# Computing Progression: EYFS and KS1

| | Nursery | Reception | Year 1 | Year 2 |
|---|---|---|---|---|
| **Learning to be a Computer Scientist** | I know how to operate simple equipment, e.g. turns on CD player and uses remote control. (Technology 30-50 – T1) | I can use programmable toys.<br><br>I can complete a simple program on a computer. (Technology 40-60 – T1) | I can understand how many everyday devices respond to commands. | |
| | I can follow very simple instructions given by a teacher.<br><br>I can respond to simple instructions. (Understanding 30-50 – U4) | I can respond to instructions involving a two-part sequence. (Understanding 40-60 – U1)<br><br>I can follow instructions involving several ideas or actions. (ELG) | I can give and follow instructions using Forward and Backward commands (arrows) and the Go command, one at a time. | I can give, follow and complete an algorithm that uses directional language. |
| | | I can sequence a simple set of instruction in the correct order.<br><br>I can order & sequence familiar events. (SSM 40-60 – SSM9) | I can explore outcomes when instructions are given in a sequence. | I can give and follow an algorithm to make half and quarter turns left and right using a range of commands e.g. Left 90, Right 90 on TextTease Turtle. |
| | | I can give instructions.<br><br>I can order & sequence familiar events. (SSM 40-60 – SSM9) | I can give and write a simple sequence of instructions. | I can use recognised language to write an algorithm. |
| | | | I can discuss/explore what will happen when instructions are given in a sequence. | I can create, test and debug an algorithm for a given purpose including moving and rotating. |
| | | | | I can begin to create a repeating algorithm using repeat commands. |
| | I can show skill in making toys work by pressing parts to achieve effects such as sound, movements or new images. (Technology 30-50 – T3) | I can select and use technology for particular purposes. (ELG) | I am beginning to understand the term algorithm. | I understand that an algorithm is a set of clear and precise instructions. |

| | | Nursery | Reception | Year 1 | Year 2 |
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| **Learning to be a Creator** | | I can recognise a computer.<br><br>I know that information can be retrieved from a computer (Technology 30-50 – T4) | I can name different parts of a computer.<br><br>I can recognise that a range of technology is used in places such as homes & schools. (ELG) | I know what each part of a computer does e.g. keyboard types etc. | |
| | | | I can log on and off with support. | I can switch on and shutdown a computer (including using log in). | I can use a computer's basic functions e.g. turn on/shut down, log on/off independently. |
| | | I can move a mouse.<br><br>I know how to operate simple equipment. (Technology 30-50 – T1) | I can begin to use a mouse to navigate around the screen.<br><br>I can use ICT hardware to interact with age-appropriate computer software. (Technology 40-60 – T2) | I can use a mouse accurately to open programs and drag objects. | |
| | | | I can identify what the print icon is.<br><br>I can select and use technology for a particular purpose. (ELG) | I can save and open a file. | I can use basic computer skills e.g. saving work, use a folder. |
| | | | I can enter text using a keyboard.<br><br>I can use ICT hardware to interact with age-appropriate computer software. (Technology 40-60 – T2) | I can type on a keyboard. | I can type a simple document/email. |
| | | | | I can select and edit text e.g. size, colour and font. | I can edit a simple document/email. |
| | | I can say when something is still and when it moves. | I know the difference between a digital image and a moving image.<br><br>I know about similarities & differences in relation to places, objects, materials & living things. (ELG) | I can use a digital camera to photograph or record a class activity. | I can create a digital video and export/upload the clips. |
| | | I can show an interest in technological toys with knobs or pulleys, or real objects such as cameras or mobile phones. (Technology 30-50 – T1) | I can take a picture and video.<br><br>Uses ICT hardware to interact with age-appropriate computer software. (Technology 40-60 – T2) | I can use images that I have taken within another software. | I can add and format an image. |

