



The national curriculum purpose of study for Computing:

A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science and design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

Aims:

The national curriculum for computing aims to ensure that all pupils:

- can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- are responsible, competent, confident and creative users of information and communication technology

Computing: School Statement of Intent:

All pupils at Fulwood and Cadley have the right to have rich, deep learning experiences that balance all the aspects of computing. With technology playing such a significant role in society today, we believe 'Computational thinking' is a skill that children must be taught if they are to be able to participate effectively and safely in this digital world and we understand that computer technology is an essential resource for supporting teaching and learning. The internet, and other digital and information technologies, open up opportunities for pupils and play an important role in their everyday lives.

Our aim is to ensure that children become digitally literate so that they are able to express themselves and develop their ideas through information and computer technology– at a level suitable for the future workplace and as active participants in a digital world.

We teach a curriculum that enables children to become effective users of technology who can:

- Understand and apply the essential principles and concepts of Computer Science, including logic, algorithms and data representation.
- Analyse problems in computational term, and have repeated practical experience of writing computer programs in order to solve such problems.
- Evaluate and apply information technology analytically to solve problems.
- Communicate ideas well by utilising appliances and devices throughout all areas of the curriculum.

		Autumn A	Project 1	Project 2	Project 3
		Project Evolve			
Class 3	Year 1	Health, well-being and lifestyle Copyright and ownership Privacy and security	Programming Animations in Scratch jr https://www.mrpict.com/uploads/1/8/7/2/18722690/year_1_programming_-_animations_in_scratchjr.pdf	Video creation Shadow puppets edu https://www.mrpict.com/uploads/1/8/7/2/18722690/year_1_video_-_shadow_puppets.pdf	Data handling Digital Pictograms https://www.mrpict.com/uploads/1/8/7/2/18722690/year_1_data_-_pictogram_diagram.pdf
Class 4	Year 1/2	Health, well-being and lifestyle Copyright and ownership Privacy and security Managing online information	Programming Animations in Scratch jr https://www.mrpict.com/uploads/1/8/7/2/18722690/year_1_programming_-_animations_in_scratchjr.pdf	Video creation Shadow puppets edu https://www.mrpict.com/uploads/1/8/7/2/18722690/year_1_video_-_shadow_puppets.pdf	Data handling Digital Pictograms https://www.mrpict.com/uploads/1/8/7/2/18722690/year_1_data_-_pictogram_diagram.pdf
Class 5	Year 2	Health, well-being and lifestyle Copyright and ownership Privacy and security Managing online information	Simple photo shopping https://www.mrpict.com/uploads/1/8/7/2/18722690/year_2_photo_-_photoshopping.pdf	My Robot Helper Scratch Jr https://www.mrpict.com/uploads/1/8/7/2/18722690/ks1_my_robot_helper.pdf	Questioning Unit 2.4 Purple Mash Link to animals in science
Class 6	Year 3	Copywrite and Ownership Managing online information	Data handling https://www.mrpict.com/uploads/1/8/7/2/18722690/year_3_data_-_story_graphs.pdf	Programming https://www.mrpict.com/uploads/1/8/7/2/18722690/ks2_animations_in_scratch.pdf	Presentation https://www.mrpict.com/uploads/1/8/7/2/18722690/year_3_presentation_-_book_creator_comic.pdf

Class 7	Year 3 /4	Copywrite and Ownership Managing online information Self-image and identity	Data handling https://www.mrpict.com/uploads/1/8/7/2/18722690/year_3_data_story_graphs.pdf	Programming https://www.mrpict.com/uploads/1/8/7/2/18722690/ks2_animations_in_scratch.pdf	Presentation https://www.mrpict.com/uploads/1/8/7/2/18722690/year_3_presentation_book_creator_comic.pdf
Class 8	Year 4	Copywrite and Ownership Self-image and identity	Data Handling- KS2 Y4 https://www.mrpict.com/uploads/1/8/7/2/18722690/year_4_data_online_questionnaire.pdf	Animation-KS2 (Y4) Year 5 Animation - Character Interviews (mrpict.com)	Purple Mash- Computing Coding: Unit 4.1
Class 9	Year 5	Copywrite and Ownership Self-image and identity Online relationships Online reputation	Programming https://www.mrpict.com/uploads/1/8/7/2/18722690/ks2_platform_game_in_scratch.pdf	Data handling https://www.mrpict.com/uploads/1/8/7/2/18722690/year_5_data_handling_google_sheets.pdf	Animation https://www.mrpict.com/uploads/1/8/7/2/18722690/year_5_animated_scene.pdf
Class 10	Year 5/6	Copywrite and Ownership Self-image and identity Online relationships Online reputation Managing online information Privacy and Security	Animation Adventure-Plotagon https://www.mrpict.com/uploads/1/8/7/2/18722690/year_6_animation_plotagon_animation.pdf	3-D lettering- Beetleblocks https://www.mrpict.com/uploads/1/8/7/2/18722690/ks2_3d_lettering.pdf	Programming- Microbit Sensors https://www.mrpict.com/uploads/1/8/7/2/18722690/year_6_programming_micro_bit.pdf
Class 11	Year 6	Copywrite and Ownership Self-image and identity Managing online information Online reputation Privacy and security	Animation Adventure-Plotagon https://www.mrpict.com/uploads/1/8/7/2/18722690/year_6_animation_plotagon_animation.pdf	3-D lettering- Beetleblocks https://www.mrpict.com/uploads/1/8/7/2/18722690/ks2_3d_lettering.pdf	Programming- Microbit Sensors https://www.mrpict.com/uploads/1/8/7/2/18722690/year_6_programming_micro_bit.pdf



