The Pines School
Computing Assessment Framework
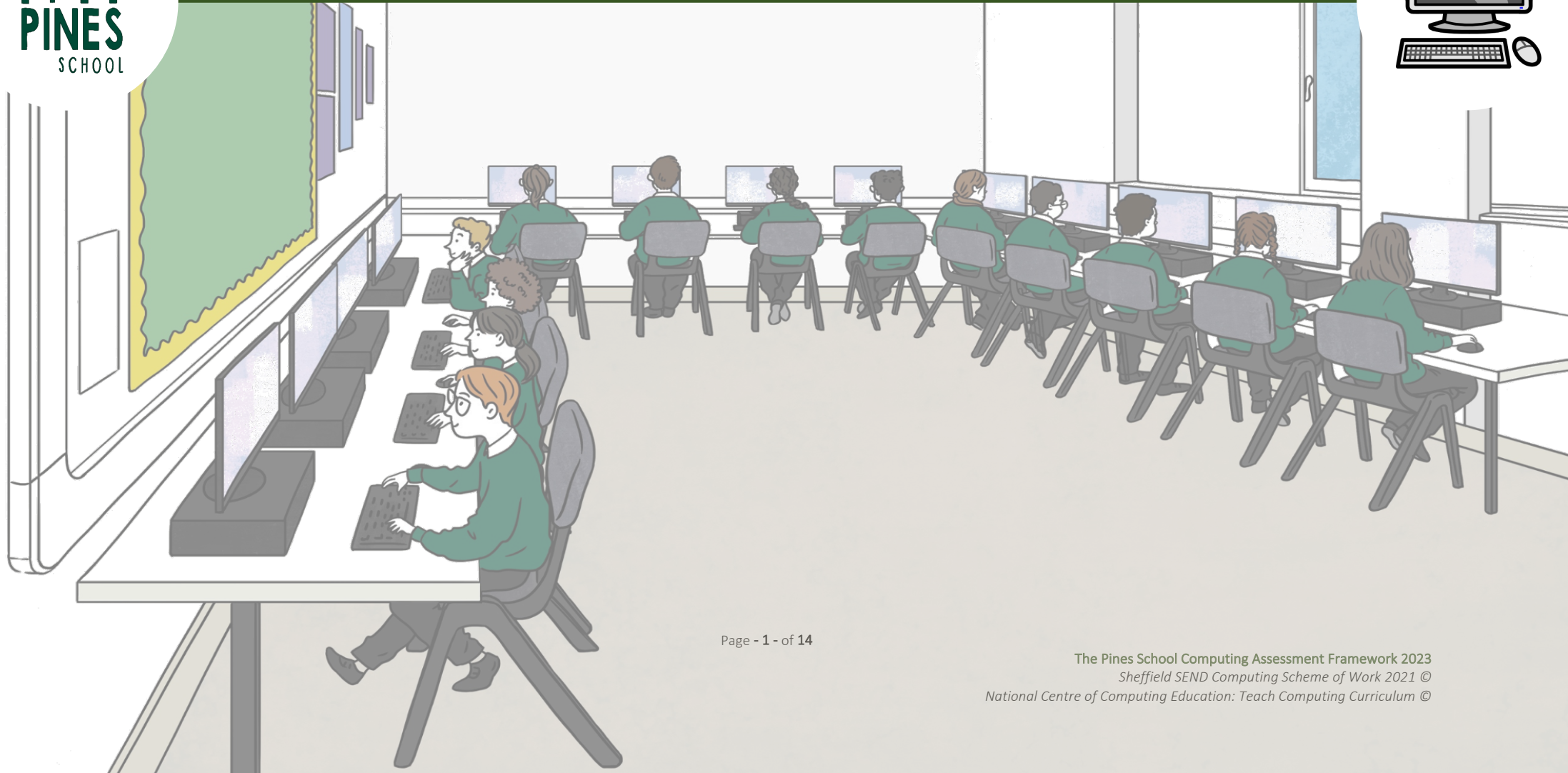
LEARNING PATHWAYS KEY:			
Reaching Out PNC 5-6 Stage 1-2	Stepping On PNC 7-8 Stage 3-4	Climbing Up KS1 / NC Year 1-2 Stage 5-6	Taking Off KS2 / NC Year 3-6 Stage 7-9
For students who are ready to start engaging with some subject-specific learning, but need support to access activities. Equates roughly to the old P5-6 levels.	For students working at the pre-key stage 1 standards, with greater independence in completing activities. Equates roughly to the old P7-8 levels.	For students completing work at Key Stage 1 level of the National Curriculum.	For students completing work at Key Stage 2 level of the National Curriculum.

