

YEAR FOUR

	AUTUMN ONE	AUTUMN TWO	SPRING ONE	SPRING TWO	SUMMER ONE	SUMMER TWO
AREA OF COMPUTING	1)Digital Literacy 2)Computer Science	Information Technology	1)Computer Science 2)Information Technology	Information Technology	Information Technology	Computer Science
UNIT	1)Online Safety (4) – 4.2 2)Hardware Investigator (2) - 4.8	1)Effective Search (3) – 4.7 2) Making Music (4) – 4.9	1)Logo (4) – 4.5 2) Animation (3) – 4.6	Writing for Different Audiences (5) – 4.4	Spreadsheets (6) – 4.3	Coding (6) – 4.1
PROGRAMMES	None	1) Internet Browsers 2) Busy Beats	1) Logo 2) 2Animate	2Email 2Connect 2DIY	2Calculate	2Code
NATIONAL CURRICULUM PROGRAMME OF STUDY COVERAGE	1) Use technology responsibly. Identify a range of ways to report concerns about contact. Identify a range of ways to report concerns about content. Recognise acceptable/unacceptable behaviour. Understand the opportunities computer networks offer for communication. 2) Work with various forms of input and output. Design and create programs that accomplish specific goals. Control or simulate physical systems. Use logical reasoning to detect and correct errors in programs. Use sequence, repetition* and selection* in programs	1)Use search technologies effectively. (4.7) Use and combine a variety of software to accomplish given goals. (4.9) Collect and present information. (4.9) Design and create content. (4.9) Collect and present data. (4.9) Use search technologies effectively. (4.9) Use and combine internet services. (4.9) Analyse and evaluate information. (4.9)	Work with various forms of input and output. (4.5) Design and create programs that accomplish specific goals. (4.5) Control or simulate physical systems. (4.5) Use logical reasoning to detect and correct errors in programs. (4.5) Use sequence, repetition* and selection* in programs. (4.5) Use and combine a variety of software to accomplish given goals. (4.6) Collect and present information. (4.6) Design and create content. (4.6) Collect and present data. (4.6) Use search technologies effectively. (4.6) Use and combine internet services. (4.6) Analyse and evaluate information. (4.6)	Use and combine a variety of software to accomplish given goals. Collect and present information. Design and create content. Collect and present data. Use search technologies effectively. Use and combine internet services. Analyse and evaluate information.	Use and combine a variety of software to accomplish given goals. Collect and present information. Design and create content. Collect and present data. Use search technologies effectively. Use and combine internet services. Analyse and evaluate information.	Work with various forms of input and output. Design and create programs that accomplish specific goals. Control or simulate physical systems. Use logical reasoning to detect and correct errors in programs. Use sequence, repetition* and selection* in programs

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AUTUMN ONE	DIGITAL LITERACY	ONLINE SAFETY	Units 4.2 Purple Mash
SKILLS (LANCASHIRE KEY LEARNING)		KNOWLEDGE AND UNDERSTANDING	
Use technology responsibly.		Know how to use technology responsibly. Understand the risks involved in arranging to meet and subsequently meeting anybody from the online world in the offline world. Know what images are suitable to include in an online profile and ensure that appropriate permissions have been obtained, e.g. copyright or asking friends before uploading their images.	
To create appropriate passwords.		Understand the need to keep personal information and passwords private in order to protect themselves when communicating online.	
Keep passwords and personal data safe.		Understand the need to keep personal information and passwords private in order to protect themselves when communicating online.	
Recognise acceptable behaviour.		Understand what acceptable online behaviour is. Understand the need for certain rules of conduct particularly when using live forms of communication, e.g. chats and forums in the school's VLE, taking turns to speak when video conferencing.	
Recognise unacceptable behaviour.		Understand that online actions can impact on other people. Understand the risks posed by the internet relating to contact e.g. bullying, grooming. Understand the risks posed by the internet relating to content e.g. violent and biased websites. Understand what unacceptable online behaviour is.	
Be able to create a 'secure' password, e.g. combination of letters, symbols and numbers in accordance with the school's e-Safety policies and procedures /AUP.		Know how to respond if asked for personal details or in the event of receiving unpleasant communications, e.g. saving the message and showing to a trusted adult –according to the school's eSafety policies and procedures /AUP. Understand the school's acceptable use policy. Recognise that cyber bullying is unacceptable and will be sanctioned according to the school's eSafety policies and procedures /AUP.	
Know what to do and who to tell if they discover something inappropriate or offensive on a website, at home and in school.		Know a range of ways to report concerns about contact. Know a range of ways to report concerns about content. Know how to report an incident of cyber bullying if and when it occurs, according to the school's eSafety policies and procedures /AUP. Know the school's rules for keeping safe online and be able to apply these beyond school.	