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| **Learning to be a Creator** | I can take a picture with support and play a recording with support.<br><br>I show an interest in technological toys with knobs or pulleys, or real objects such as cameras or mobile phones. (Technology 30-50 – T2) | I can record using a microphone.<br><br>I can use ICT hardware to interact with age-appropriate computer software. (Technology 40-60 – T2) | | |
| | | | I can create a pictogram using the computer. | I can create and edit a range of simple graphs using a computer. |
| | I can experiment with digital painting/drawing with support.<br><br>I can complete a simple program on a computer. (Technology 40-60 – T1) | I can experiment with digital painting/drawing.<br><br>I can use ICT hardware to interact with age-appropriate computer software. (Technology 40-60 – T2) | I can use a range of paintbrush sizes, colours and types when creating digital art. | I can use a range of tools in a computer program to reproduce a style of art. |
| | | | I can create shapes with different coloured outlines and fills. | I can change the shade of a colour for effect. |
| | | | I can use word processing programmes to create simple posters. | I can edit text in a word processor e.g. .word, publisher, PowerPoint. |
| | | | | I can send and open an email. |
| | | | I can complete a search using a child friendly search engine under the supervision of adults. | I can understand what a search engine is and can use a child friendly search engine independently. |
| | | | I can explore a website by clicking on buttons, arrows, menus and hyperlinks. | I can use the Internet to find information for a topic, with support (Favourites file, hyperlinks set up by the teacher). |

| | Nursery | Reception | Year 1 | Year 2 |
|---|---|---|---|---|
| **Learning to be SMART – E-Safety** | | I can understand that my login is just for me. | I can understand why my login has a password. | I can understand why a secure password is important and should be kept private. |
| | I know that information can be retrieved from computers. (Technology 30-50 – T4) | I know that many people use the internet to receive information.<br><br>I know that a range of technology is used in places such as homes and schools. (ELG) | I can begin to understand that I leave a digital footprint when using the internet. | I can understand that the internet can be used to communicate with people all around the world. |
| | I can ask for help from an adult.<br><br>I show confidence in asking adults for help. (Self-confidence and self-awareness 30-50 – SCSA6) | I can ask for help when an unfamiliar box appears on a computer/iPad.<br><br>I can say when I do or don't need help. (ELG) | I know ways to be safe on the internet (SMART). | I know that people may not be who they say they are online. |
| | | I can begin to understand the SMART rules and why we have them.<br><br>I can work as part of a group or class and understand and follow the rules. (ELG) | I can understand the SMART rules and why we have them. | I can remember and explain the SMART rules. |
| | I can use devices that may have the internet with support.<br><br>I can select and use activities and resources with help. (Self-confidence and self-awareness 30-50 – SCSA1) | I can begin to safely use the internet when supervised by an adult.<br><br>I can choose the resources I need for my chosen activity. (ELG) | I can use the internet to explore. | I can use the internet to research a given topic. |
| | | | I can begin to understand what cyberbullying is and know how to protect myself with the SMART rules. | I can write clear and respectful messages when communicating online. |

# Computing Progression: KS2

| | Year 3 | Year 4 | Year 5 | Year 6 |
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| **Learning to be a Computer Scientist** | I can explain how simple algorithms work and begin to spot errors by testing. | I can explain how simple algorithms work and spot errors by extensively testing. | I can begin find the relevant part of an algorithm to debug using decomposition. | I can find the relevant part of an algorithm to debug using decomposition. |
| | I can create and debug an algorithm using the move, rotate and repeat commands. | I can create and debug an algorithm using the move, rotate and repeat commands with the intention of meeting a specific goal. | I can create a program with a purpose that can be controlled by an end-user using input and output systems. | I can use a range of programming language to write purposeful programs and explain the systems that enable it to function. |
| | | I can create and use variables to store relevant information. | I can test and edit my program by altering variables e.g. speed, score target to alter the outcome. | I can use logical reasoning to detect and correct a range of errors including logical, semantic and syntax errors and explain why the error occurred. |
| | I can create and debug algorithms that draw regular polygons and patterns, | I can create a procedure to draw regular polygons or patterns using the skills of sequence, selection and repetition. | I can begin to use decomposition to break a complex program into a series of manageable procedures and functions. | I can solve problems by using decomposition to break a complex program into a series of manageable procedures and functions. |
| | I can realise the importance of accurate instructions. | I can apply my knowledge regarding accurate instructions to ensure algorithms function properly. | I can apply my knowledge of accuracy to ensure my procedures interact as expected. | I can apply my knowledge of accuracy to ensure my procedures interact as expected and debug to ensure expected outcome. |