Reaching Out			
Pre-National Curriculum: PNC 5			
Stage 1			
What is a Computer? **Key Skills**	**Communication: Multimedia**	**Communication: Data**	**Programming & Algorithms**
1. I can explore technology. 2. I can use different digital devices, e.g., computer, camera, tablet. 3. I can access content using an appropriate access device.	1. I can access a range of multimedia content. 2. I can demonstrate a preference for a piece of content from a selection. 3. I can use technology to explore digital content. 4. I can create very simple digital content, e.g., make marks in an art package.	1. I can access content in a range of formats, e.g., image, video, audio. 2. I can identify objects of a single category e.g., colour. 3. I can indicate 1 or lots of an object represented in a digital resource.	1. I can make something happen using technology. 2. I can expect an outcome from an action when using technology. 3. I can repeat an action to trigger a specific outcome.

Online Safety & Digital Literacy
1. I can access digital content online, e.g., images, video, music.

Reaching Out Pre-National Curriculum: PNC 6 Stage 2			
What is a Computer? Key Skills	**Communication: Multimedia**	**Communication: Data**	**Programming & Algorithms**
1. I can access content using an appropriate access device. 2. I can recognise different digital devices, e.g., computer, camera, tablet. 3. I can recognise that different device are used for different purposes, e.g., camera to take photo. 4. I can choose appropriate technology from a limited selection to fulfil a familiar task, e.g., to watch video.	1. I can create simple digital content e.g., digital art. 2. I can operate a digital device with support to fulfil a task, e.g., take a photograph. 3. I know that you can control multimedia content, e.g., play and stop video and audio. 4. I can choose media from a selection for a given purpose.	1. I can sort familiar objects into 2 given categories. 2. I can count up to 3 objects represented in a digital resource.	1. I can control technology for a purpose e.g., move a remote control car to a destination. 2. I can recognise the success or failure of an action when using technology. 3. I can follow an instruction to control a device.

Online Safety & Digital Literacy
1. I can choose content to watch or listen to on a familiar web page.

Stepping On Pre-National Curriculum: PNC 7 Stage 3			
What is a Computer? **Key Skills**	**Communication: Multimedia**	**Communication: Data**	**Programming & Algorithms**
1. I can recognise that you can access content on a digital device. 2. I can use a mouse, touchscreen or appropriate access device to target and select options on screen. 3. I can recognise and use a range of digital devices. 4. I can recognise commonly used parts of a computer, e.g., mouse, screen, keyboard.	1. I can choose media from a selection to convey information, e.g., image for a poster. 2. I can operate a digital device independently to fulfil a task. 3. I can select basic options in a familiar application, e.g., colour of pen.	1. I can recognise content in a range of formats e.g., text, image, video, audio. 2. I can sort familiar objects into 2 or more categories. 3. I can answer basic questions about information displayed in images, e.g., more or less.	1. I can follow simple instructions to control a digital device. 2. I can recognise that we control computers. 3. I can identify the steps of a known task.

Online Safety & Digital Literacy
1. I know that some online content is inappropriate. 2. I know that some information is private.

