



# Computing progression of skills

## Year 1

Computer Science (CS)	Information Technology (IT)	Digital Literacy (DL)	e-Safety (DL)
give instructions to friends and follow instructions to move around	be creative with different technology tools	recognise the ways technology is used in the classroom	keep passwords private
describe what happens when buttons are pressed on a robot	use technology to create and present my ideas	recognise ways that technology is used at home and in the community	say what personal information is
press the buttons in the correct order to make a robot do what is wanted	use the keyboard or a word bank on my device to enter text	use links to websites to find information	tell an adult when I see something unexpected or worrying online
describe what actions are needed to make something happen and begin to use the word algorithm	save information and retrieve it again	begin to identify some of the benefits of using technology	agree and follow sensible e-Safety rules
begin to predict what will happen for a short sequence of instructions	talk about the different ways in which information can be shown		
begin to use software/apps to create movement and patterns on a screen	use technology to collect information, including photos, video and sound		
use the word debug when I correct mistakes when I program			



# Computing progression of skills

## Year 2

Computer Science (CS)	Information Technology (IT)	Digital Literacy (DL)	e-Safety (DL)
<p>give instructions to a friend (using forward, backward and turn) and physically follow their instructions</p> <p>say the order needed to make something happen and talk about this as an algorithm</p> <p>program a robot or software to do a particular task</p> <p>look at a friend's program and say what will happen</p> <p>use programming software to make objects move</p> <p>watch a program execute and spot where it goes wrong so to debug it</p>	<p>use technology to organise and present ideas in different ways</p> <p>use the keyboard on a device to add, delete and space text for others to read</p> <p>save and open files on a device</p> <p>talk about the different ways technology is used to collect information, including a camera</p> <p>make and save a chart using data collected</p> <p>say what kind of information could be used to help investigate a question</p>	<p>I can tell you why I use technology in the classroom.</p> <p>I can tell you why I use technology in my home and community.</p> <p>I am starting to understand that other people have created the information I use.</p> <p>I can identify benefits of using technology including finding information, creating and communicating.</p> <p>I can talk about the differences between the Internet and things in the physical world.</p>	<p>explain passwords and personal information needs to be kept private</p> <p>describe the things that happen online that must be told to an adult</p> <p>talk about why people should go online for a short amount of time</p> <p>talk about why it is important to be kind and polite online and in real life</p> <p>know that not everyone is who they say they are on the Internet</p> <p>recognise an age appropriate website</p>



## Computing progression of skills

### Year 3

Computer Science (CS)	Information Technology (IT)	Digital Literacy (DL)	e-Safety (DL)
break an open-ended problem up into smaller parts	create different effects with different technology tools	save and retrieve work on the Internet, the school network or a device	talk about what makes a secure password and why they are important
put programming commands into a sequence to achieve a specific outcome	combine a mixture of text, graphics and sound to share ideas and learning	talk about the parts of a computer and internet	protect personal information when doing different things online
keep testing a program and can recognise when to debug it	use appropriate keyboard commands to amend text on a device	tell you ways to communicate with others online	use the safety features of websites as well as reporting concerns to an adult
use repeat commands	evaluate work and improve its effectiveness.	describe the World Wide Web as the part of the Internet that contains websites	recognise websites and games appropriate for my age
describe the algorithm needed for a simple task	use an appropriate tool to share work online	use search tools to find and use an appropriate website	make good choices about how long is spent online
detect a problem in an algorithm which could result in unsuccessful programming		think about images used online	post positive comments online.