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AUTUMN ONE		COMPUTER SCIENCE	HARDWARE INVESTIGATORS	Units 4.8 Purple Mash
SKILLS (LANCASHIRE KEY LEARNING)		KNOWLEDGE AND UNDERSTANDING		
Use technology responsibly.		Know how to use technology responsibly.		
Use a range of digital tools to communicate, e.g. contributing to chats and/or discussion forums, in school's VLE, blog or text messages, making purposeful contributions to respond to another pupil's question or comment.		Understand that computer networks can be used for communication. Understand the opportunities computer networks offer for communication. Know a range of ways that computer networks can be used for communication.		

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AUTUMN TWO		INFORMATION TECHNOLOGY		EFFECTIVE SEARCH		Unit 4.7 Purple Mash	
SKILLS (LANCASHIRE KEY LEARNING)				KNOWLEDGE AND UNDERSTANDING			
Use a range of child friendly search engines to locate different media, e.g. text, images or sound.				Talk about and describe the process of finding specific information, noting any difficulties during the process and how these were overcome			
Evaluate different search engines and explain their choices in using these for different purposes.				Understand that information found as a result of a search can vary in relevance. Understand when and where the internet can be used as a research tool.			
Develop specific key questions and key words to search for information e.g., a question such as 'Where could we go on holiday?' would become a search for 'holiday destinations'.							
Use strategies to verify the accuracy and reliability of information, distinguishing between fact and opinion, e.g. cross checking with different websites or books.				Begin to recognise that anyone can author on the internet and sometimes web content is inaccurate or even offensive. Begin to understand the concept of copyright, e.g. what images, videos or sounds are legal and safe to use in their own work.			
Consider the effectiveness of key questions on search results and refine where necessary.				Understand that information found as a result of a search can vary in relevance.			
Use appropriate tools to save and retrieve accessed information, e.g. through the use of favourites, history, copy/paste and save as.							
Identify and cancel unwanted advertising, pop-ups and potentially malicious downloads by using the task manager function and NOT through buttons on the pop-up window, or the cross in the right hand corner.				Begin to recognise that anyone can author on the internet and sometimes web content is inaccurate or even offensive. Understand that provision is made in schools to filter			
Know how to temporarily allow useful pop-ups from a website.				Understand that provision is made in schools to filter			
Develop use of more advanced searching techniques, e.g., searching for a phrase using quotation marks to locate precise information.				Know that Boolean search 'operators' can effect web searches			
Choose the most appropriate search engine for a task, e.g., image search, search within a specific site or searching the wider internet.				Understand that information found as a result of a search can vary in relevance.			

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AUTUMN TWO	INFORMATION TECHNOLOGY	MAKING MUSIC	Unit 4.9 Purple Mash
SKILLS (LANCASHIRE KEY LEARNING)		KNOWLEDGE AND UNDERSTANDING	
Use a variety of devices and software to select, playback and record voice and other sounds.		Talk about software which allows the creation and manipulation of sound and music. Understand that many types of sounds can be combined in editing software.	
Locate and use sound files from online sources, e.g. Audio Networks, and other multimedia resources.		Understand how sound can be used in multimodal texts to create meaning and provide effects.	
Select, import and edit existing sound files in sound editing software, e.g., Audacity.		Understand how sound can be used in multimodal texts to create meaning and provide effects.	
Use editing tools to refine and improve outcomes and performances.			
Use recorded sound files in other software applications.			
Be able to share sound recordings with a wider audience.		Understand that copyright exists on most recorded music.	
Use music software to experiment with capturing, repeating and sequencing sound patterns.		Talk about software which allows the creation and manipulation of sound and music. Understand that many types of sounds can be combined in editing software.	
Use ICT to create and perform sounds or music that would otherwise not be possible in a live situation, e.g., editing a multi-part piece.		Talk about software which allows the creation and manipulation of sound and music. Understand that many types of sounds can be combined in editing software. Understand how sound can be used in multimodal texts to create meaning and provide effects.	