<table>
<tr><td colspan="4" align="center">**Stepping On**
Pre-National Curriculum: PNC 8
Stage 4</td></tr>
<tr><td>**What is a Computer?
Key Skills**</td><td>**Communication: Multimedia**</td><td>**Communication: Data**</td><td>**Programming & Algorithms**</td></tr>
<tr>
<td>
1. I can recognise the basic parts of a computer, e.g., mouse, screen, keyboard.
2. I can recognise basic parts of a keyboard, e.g., spacebar, numbers and letters (if used).
3. I know that you can access the same content on different devices.
4. I can recognise that information and media can be stored on a digital device, e.g., they ask to view a photo that has been taken on a tablet.
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1. I can select basic options in a familiar application to change appearance of media, e.g., font size, pen style.
2. I can choose a digital device from a selection to complete a specific task.
3. I can present information using appropriate software with support.
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<td>
1. I can identify text, image, video and audio content.
2. I can collect simple date (e.g., likes/dislikes) on a topic.
3. I can present simple data using images, e.g., number of animals poster.
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<td>
1. I can try alternative approaches to achieve a goal when using technology.
2. Input a short sequence of instructions to control a device e.g., Bee-Bot.
3. I can recognise that we control computers by giving them instructions.
4. I can order two or three steps of a known task.
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Online Safety & Digital Literacy
1. I can recognise inappropriate content and know to tell an appropriate adult.
2. I can describe what makes a good friend.
3. I know that some information is private and we shouldn't share it with everyone.

Climbing Up National Curriculum: Year 1 Stage 5			
What is a Computer? **Key Skills**	**Presenting Information & Multimedia**	**Data**	**Programming & Algorithms**
1. I can recognise a range of digital devices. 2. I can select a digital device to fulfil a specific task, e.g., to take a photo. 3. I can name a range of digital devices, e.g., laptop, phone, games console. 4. I can log on to the school computer / unlock the school tablet with support. 5. I can identify the basic parts of a computer, e.g., mouse, keyboard, screen. 6. I can use a suitable access device (mouse, keyboard, touchscreen, switch) to access and control an activity on a computer. 7. I can open key applications independently. 8. I can save and open files with support. 9. I can add an image to a document from a given folder/source with support.	1. I can create digital content, e.g., digital art. 2. I can choose media from a selection (e.g., images, video, sound) to present information on a topic. 3. I can recognise that you can find out information from a website. 4. I can recognise that you can edit digital content to change its appearance. 5. I can select basic tools/options to change the appearance of digital content, e.g., filter on an image / font / size of paintbrush. 6. I can combine media with support to present information, e.g., text and images.	1. I can recognise different forms of digital content, i.e., text, image, video and audio. 2. I can collect simple data (e.g., likes/dislikes) on a topic. 3. I can present simple data using images, e.g., number of animals. 4. I can recognise charts and pictograms and why we use them. 5. I can explain information shown in a simple chart or pictogram. 6. I can modify simple charts/pictograms, e.g., add title, item or labels. 7. I can identify the key features of a chart or pictogram. 8. I can collect data on a topic (eye colour, pets etc.) and present in a pictogram or chart.	1. I can recognise that computers don't have a brain. 2. I can explain that we control computers by giving hem instructions. 3. I can create a simple program e.g., to control a floor robot. 4. I can create a simple algorithm. 5. I can predict the outcome of a simple algorithm or program. 6. I can explain what an algorithm is – a sequence of instructions to make something happen. 7. I can recognise that the order of instructions in an algorithm is important. 8. I can debug an error in a simple algorithm or program e.g., for a floor robot.

Digital Literacy
1. I can use a simple password when logging on, where relevant.
2. I can explain why we use passwords.
3. I can recognise examples of personal information, e.g., name, image.
4. I know who to tell if concerned about content or contact online.
5. I can recognise that digital content belongs to the person who create it.
6. I can talk about their use of technology at home.