| | Year 3 | Year 4 | Year 5 | Year 6 |
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| **Learning to be a Creator** | I can use basic computer skills e.g. save, open etc. | I can keep my files organised with relevant filenames. | | |
| | I can use the CTRL key to use key commands. | | | |
| | I can edit text by changing case, aligning, using bullet points/ numbers. | I can edit and enhance images and text to make them more presentable. | I can digitally alter and manipulate images. | |
| | I can insert and format text boxes. | I can create a document/ presentation including images, word art etc. | | |
| | I can lay out a page effectively by inserting, ordering and grouping objects as well as formatting. | I can arrange and layer objects including titles and backgrounds. | | |
| | I can understand how a search engine works and how word order can effect search results. | I can use a search engine to find relevant and reliable information using key search words e.g. "" and NOT/-. | I can use a range of search engines and am beginning to use keywords effectively. | I can use a range of search engines and keywords effectively to find reliable information. |
| | | | | I can explain how the internet/ the cloud works and how its services are used around the world e.g. communication, as well as explain the acronym WWW. |
| | I can create a hyperlink to a reliable/saved page. | I can use hyperlinks in my work to reference a reliable/saved page. | I can create a simple webpage by inserting images, heading and hyperlinks. | |

| | Year 3 | Year 4 | Year 5 | Year 6 |
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| **Learning to be a Creator** | | | I can explore 3D modelling using a range of concrete and computer methods e.g. plasticine, SketchFab. | |
| | | | I can create a simple animation using 3D models and gradual changes. | |
| | I understand the principles of animation and create an animation using gradual frame changes. | I can create and edit video footage and add titles, audio/soundtracks and transitions to make it presentable. | I can edit the raw animation footage to create a presentable end product. | I can edit raw footage to create a purposeful digital film/ presentation by adding audio and a soundtrack to make it impactful. |
| | I can present data effectively using a range of software. | I can collect, analyse and present data accurately. | I can store and edit information in a spreadsheet using simple formulae with support. | I can store and edit information in a spreadsheet using formulae independently. |
| | | | I can understand the benefits of using a spreadsheet to process and view data. | I can process information using formulae to answer questions about a dataset. |
| | | I can use timing on a presentation. | | |

| | Year 3 | Year 4 | Year 5 | Year 6 |
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| **Learning to be SMART – E-safety** | I can understand that my accounts and passwords keep my information safe and private. | I can create a secure password using capital letters, numbers and symbols. | I know that if I share my passwords online or access unsecure sites then I put my information at risk. | I know all the ways to keep my account secure and that my account name should not be associated with my real name. |
| | I can understand the term identity theft and know how to protect myself. | I can understand what is meant by spam and how we should protect ourselves from it. | I can understand that not all websites are secure and to understand what a privacy policy/seal is. | I can understand that that are identity theft scams online and how that information may be used. |
| | I know who/where to go to when I have concerns. | I can explain what to do if I am worried online and know about CEOPS. | I know that I should talk to an adult I trust or CEOPs if I feel worried. | I know the risks of being online and can identify when I need help and support. |
| | I can explain the SMART rules and apply them to actual situations. | I can explain the SMART rules and give examples for each situations. | I can apply the SMART rules to a range of situation and point out when a situation is dangerous. | I can link the SMART rules to social media usage and know what is and isn't acceptable online. |
| | I can begin to understand what it means to be a good digital citizen. | I can understand what it means to be a good digital citizen. | I can begin to understand the dangers of social media. | I can stay safe when using interactive technologies such as online games and social media. |
| | I can understand the effect of cyberbullying and know what to do if I experience this. | I can understand what it meant by plagiarism and the consequences of plagiarising. | I can compare cyberbullying to in-person bullying and learn strategies for coping with it. | I can understand the need to have a positive online persona to maintain professional relationships and that once something is online it can't be taken back. |