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SPRING ONE COMPUTER SCIENCE LOGO Unit 4.5 Purple Mash	
SKILLS (LANCASHIRE KEY LEARNING)	KNOWLEDGE AND UNDERSTANDING
Write programs that accomplish specific goals.	Understand how to plan and write programs that accomplish specific goals.
Read what a sequence in a program does.	Understand what the terms sequence, repetition and selection mean and know how to use them in programs.
Use sequence, repetition and selection in programs.	Understand what the terms sequence, repetition and selection mean and know how to use them in programs.
Plan, test and evaluate programs that solve specific problems using a screen turtle or other programmable devices.	Understand that planning is a vital part of designing programs. Understand that evaluation is a vital part of the design process.
Use sequences of commands to control physical devices using outputs.	Understand what the terms sequence, repetition and selection mean and know how to use them in programs. Understand how to control physical devices.
Demonstrate and develop a sense of audience when appropriate.	
Use and debug programs to control physical devices Note real or screen simulations could be used.	Know what debugging is and how it can be used to achieve specific goals.
Use logical reasoning to detect and correct errors in programs.	Know what debugging is and how it can be used to achieve specific goals.

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SPRING ONE	INFORMATION TECHNOLOGY	ANIMATION	Unit 4.6 Purple Mash
SKILLS (LANCASHIRE KEY LEARNING)		KNOWLEDGE AND UNDERSTANDING	
Acquire, store and retrieve images from cameras, scanners and the internet for a purpose.		Understand that internet services such as those that provide images, sounds, 3D representations and graphic software can be used to achieve specific goals and tasks.	
Select specific areas of an image, copy and paste to make repeating patterns.			
Be able to resize various elements in a graphics or paint package.			
Use various tools in paint packages or photo manipulation software to edit/change an image, e.g. applying different special effects.			
Use the 'print screen' function to capture images.			
Explore the use of graphics and paint packages to design and plan an idea.			
Use a range of devices to capture still and moving images for a purpose. These could include digital cameras, video cameras, iPads, microscopes and webcams.		Understand that a digital image can be captured from different devices and it can be stored and developed. Know how to take images appropriately and responsibly (See school's Acceptable Use Policy/AUP).	
Discuss and evaluate the quality of their own and others' captured images and make decisions whether to keep, delete or change them.		Begin to understand how images from different sources (stills, video, graphics, animation) are used to enhance a presentation or communicate an idea. Understand that planning is a vital part of the design process. Understand that evaluation and improvement are vital parts of the design process and ICT allows changes to be made quickly and efficiently.	
Independently download and save images and video onto a computer.		Know how to take images appropriately and responsibly (See school's Acceptable Use Policy/AUP).	
Independently upload images and movies from digital cameras and other devices to a computer and save in a relevant location.		Know how to take images appropriately and responsibly (See school's Acceptable Use Policy/AUP).	
Be able to 'resize' images (pixels, resolution, aspect ratio and dimensions).		Begin to understand the meaning of 'resizing' i.e. the differences between pixel size, resolution and image dimensions and the need to maintain aspect ratios.	
Be able to use basic tools in a software package to change images according to purpose.			
Import music, stills or video into video editing software for a specific project.			
Arrange, trim and cut clips to create a short film that conveys meaning.			
Add simple titles, credits and special effects, e.g .transitions.			
Storyboard, then use captured images to create a short animated sequence which communicates a specific idea.			