Climbing Up
National Curriculum: Year 2
Stage 6

What is a Computer? Key Skills	Presenting Information & Multimedia	Data	Programming & Algorithms
1. I can recognise what a computer is (input > process > output).	1. I can create simple digital content for a purpose, e.g., digital art.	1. I can identify different forms of digital content, i.e., text, image, video and audio.	1. I can explain that computers have no intelligence and we have to program them to do things.
2. I can recognise that a range of digital devices contain computers, e.g., phone, games console, smart speaker.	2. I can recognise that we can use technology to record and playback audio or take and view photographs.	2. I can recognise charts, pictograms and branching databases, and why we use them.	2. I can create a program with multiple steps e.g., to control a floor robot.
3. I can explain what the basic parts of a computer are used for.	3. I can apply edits to digital content to achieve a particular effect, e.g., emphasise part of a text.	3. I can identify an object using a branching database.	3. I can predict the outcome of an algorithm or program with multiple steps.
4. I can identify and use input devices, e.g., mouse, keyboard, and output devices, e.g., speakers, screen.	4. I can present ideas and information by combining media, e.g., text and images.	4. I can recognise an error in a branching database.	4. I can recognise that the instructions in an algorithm need to be clear and unambiguous.
5. I can open key applications independently.	5. I can explain that you can search for information on the internet.	5. I can create a branching database using pre-prepared images and questions.	5. I can identify and correct errors in a given algorithm or program, and recognise the term debugging.
6. I can save and open files to/from a given folder.	6. I can plan out digital content, e.g., a simple sketch or storyboard.	6. I can identify the features of a good question in a branching database.	6. I can explain what an algorithm is, and that when inputted on a computer it is called a program.
7. I can add an image to a document from a given folder/source.	7. I can identify the common features of digital content, e.g., title, images.	7. I can independently plan out and create a branching database.	7. I can plan out a program by creating an algorithm, and evaluate its success.
8. I can resize an image in a document.	8. I can recognise that we can use different types of media to convey information, e.g., text, image, audio, video.	8. I can evaluate a given branching database and suggest improvements.	
9. I can highlight text and use arrow keys.			
10. I can capture media independently (e.g., take photos, record audio).			

Digital Literacy

1. I can remember a simple password to log onto the computer or a website.
2. I can identify rules for acceptable use of technology in school.
3. I can recognise what personal information is and the need to keep it private.
4. I can recognise that spending a lot of time in front of a screen can be unhealthy.
5. I can recognise that some information found online may not be true.

Taking Off National Curriculum: Year 3 Stage 7			
What is a Computer? **Key Skills**	**Presenting Information & Multimedia**	**Data**	**Programming & Algorithms**
1. I can describe what a computer is (input > process > output). 2. I can explain the difference between input and output devices on a computer. 3. I can know where to save and open files (e.g., in shared folder). 4. I can save files with appropriate names. 5. I can use a keyboard effectively to type in text. 6. I can use left-, right- and double-click on the mouse. 7. I can add an image to a document from the internet. 8. I can resize and move an image in a document. 9. I can use a search engine to find simple information. 10. I can recognise that school computers are connected.	1. I can present ideas and information by combining media independently, e.g., text and images. 2. I can design and create simple digital content for a purpose/audience, e.g., poster. 3. I can edit digital content to improve it, e.g., resize text. 4. I can identify the features of a good piece of digital content. 5. I can explain why we use technology to create digital content. 6. I can recognise why we use different types of media to convey information, e.g., text, image, audio, video.	1. I can recognise charts, pictograms and databases, and why we use them. 2. I can present information using a suitable chart. 3. I can explore a record card database to find out information. 4. I can use filters in a database to find out specific information. 5. I can name the key parts of a database, e.g., record, field, search. 6. I can answer questions about information in a database. 7. I can name some benefits of using a computer to create charts and databases. 8. I can recognise that search engines store information in databases.	1. I can predict the outcome of a block or text- based program (Scratch/Logo). 2. I can successfully modify an existing program, e.g., change background, number of times things happen. 3. I can identify repeated steps in a program or algorithm. 4. I can create examples of algorithms containing count-controlled loops. 5. I can use a count-controlled loop (e.g., repeat 3 times) to make a program more efficient. 6. I can recognise that we can create an algorithm to help plan out a program. 7. I can recognise a forever loop in a program or algorithm. 8. I can use a forever loop in a program to keep something happening. 9. I can identify errors in a block or text-based program and correct them. 10. I can recognise that different inputs can be used to control a program.

