

Computing Progression Map

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
COMPUTER SCIENCE (ALGORITHMS AND PROGRAMMING)							
1	Know that an instruction tells you what to do. Follow instructions (symbolic/ verbal) involving several ideas or actions.	Use forwards/backwards/left/right to create a program to achieve a single planned outcome (e.g. <i>direct a character or object through a maze.</i>) 1.5/1.7/2.1	Use coding commands (such as <i>repeat, input, output, event, collision detection, timer</i>) to create a program with more than one output.	Write a program incorporating variables, repetition commands and 'if' statements (e.g. <i>to change a characters' actions.</i>) 3.1/3.3/4.1/4.5	Write a program incorporating variables (e.g. <i>to show a count up/down timer on screen</i>), 'if/else' statements and response to user keyboard inputs.	Write a program that includes text variables and can set and change a variables' values. 5.1/5.5/6.1/6.5	Use functions in my programming and explain how I organised code in a program into functions to make it easier to read.
2	Begin to create my own programme to make beebots/programmable toys move.	Test a program and say why it did not work. 1.4/1.5/1.7/2.1	Identify and correct errors in a simple program I have created and know this is called 'debugging'.	Identify, explain and correct errors in a simple program, including ones I have not created, and know this is called 'debugging'.	Explain what steps are needed to be followed in order to de-bug my own or another's program.	Debug when things do not run as expected by breaking the program into smaller parts	Debug when things do not run as expected
3	Give instructions (sequencing symbols/ verbally) for appropriate sequence e.g. for an everyday activity.	Explain that a computer (or other digital device e.g. floor robot) makes something happen by following precise instructions in sequence. 1.4/1.5/1.7/2.1	Explain that a digital device makes something happen by following an algorithm (a clear set of instructions in a precise sequence) and that the order of the instructions affects the outcome.	Select an appropriate algorithm when making a simulation of an event on the computer. 3.1/4.1	Create an algorithm modelling the sequence of a simple event. 4.1	Analyse an algorithm I have created in order to improve it e.g. by replacing some repetition commands with loops 5.1/5.5/6.1/6.5	Adapt an existing algorithm in order to make it unique to my own requirements e.g. <i>to make my own text based adventure</i>
INFORMATION TECHNOLOGY							
4	Begin to save documents with decreasing support	Follow instructions in order to save and retrieve digital work I have created in databases, spreadsheets, text and art packages. 1.1,1.3; 1.6; 1.8 2.3-8	Save and retrieve digital work I have created in databases, spreadsheets, text and art packages. 1.1,1.3; 1.6; 1.8# 2.3-8	Save, retrieve, edit, rename and overwrite digital work I have created in databases, spreadsheets, text and art packages.		Create and name a folder for saving, retrieving and manipulating digital work I have created online and in databases, spreadsheets, text and art packages.	
5: Presentations	Explore and use painting programmes Develop mouse control Edit artwork on a computer/tablet.	Use publisher to present my work and add appropriate clip art 1.1,3,6,8 2.6,7,8	Use publisher to present my work and include appropriate clip-art, photos and data in tables.	Use powerpoint to create a simple presentation with a title slide and a picture, graph or sound inserted from the Internet or personal files.	Use powerpoint to create a presentation which includes pictures, text, graphs, tables, sound and hyperlinks	Use powerpoint to create a presentation which includes pictures, text, graphs, tables, sound and hyperlinks and effective slide transitions	Use powerpoint to create a presentation which includes pictures, text, graphs, tables, sound and hyperlinks, effective slide transitions and animators notes.