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SPRING TWO INFORMATION TECHNOLOGY WRITING FOR DIFFERENT AUDIENCES Unit 4.4 Purple Mash	
SKILLS (LANCASHIRE KEY LEARNING)	KNOWLEDGE AND UNDERSTANDING
Use different font sizes, colours and effects to communicate meaning for a given audience.	Consider how design features meet the needs of the audience e.g. poster, newspaper, menu, instructions.
Use various layouts, formatting, graphics and illustrations for different purposes or audiences.	Consider how design features meet the needs of the audience e.g. poster, newspaper, menu, instructions.
Use various software tools to complete a project, problem or task.	Understand that some tasks and problems require a variety of software tools to accomplish them.
Use page setup to select different page sizes and orientations.	
Recognise and use key layout and design features, e.g., text boxes, columns and borders.	
Insert and edit simple tables.	Understand that evaluation and improvement are vital parts of the design process and that ICT allows changes to be made quickly and efficiently. Demonstrate this through editing their work.

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SUMMER ONE	INFORMATION TECHNOLOGY	SPREADSHEETS	Unit 4.3 Purple Mash
SKILLS (LANCASHIRE KEY LEARNING)		KNOWLEDGE AND UNDERSTANDING	
Create frequency diagrams and graphs to answer questions.			
Based on the data collected, children should raise their own questions and translate them into search criteria that can be used to find answers to specific questions.			
Compare different charts and graphs, e.g., in tables, frequency diagrams, pictograms, bar charts, databases or spreadsheets and understand that different ones are used for different purposes.		Know that ICT can enable the creation of a variety of tables and graphs for different purposes.	
Select and use the most appropriate method to organise and present data.			
Use a pre-prepared spreadsheet to record data to answer questions and produce graphs.		Understand how computer simulations and spread-sheet models allow changes to be made quickly and easily in comparison with real life situations.	
Use a pre-prepared spreadsheet to explore simple number patterns, e.g. multiples.		Understand that changes made to one element of a spreadsheet can impact on other calculations	
Change the contents of cells in a pre-prepared spreadsheet and explore the consequences.		Understand that changes made to one element of a spreadsheet can impact on other calculations	

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SUMMER TWO COMPUTER SCIENCE CODING Unit 4.1 Purple Mash	
SKILLS (LANCASHIRE KEY LEARNING)	KNOWLEDGE AND UNDERSTANDING
Write programs that accomplish specific goals.	Understand how to plan and write programs that accomplish specific goals.
Read what a sequence in a program does.	Understand what the terms sequence, repetition and selection mean and know how to use them in programs.
Work with various forms of input.	Know a range of input devices and how they can be used. Know the difference between an input and an output. Understand that computers can collect data from various inputs.
Work with various forms of output.	Know a range of output devices and how they can be used. Know the difference between an input and an output.
Use logical reasoning to predict outputs.	
Design programs, showing skills needed to plan and implement a task/problem that accomplish specific goals.	Understand that planning is a vital part of designing programs.
Design programs showing appropriate planning and implementing skills.	Understand that planning is a vital part of designing programs.
Create programs that implement algorithms to achieve specific goals.	
Debug programs that accomplish specific goals through self and peer assessment.	Understand that evaluation is a vital part of the design process.
Use sequence, repetition and selection in programs.	Understand what the terms sequence, repetition and selection mean and know how to use them in programs.
Plan, test and evaluate programs that solve specific problems using a screen turtle or other programmable devices.	Understand that planning is a vital part of designing programs. Understand that evaluation is a vital part of the design process.
Use sequences of commands to control physical devices using outputs.	Understand how to control physical devices.
Demonstrate and develop a sense of audience when appropriate.	
Use and debug programs to control physical devices Note real or screen simulations could be used.	Know what debugging is and how it can be used to achieve specific goals. Be aware that everyday devices use sensors and outputs, e.g. automatic doors, traffic lights, intruder alarms.
Use logical reasoning to detect and correct errors in programs.	Understand how to use logical reasoning to detect errors in programs. Understand how to use logical reasoning to correct errors in programs.