## Computing progression of skills

### Year 4

Computer Science (CS)	Information Technology (IT)	Digital Literacy (DL)	e-Safety (DL)
<p>use logical thinking to solve an open-ended problem by breaking it up into smaller parts</p> <p>use an efficient procedure to simplify a program</p> <p>know that lots of testing of a program is needed while being put together</p> <p>use a variety of tools to create a program.</p> <p>recognise an error in a program and debug it.</p> <p>recognise that an algorithm will help to sequence more complex programs</p> <p>recognise that using algorithms will also help solve problems in other learning such as Maths, Science and Design and Technology.</p>	<p>use photos, video and sound to create an atmosphere when presenting to different audiences</p> <p>confident to explore new media to extend what can be achieved</p> <p>change the appearance of text to increase its effectiveness</p> <p>create, modify and present documents for a particular purpose</p> <p>use a keyboard confidently and make use of a spellchecker to write and review work</p> <p>give constructive feedback to friends to help them improve their work and refine own work</p>	<p>say whether a resource used is on the Internet, the school network or a device</p> <p>identify key words to use when searching safely on the World Wide Web</p> <p>think about the reliability of information read on the World Wide Web</p> <p>say how to check who owns photos, text and clipart</p> <p>describe the different parts of a webpage</p> <p>talk about the way search results are selected and ranked</p>	<p>protect passwords and other personal information</p> <p>talk about the ways to stay protected online</p> <p>use the safety features of websites as well as reporting concerns to an adult</p> <p>know that anything posted online can be seen by others</p> <p>choose websites and games that are appropriate for age</p> <p>help friends make good choices about the time spent online</p> <p>ask an adult before downloading files and games from the Internet</p> <p>talk about why a trusted adult needs to be asked before downloading files and games from the Internet.</p> <p>comment positively and respectfully online</p>



# Computing progression of skills

## Year 5

Computer Science (CS)	Information Technology (IT)	Digital Literacy (DL)	e-Safety (DL)
<p>decompose a problem into smaller parts to design an algorithm for a specific outcome and use this to write a program</p> <p>refine a procedure using repeat commands to improve a program</p> <p>use a variable to increase programming possibilities</p> <p>change an input to a program to achieve a different output</p> <p>use 'if' and 'then' commands to select an action</p> <p>talk about how a computer model can provide information about a physical system</p> <p>use logical reasoning to detect and debug mistakes in a program</p> <p>use logical thinking, imagination and creativity to extend a program</p>	<p>use text, photo, sound and video editing tools to refine work</p> <p>use previously developed skills to create content using unfamiliar technology</p> <p>select, use and combine the appropriate technology tools to create effects that will have an impact on others</p> <p>select an appropriate online or offline tool to create and share ideas</p> <p>review and improve own work and support others to improve their work</p>	<p>use different online communication tools for different purposes</p> <p>use a search engine to find appropriate information and check its reliability</p> <p>recognise and evaluate different types of information found on the World Wide Web</p> <p>find out who the information on a webpage belongs to</p>	<p>protect passwords and other personal information</p> <p>explain why protection is needed online and the best ways to do this, including reporting concerns to an adult</p> <p>know that anything posted online can be seen, used and may affect others</p> <p>talk about the dangers of spending too long online or playing a game</p> <p>explain the importance of communicating kindly and respectfully</p> <p>discuss the importance of choosing an age-appropriate website or game</p> <p>understand that not all resources on the Internet are true</p>



# Computing progression of skills

## Year 6

Computer Science (CS)	Information Technology (IT)	Digital Literacy (DL)	e-Safety (DL)
<p>deconstruct a problem into smaller steps, recognising similarities to solutions used before</p> <p>explain and program each of the steps in my algorithm</p> <p>evaluate the effectiveness and efficiency of an algorithm while continually testing the programming of that algorithm</p> <p>recognise when variables are needed to achieve a required output</p> <p>use a variable and operators to stop a program</p> <p>use different inputs (including sensors) to control a device or onscreen action and predict what will happen</p> <p>use logical reasoning to detect and correct errors in a algorithms and programs</p>	<p>use a spreadsheet and database to collect and record data</p> <p>present data in an appropriate way</p> <p>talk about audience, atmosphere and structure when planning a particular outcome</p> <p>confidently identify the potential of unfamiliar technology to increase my creativity</p> <p>combine a range of media, recognising the contribution of each to achieve a particular outcome</p> <p>explain why particular online tools are selected for specific purposes</p> <p>be digitally discerning when evaluating the effectiveness own work and the work of others</p>	<p>tell you the Internet services needed for different purposes</p> <p>describe how information is transported on the Internet</p> <p>check the reliability of a website</p> <p>talk about copyright and acknowledge the sources of information found online</p>	<p>protect passwords and other personal information</p> <p>explain the consequences of sharing too much online</p> <p>support friends to protect themselves and make good choices online, including reporting concerns to an adult</p> <p>explain the consequences of spending too much time online or on a game</p> <p>explain the consequences of not communicating kindly and respectfully</p> <p>explain why a computer or device needs to be protected from harm</p>