

COMPUTING PROGRESSION OF SKILLS



| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
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| Computer Science | <ul style="list-style-type: none"> I can explain that an algorithm is a set of instructions. I know that a computer program turns an algorithm into code that the computer understands I can work out what is wrong with a simple algorithm when the steps are out of order I can write my own simple algorithm I can make logical attempts to fix my code if it isn't working properly I can read code - one line at a time - and make a good prediction about what may happen in a programme | <ul style="list-style-type: none"> I can explain that an algorithm is a set of instructions to complete a task I know I need to carefully plan my algorithm so that it will work when I make it into a code I can design a simple program, using 2Code, that achieves a purpose I can find and correct errors in my program I can design a program with logical, programmable steps I can spot something in a program that has an action or effect | <ul style="list-style-type: none"> I can turn a simple real life situation into an algorithm for a program I can design an algorithm carefully thinking about what I want it to do and how I can turn it into a code. I can identify an error in my program and fix it. I can experiment with timers I can design and code a program that follows a simple sequence I can experiment with timers in my program I can identify the difference between using the effect of a timer or a repeat command in my code I can read programs with several steps, and predict the outcome I can identify different ways that the internet can be used for communication I can use email, such as 2Email, to respond to others appropriately and attach files. | <ul style="list-style-type: none"> I can turn a real life situation to solve into an algorithm using a design that shows how I can accomplish this in code. I can use repetition in my code. I can use timers within my program designs more accurately to create repetition effects I can use selection in my programming - for example, using an IF statement for a question being asked and the program takes 1 of 2 paths I can use variables within my program and know how to change the value of these. I can use the user inputs and output features within my program, such as 'Print to Screen' I can identify errors in my code by using different methods and make logical attempts to correct this. I can read programs that contain several steps and predict the outcomes with increasing accuracy I recognise the main component parts of hardware, allowing computers to join and form a network. | <ul style="list-style-type: none"> I can make more complex, real life problems into algorithms for a program I can test and debug my programs as I work I can convert algorithms that contain sequence, selection and repetition into code that works. I can use sequence, selection, repetition and some other coding structures in my code. I can organize my code carefully and know that this will help me debug more efficiently I can use logical methods to identify the cause of any bug with some to identify the specific line of code I know the importance of computer networks and how they solve problems and enhance communication I recognise the main dangers that can come from computer networks I can explain what personal information is and know strategies for keeping this safe I can use the most appropriate form of online communications according to the digital content - for example, 2Email and 2Blog | <ul style="list-style-type: none"> I can turn a more complex programming task into an algorithm, I can identify the most important aspect of a programming task (abstraction) I can decompose important aspects of a programming task in a logical way, identifying appropriate coding structures that would work I can test and debug my program and use logical methods to identify the cause of a bug I can identify a specific line of code that is causing a problem in my program and attempt to fix it I can translate algorithms that include sequence, selection and repetition into code and nest these structures within each other I can use inputs and outputs within my coded programs, such as sound, movement and buttons. I can interpret a program in parts and make logical attempts to put the separate parts together in an algorithm to explain the program as a whole. I can explain the difference between the internet and the world wide web and I can explain what a WAN and LAN is and describe the process of how access to the internet in school is possible |

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| <p>Information Technology</p> | <ul style="list-style-type: none"> I am able to sort, collate, edit and store simple digital content (<i>name, save and retrieve their work</i>) I can follow simple instructions to access online resources I can begining to use Purple Mash software to complete tasks (<i>2Quiz, 2Code or 2Count</i>) | <ul style="list-style-type: none"> I can organise data - for example, using a database such as 2Investigate. I can find data using specific searches - for example, using 2Investigate. I can edit digital data - such as data in music composition software like 2Sequence. I can name, save and find my work. I can include photos, text and sound in my creations. I can use a Purple Mash program to organize information - such as 2Question or 2Calculate. | <ul style="list-style-type: none"> I can carry out simple searches to retrieve digital content on a range of online systems both within Purple Mash and on internet search engines. I can collect, analyse, evaluate and present data and information using a selection of software (2Question, 2Graph) I can consider the most appropriate software to use when given a task by my teacher I can create purposeful content and attach this to email | <ul style="list-style-type: none"> I understand the purpose of a search engine and the main features within it I can look at information on a webpage and make predictions about the accuracy of information contained within it I can create and improve my solutions to a problem based on feedback - for example, creating a program on 2Code I can review solutions that others have created using the checklist criteria I can work collaboratively to create content and solutions I can share digital content using a variety of applications, such as 2Blog and 2Email. | <ul style="list-style-type: none"> I can search precisely when using a search engine I can explain in detail how accurate, safe and reliable content is on a webpage I can make appropriate improvements to digital work I have created I can comment on how successful a digital solution is that I have created I can work collaboratively with others creating solutions to problems using appropriate software, such as 2Code. I can use collaborative modes, such as within 2Connect, to work with others and share it | <ul style="list-style-type: none"> I can use filters when searching for digital content I can explain in detail how accurate and reliable a web page and its contents is I can compare a range of digital content sources and rate them in terms of content quality and accuracy I can consider the intended audience carefully when I design and make digital content I can design and create my own online blogs and I can use criteria to evaluate the quality of my own and others' digital solutions suggesting refinements |
| <p>Digital Literacy</p> | <ul style="list-style-type: none"> I can say what technology is I can say what examples of technology can be found in school I can say what examples of technology can be found at home I can use technology safely and respectfully, keeping personal information private I know where to go for help and support if I am concerned about content or contact from the internet or other online technologies I can save my work in a safe place, such as 'My Work' folder | <ul style="list-style-type: none"> I can find information I need using a search engine I know the implications if inappropriate online searches I can safely share work and communicate electronically - through using 2Email or posting to the Purple Mash display board. I can report unkind behaviour and things that upset online to a trusted adult. I can see where technology is used at school, such as in the office or the lunch hall. I understand that my creations, such as programs in 2Code, need similar skills to the adult world (e.g. program used for collecting dinner money) | <ul style="list-style-type: none"> I can create a secure password I can explain the importance of having a secure password and not sharing it with others I can explain the negative consequences of not keeping passwords safe and secure I understand the importance of keeping safe online and behaving respectfully I can use communication tools, such as 2Email, respectfully I can report unacceptable content and contact online in more than one way to a trusted adult | <ul style="list-style-type: none"> I have a good understanding of the online safety rules learnt at school I can demonstrate how to use different online technologies safely I can demonstrate how to use a variety of online services safely I know I have a right to privacy both on and off line. I recognise that my wellbeing can be affected by how I use technology I can report with ease any concerns with content and contact online and know immediate strategies to keep safe. | <ul style="list-style-type: none"> I have a secure knowledge of online safety rules taught at school I can demonstrate the safe and respectful use of different online technologies and online services I always relate appropriate online behaviour to my right to have personal privacy I know how to not let my mental wellbeing, or others, be affected by the use of online technologies and services. | <ul style="list-style-type: none"> I can demonstrate safe and respectful of a range of different technologies and online services I can identify more discrete inappropriate behaviours online through developing critical thinking I know the value of protecting my privacy and the privacy of others online. |