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6: Data	<p>Begin to input information into a computer using a keyboard.</p> <p>Begin to input information into a table.</p>	Use a data package to sort information 2.4	Use a data package to collect, organise and present data and answer questions about the data collected.	Enter data into a graph or branching database and answer questions from it	Choose and create an appropriate graphical format to present the results of an investigation or other data I have collected.	Enter information into a database and can search a database in order to answer questions	Enter information into a database and can sort and filter information in order to answer questions
7: Spreadsheets		Add and use the count tool to count items in a spreadsheet.	Use totalling tools in a spreadsheet to automatically total rows and columns.	Use the 'more than', 'less than' and 'equals' tools in a spreadsheet to compare different numbers and help to work out solutions to mathematical problems.	Add a formula to a cell in a spreadsheet to automatically make a calculation in that cell.	Use text variables in a spreadsheet to create simple formulae to perform calculations.	Use a spreadsheet to model a real-life situation and come up with solutions that can be practically applied.
8: Graphics	<p>Explore art programmes to create pictures</p> <p>Edit work using rubbers & able to change colours</p>	Use various tools such as brushes, pens, rubber, stamps and shapes to create my work.	Select and use the most appropriate tool to create my work such as brushes, pens, rubber, stamps, shapes or lines and pattern templates	Use the print screen function to capture an image from the internet and combine images from cameras or the internet for a purpose.	Edit pictures using a range of tools in a graphics program e.g. select certain areas of an image and resize, rotate and invert the image.	<p>Create and edit designs using a 3D modelling package e.g. by moving the points to alter the shape of the model while still maintaining its form or by changing the viewpoint to gain insight into the look of my model from different angles</p> <p>Split this if find further opportunity in LTP to create plans.</p>	
9: Text	<p>Begin to use keyboards to input information</p> <p>Recognise letter sounds on a keyboard. Begin to use uppercase/ lowercase lettering.</p>	Change the colour, font and size of words	Use copy and paste and use highlighting to change the colour font and size of individual words or blocks of text.	Use the bold, italic and underline tools	Align text left, right and centre and can select appropriate font size and type for the text created.	Use a text box to change the position and direction of text and can use two hands to type the letters on a keyboard.	Explain what is meant by 'top row', 'home row', 'bottom row' and 'space bar' and can type a series of words using the correct fingering with speed and accuracy.
10: Internet research	<p>Understand how information can be retrieved from computers/technology</p> <p>Use online pictures to find information.</p>	Navigate a website by clicking on the arrows, menus and hyperlinks.	Use a search engine to complete simple Internet searches using keywords/search terms provided.	Think of and use search terms/keywords linked with questions I wish to answer to locate information on the Internet.	Think of and use search terms/keywords to locate information or refine searches on the Internet and add websites to a 'favourites' list	Use more than one strategy for searching information such as key words, minus key, 'or' and 'not' searches and the media task bar.	Select the most efficient search strategy for the search required and use strategies to check the validity of information (e.g. cross-referencing to books or other sites; using knowledge of domain names).
DIGITAL LITERACY (INCLUDING E-SAFETY)							
11	<p>Begin to login to a programme using a 2-digit password</p> <p>Beginning to understand online safety e.g. not</p>	Use a given password to access a digital device and know not to share it with others.	Use passwords I have created on digital devices and know some benefits of using them.	Create and use a secure password and say what makes it secure.	Create and use a secure password and know the outcomes of not keeping passwords private.	Create and change secure passwords in order to access and protect digital information including online	Create and change secure passwords in order to access and protect digital information including online and know the

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	sharing passwords.						pros/cons of using password software.
12			Recognise an e-mail address and open and send an e-mail.	Add an attachment to an e-mail.	Add an attachment to an e-mail and use an address book to e-mail recipients.	Download and save files from an e-mail attachment and e-mail more than one person using the address bar or CC bar.	Choose when it is appropriate to use CC or BCC when sending or replying to e-mails.
13	<p>Ensure that adults are aware when I am online.</p> <p>Begin to know not to share information with others online e.g. names, passwords, birthdays.</p>	Know that my name, birthday, address and photograph are personal information and that I should check with a trusted adult before sharing them if asked.	Give examples of different forms of personal information and can say why it is important to ask for permission before sharing it.	Give examples of direct personal information (e.g. name, address, phone number, e-mail, photos, videos etc) and indirect personal information (e.g. pictures/videos in school uniform or with recognisable landmarks, names of clubs I belong to etc) and can explain why I should check before sharing it.	Know that any personal information I put online can be seen and used by others and that once it is online, how it is used can be out of my control.	Know that any personal information I put online can be seen by others and can give some examples of how the information might be used.	Know that I am responsible for information that I choose to share online and can explain different ways it may impact on myself and/or others.
14	Begin to look at websites and begin to know what to do if something upsets me.	Know that some websites are good for me and others are not and that making sure a trusted adult knows what I am doing online helps me to stay safe.	Identify trusted adults at home or at school to go to for help if something makes me uncomfortable, upset or frightened when I am online.	Explain why privacy settings are important for online safety and know to report immediately concerns about content or contact to a trusted adult.	Recognise acceptable and unacceptable behavior online and can find and use 'report' and 'flag' buttons in commonly used sites to report concerns about content or contact.	Give examples of online risks and how to minimize the occurrence or impact of these.	Discuss the risks and rewards of using Internet communication tools and give examples of how to protect myself and the devices I use.