Computing

Curriculum Overview of Sequential Knowledge

		<i>Project Evolve- Safe Use</i>	<i>Project 1</i>	<i>Project 2</i>	<i>Project 3</i>	<i>Cross-curricular D.A.R.E.S projects</i>
Class 3	Year 1	<p>NC: <i>Recognise common uses of information technology beyond school</i></p> <p><i>Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</i></p> <p>Health, well-being and lifestyle</p> <ul style="list-style-type: none"> To give examples of rules to keep myself safe when using technology both in and beyond the home. <p>Copyright and ownership</p>	<p>Programming Animations in Scratch jr</p> <p>NC: <i>Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</i></p> <p><i>Create and debug simple programs</i></p> <p><i>Use logical reasoning to predict the behaviour of simple programs</i></p> <p>Computational thinking</p>	<p>Video creation Shadow puppets edu</p> <p>NC: <i>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</i></p> <p><i>Recognise common uses of information technology beyond school</i></p> <p>Video creation</p> <ul style="list-style-type: none"> I know how to select images and record a voiceover. I know how to highlight and zoom into images as I record. <p>Key vocabulary</p>	<p>Data handling Digital Pictograms</p> <p>NC: <i>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</i></p> <p><i>Recognise common uses of information technology beyond school</i></p> <p>Data handling</p> <p>I know how to sort images or text into two or more categories on a digital device. I know how to collect data on a topic. I know how to create a tally chart and pictogram.</p>	<p>Cross-curricular D.A.R.E.S projects</p> <p>Photo and digital art- Robot avatars</p> <p>Animation- Stop motion animation</p> <p>Sound-podcasting</p> <p>Presentation-spider diagram</p> <p>Video creation-retelling a story</p>

		<ul style="list-style-type: none"> • To explain why work I create using technology belongs to me and say why. • To save my work under a suitable title / name so that others know it belongs to me (e.g. filename, name on content). • To understand that work created by others does not belong to me even if I save a copy. <p>Privacy and security</p> <ul style="list-style-type: none"> • To explain that passwords are used to protect information, accounts and devices. • To recognise more detailed examples of information that is personal to someone (e.g where someone lives and goes to school, family names). • To explain why it is important to always ask a trusted adult before sharing any personal information online, belonging to myself or others. 	<ul style="list-style-type: none"> • I understand what algorithms are • I know how to write simple algorithms • I understand the sequence of algorithms is important • I know how to debug simple algorithms <p>Key vocabulary</p> <p>Algorithm, sequence, order, bug, fix, precise, Digital, program, follow, code, bugs, fix, order, ScratchJr</p>	<p>Search, select, rearrange, title, text, record, pause, undo, zoom, pan, highlight.</p>	<p>I know how to record myself explaining what I have done and what it shows me.</p> <p>Key vocabulary</p> <p>Sort, background, data, emoji, image, edit, shape, table, resize, drag, save.</p>	
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<p>Class 4</p>	<p>Year 1 & 2</p>	<p>NC: <i>Recognise common uses of information technology beyond school</i></p> <p><i>Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</i></p> <p>Y1 Health, well-being and lifestyle</p> <ul style="list-style-type: none"> • To give examples of rules to keep myself safe when using technology both in and beyond the home. <p>Copyright and ownership</p> <ul style="list-style-type: none"> • To explain why work I create using technology belongs to me and say why. • To save my work under a suitable title / name so that others know it belongs to me (e.g. 	<p>Programming Animations in Scratch jr</p> <p>NC: <i>Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</i></p> <p><i>Create and debug simple programs</i> <i>Use logical reasoning to predict the behaviour of simple programs</i></p> <p>Computational thinking</p> <ul style="list-style-type: none"> • I understand what algorithms are • I know how to write simple algorithms • I understand the sequence of algorithms is important • I know how to debug simple algorithms <p>Key vocabulary</p>	<p>Video creation Shadow puppets edu</p> <p>NC: <i>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</i></p> <p><i>Recognise common uses of information technology beyond school</i></p> <p>Video creation</p> <ul style="list-style-type: none"> • I know how to select images and record a voiceover. • I know how to highlight and zoom into images as I record. <p>Key vocabulary</p> <p>Search, select, rearrange, title, text, record, pause, undo, zoom, pan, highlight.</p>	<p>Data handling Digital Pictograms</p> <p>NC: <i>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</i></p> <p><i>Recognise common uses of information technology beyond school</i></p> <p>Data handling</p> <p>I know how to sort images or text into two or more categories on a digital device. I know how to collect data on a topic. I know how to create a tally chart and pictogram. I know how to record myself explaining what I have done and what it shows me.</p> <p>Key vocabulary</p>	<p>Cross-curricular D.A.R.E.S projects</p> <p>Photo and digital art- Robot avatars</p> <p>Animation- Stop motion animation</p> <p>Sound- podcasting</p> <p>Presentation- spider diagram</p> <p>Video creation- retelling a story</p>
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		<p>filename, name on content).</p> <ul style="list-style-type: none">• To understand that work created by others does not belong to me even if I save a copy. <p>Privacy and security</p> <ul style="list-style-type: none">• To explain that passwords are used to protect information, accounts and devices.• To recognise more detailed examples of information that is personal to someone (e.g where someone lives and goes to school, family names). <p>- To explain why it is important to always ask a trusted adult before sharing any personal information online, belonging to myself or others.</p> <p>Y2</p> <p>Health, well-being and lifestyle</p> <ul style="list-style-type: none">• To recognise how to use information technology responsibly.• To recognise some of the choices that are made when using information technology.• To know how guidance and rules help	<p>Algorithm, sequence, order, bug, fix, precise, Digital, program, follow, code, bugs, fix, order, ScratchJr</p>		<p>Sort, background, data, emoji, image, edit, shape, table, resize, drag, save.</p>	
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me and know where to go to for help is concerned.

