie charts and bar graphs. Children use the 'more than', 'less than' and 'equals' tools to compare different numbers and help to work out solutions to calculations. Children use the 'spin' tool to count through times tables. To introduce the Advanced Mode of 2Calculate and use coordinates.</p> <p>Y3 Graphing To enter data into a graph and answer questions. Children solve a maths investigation. Children present the results in a range of graphical formats.</p> <p>Y3 Touch Typing To discuss the need for correct posture when typing. To introduce typing terminology. 'top row', 'home row', 'bottom row' and 'space bar'</p> <p>Year 4 Spreadsheets Using the formula wizard in the advanced mode to add formulae and explore formatting cells. Use Timer and spin button. Children use a series of data in a spreadsheet to create a line graph.eg. Children use a line graph to find out when the temperature in the playground will reach 20°C Using a spreadsheet for Budgeting. Exploring Place Value with a spreadsheet</p> <p>Year 4 Writing for different audiences To explore how font size and style can affect the impact of a text. To use a simulated scenario to produce a news report.</p> <p>Year 4 Animations To discuss what makes a good animated film or cartoon and what their favourites are. To learn how animations are created by hand. To find out how 2Animate can be created in a similar way using the computer. To learn about onion skinning in animation. To add backgrounds and sounds to animations. To be introduced to stop motion animation. To share animation on the class display board and by blogging.</p> | <p>Year 5 Spreadsheets Children can create a formula in a spreadsheet to convert m to cm. Children can apply this to creating a spreadsheet that converts miles to km and vice versa. Formulae including the advanced mode. Children can use a spreadsheet to work out the area and perimeter of rectangles. Children can use these calculations to solve a real-life problem. Using text variables to perform calculations. Children can use a spreadsheet to model a real-life situation and come up with solutions that can be practically applied.</p> <p>Y5 Databases To learn how to search for information on a database. Children design an avatar for a class database. Children enter information into a class database. Children create their own database on a chosen topic. Children add records to their database. Children know what a database field is and can correctly add field information. Children understand how to word questions so that they can be effectively answered using a search of their database.</p> <p>Y5 Game Creator Children review and analyse a computer game. Children describe some of the elements that make a successful game. Children begin the process of designing their own game. Children design the setting for their game so that it fits with the selected theme. Children can upload images or use the drawing tools to create the walls, floor and roof. Children can design characters for their game. Children can decide upon, and change, the animations and sounds that the characters make. Children can make their game more unique by selecting the appropriate options to maximise the playability. Children can write informative instructions for their game so that other people can play it. Children evaluate their own and peers' games to help improve their design for the future.</p> <p>Y5 3D Modelling To be introduced to 2Design and Make Children adapt one of the vehicle models by moving the points to alter the shape of the vehicle while still maintaining its form. Children explore how to edit the polygon 3D models to design a 3D model for a purpose. To understand printing and making.</p> <p>Year 5 Concept Mapping 2Connect To understand the need for visual representation when generating and discussing complex ideas. To understand and use the correct vocabulary when creating a concept map. To create a concept map.</p> |

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| Assessment Criteria and KPIs | | <p>To think about how music can be used to express feelings and create tunes which depict feelings. To upload a sound from a bank of sounds into the Sounds section. To record their own sound and upload it into the Sounds section. To create their own tune using the sounds which they have added to the Sounds section.</p> <p>Presenting Ideas To explore how a story can be presented in different ways. To make a quiz about a story or class topic. To make a fact file on a nonfiction topic To make a presentation to the class.</p> | <p>To understand how a concept map can be used to retell stories and information. To create a collaborative concept map and present this to an audience.</p> <p>Year 6 Spreadsheets Children create a spreadsheet to answer a mathematical question relating to probability. • Children take copy and paste shortcuts. • Children problem solve using the count tool. Use of spreadsheets in 'real life' Creating a computational model Use a spreadsheet to plan pocket money spending. Planning a school event - Children can use a spreadsheet to model a real-life situation and come up with solutions that can be applied to real life.</p> <p>Year 6 Quizzes To make a picture quiz for young children Children use the 2DIY activities to create a picture based quiz. • Children consider the audience's ability level and interests when setting the quiz. • Children share their quiz and respond to feedback. Are you smarter than a 10- (or 11-) year-old? To make a quiz to test your teachers or parents</p> |
| | <p>Year 1 Expected Can they create original content using digital technology? • Can they use digital technology to store and retrieve content?</p> <p>Year 2 Expected Can they find information on a website? • Can they use a web page as a resource? • Can they experiment with drawing tools, text, pictures and animation to create content (e.g. presentation, eBook)? • Can they create content (e.g. presentation, video, animation) in a small group and record the narration?</p> | <p>Year 3 Expected Can they use editing software to manipulate media (e.g. crop, add effects, manipulate audio)? • Can they manipulate sound? • Can they combine text, images and sounds and show awareness of audience?</p> <p>Year 4 Expected</p> | <p>Year 5 Expected Can they listen, download, produce and upload a variety of broadcast media (e.g live streaming, podcast)? Can they manipulate sounds using audio editing software (eg. Audacity)? Can they select music from a variety of sources and incorporate it into multimedia presentations? Can they work on simple film editing? Can they use a range of presentation applications? Can they use technology to capture a range of multimedia.? Can they make a home page for a website that contains links to other pages? Can they prepare and then present a simple film? (e.g. Storyboarding and then filming/editing).</p> <p>Year 6 Expected Can they explore the menu options and experiment with images (colour effects, options, snap to grid, grid settings etc.)? Can they add special effects to alter the appearance of a graphic? Can they 'save as' gif or i peg wherever possible to make the file size smaller (for emailing or downloading)? Can they make an information poster using their graphics skills to good effect? Can they present a film for a specific audience and then adapt same film for a different audience? Can they create a sophisticated multimedia presentation?</p> |



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