Digital Literacy
1. I can explain why we need to keep our password safe.
2. I can recognise that digital content belongs to the person who first created it, but we can give permission for others to use it.
3. I can recognise when to share personal information and when not to.
4. I can recognise that some people lie about who they are online.
5. I am aware that games and films have age ratings.

Taking Off National Curriculum: Year 4 Stage 8			
What is a Computer? **Key Skills**	**Presenting Information & Multimedia**	**Data**	**Programming & Algorithms**
1. I can recognise that you can organise files using folders. 2. I can explain what a good file name would look like. 3. I can delete and move files. 4. I can use key parts of a keyboard effectively, e.g., shift, arrow keys, delete). 5. I know how to copy and paste text or images in a document. 6. I can crop an image and apply simple filters. 7. I can use a search engine to find specific information. 8. I can recognise that school computers are connected together on a network.	1. I can collect, organise and present information using a range of media. 2. I can design and create digital content for a specific purpose, e.g., poster, animation. 3. I can edit digital content to improve it according to feedback. 4. I can identify the features of a good piece of digital content and apply these in own design. 5. I can explain the benefits of using technology to present information. 6. I can know where to find copyright-free content, e.g., creative commons images. 7. I can collaborate with peers using online tools, e.g., blogs, Google Drive, Office 365, if available.	1. I can draw conclusions from information stored in a database, chart or table. 2. I can design a questionnaire and collect a range of data on a theme. 3. I can choose appropriate formats to present data to convey information. 4. I can recognise that school computers are connected together on a network. 5. I can recognise that the Internet is made up of computers and other digital devices connected together all around the world. 6. I know that you use a web browser to access information stored on the internet. 7. I can appreciate that you need to use specific software to work with video, images, audio etc.	1. I can create a program using a range of events/inputs to control what happens. 2. I can recognise that we can decompose a problem into smaller parts to help solve it. 3. I can explain when to use forever loops and count-controlled loops and use them in programs. 4. I can recognise selection in a program or algorithm. 5. I can use selection in algorithms in programs to alter what happens when a condition changes, e.g., if...then... 6. I can design a program for a purpose. Decompose into parts and create an algorithm for each one. 7. I can recognise common mistakes in programs and how to correct them.

Digital Literacy
1. I can remember and use an individual password. 2. I can recognise what kinds of websites are trustworthy sources of information. 3. I can recognise the benefits and risks of different apps and websites. 4. I can recognise that the media can portray groups of people differently. 5. I can rate a game or film they have made and explain their rating.

Taking Off			
National Curriculum: Year 5			
Stage 9			
What is a Computer? **Key Skills**	**Presenting Information & Multimedia**	**Data**	**Programming & Algorithms**
1. I can type using fingers on both hands. 2. I can use common keyboard shortcuts, e.g., ctrl C (copy), ctrl V (paste). 3. I can explain what makes a strong password. 4. I can use folders to organise files. 5. I know how to mute and unmute audio on a computer or tablet. 6. I can recognise that there is more than one search engine, and they may produce different results. 7. I can use a search engine effectively to find information and images. 8. I can know how to search for an application on a computer/tablet.	1. I can identify and use appropriate hardware and software to fulfil a specific task. 2. I can remix and edit a range of existing and their own media to create content. 3. I can consider the audience when designing and creating digital content. 4. I can recognise the benefits of using technology to collaborate with others. 5. I can identify success criteria for creating digital content for a given purpose and audience. 6. I can evaluate their own content against success criteria and make improvements accordingly.	1. I can explain the difference between data and information. 2. I can appreciate that different programs work with different types of data, e.g., text, number, video. 3. I can explain the difference between the Internet and the World Wide Web. 4. I know the difference between a search engine and a web browser. 5. I can explain the basics of how search engines work, and that different search engines may give different results. 6. I can perform complex searches for information using advanced settings in search engines. 7. I can recognise the benefits and risks of sharing data online.	1. I can name a range of sensors in physical systems. 2. I can recognise that different solutions may exist for the same problem. 3. I can predict what will happen in a program or algorithm when the input changes (e.g., sensor, data or event). 4. I can use two-way selection in programs and algorithms, i.e., if...then...else... 5. I can recognise variables in a program and what they do. 6. I can create programs including repeat until loops. 7. I can create and use simple variables, e.g., to keep score. 8. I can evaluate a program and make improvements to the code or design accordingly. 9. I can create an algorithm for a physical system containing a sensor.

Digital Literacy
1. I know where to find copyright free images and audio, and why this is important. 2. I can critically evaluate websites for reliability of information and authenticity. 3. I can demonstrate responsible use of online services and know a range of ways to report concerns.

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<tr><td colspan="4" align="center">**Taking Off**
National Curriculum: Year 6
Stage 10</td></tr>
<tr><td align="center">**What is a Computer?**
Key Skills</td><td align="center">Presenting Information & Multimedia</td><td align="center">Data</td><td align="center">Programming & Algorithms</td></tr>
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1. I can type efficiently using both hands.
2. I can use a range of keyboard shortcuts.
3. I can recognise that different devices may have different operating systems.
4. I can organise files effectively using folders and files names.
5. I can use the advanced search tools when using a search engine to find specific information and images.
6. I can explain the basic function of an operating system.
7. I can recognise common file types and extensions e.g., jpeg, png, doc, wav
8. I can recognise a range of Internet services, e.g., email, VOIP (e.g., Skype, FaceTime), World Wide Web, and what they do.
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1. I can select, combine and remix a range of media to create original content.
2. I can consider all steps of the design process when creating content (e.g., identify problem, plan, create, evaluate, share.)
3. I can identify the most effective tools to present information for a specific purpose.
4. I can explain the benefits of using technology to collaborate with others.
5. I can evaluate existing digital content in terms of effectiveness and design.
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1. I can recognise what a spreadsheet is and what it is used for.
2. I can explain the difference between physical, mobile and wireless networks.
3. I can use simple formulae in a spreadsheet to find out information from a set of data.
4. I can collect data for a purpose and plan out a spreadsheet to present it effectively, using relevant formulae.
5. I can produce graphs from data in a spreadsheet to answer a question.
6. I can analyse and evaluate data and information in a spreadsheet, chart or database.
7. I can recognise that poor quality data leads to unreliable results.
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1. I can design and program a physical computing system that uses sensors.
2. I can recognise and use procedures (sub-routines) in programs.
3. I can plan out a program in detail, including task, algorithm, code and execution level.
4. I can explain common errors in programs and how to fix them.
5. I can use nested selection statements in a program or algorithm effectively.
6. I can combine a variable with relational operators (< = >) to determine when a program changes, e.g., if score > 5, say "well done".
7. I can recognise key concepts (sequence, selection, repetition and variables) in a range of languages and contexts.
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Digital Literacy
1. I can explain what makes a strong password and why this is important at school and in the wider world.
2. I can explain how algorithms are used to track online activities with a view to targeting advertising and information.
3. I know that there are laws around the purchase of games; the production, sending and storage of images; what is written online; and around online gambling.