Self image and Identity

- I can give examples of issues online that might make someone feel sad, worried, uncomfortable or frightened; I can give examples of how they might get help. **Privacy and security**

Privacy and security

- To explain how passwords can be used to protect information, accounts and devices.
 - To explain and give examples of what is meant by 'private' and 'keeping things private'.
 - To describe and explain some rules for keeping personal information private (e.g. creating and protecting passwords).
 - To explain how some people may have devices in their homes connected to the internet and give examples (e.g. lights, fridges, toys, televisions).
- Managing online information
- To identify that some images are not real/fake

Class 5	Year 2	<p>NC: <i>Recognise common uses of information technology beyond school</i></p> <p><i>Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</i></p> <p>Y2</p> <p>Health, well-being and lifestyle</p> <ul style="list-style-type: none"> • To recognise how to use information technology responsibly. • To recognise some of the choices that are made when using information technology. • To know how guidance and rules help me and know where to go to for help is concerned. <p>Self image and Identity</p>	<p>Photography</p> <p>Simple photo shopping</p> <p>NC: <i>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</i></p> <p><i>Recognise common uses of information technology beyond school</i></p> <p>Presentations, web designs and eBook creation</p> <p>I know how to add voice labels to an image.</p> <p>Key vocabulary</p> <p>Upload, image, add, tag, label, audio, media, copy, save.</p>	<p>Programming</p> <p>My Robot Helper</p> <p>NC: <i>Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</i></p> <p><i>Create and debug simple programs</i></p> <p><i>Use logical reasoning to predict the behaviour of simple programs</i></p> <p>Computational thinking</p> <p>I know how to write algorithms for everyday tasks</p> <ul style="list-style-type: none"> • I know how to use logical reasoning to predict the outcome of algorithms • I understand decomposition is breaking objects/processes down • I know how to debug algorithms <p>Coding/programming</p>	<p>Questioning</p> <p>Unit 2.4</p> <p>NC: <i>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</i></p> <p><i>Recognise common uses of information technology beyond school</i></p> <p>To learn about data handling tools that can give more information than pictograms.</p> <ul style="list-style-type: none"> • To use yes/no questions to separate information. • To construct a binary tree to identify items. • To use 2Question (a binary tree database) to answer questions. • To use a database to answer more complex search questions. • To use the Search tool to find information. <p>Key vocabulary</p>	<p>Cross-curricular D.A.R.E.S projects</p> <p>Presentation- animal catchphrase quiz</p> <p>Presentations- Speech bubble pictures</p> <p>Photography and digital art- Robot avatars</p> <p>Video creation- Masking story time</p>
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		<ul style="list-style-type: none"> • I can give examples of issues online that might make someone feel sad, worried, uncomfortable or frightened; I can give examples of how they might get help. Privacy and security • To explain how passwords can be used to protect information, accounts and devices. • To explain and give examples of what is meant by 'private' and 'keeping things private'. • To describe and explain some rules for keeping personal information private (e.g. creating and protecting passwords). -To explain how some people may have devices in their homes connected to the internet and give examples (e.g. lights, fridges, toys, televisions). Managing online information • To identify that some images are not real/fake 		<p>I understand programs follow precise instructions</p> <ul style="list-style-type: none"> • I know how to create programs using different digital devices E.g. Bee Bot or ScratchJr on a tablet • I know how to debug programs of increasing complexity • I know how to use logical reasoning to predict the outcome of simple programs <p>Key vocabulary</p> <p>Decomposition, debug, reason, detail, breakdown, task, Precise, logical reasoning, prediction, debug, sequence</p>	<p>Action, alert, algorithm, background, button, code blocks, command, debug, execute, design.</p>	
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<p>Class 6</p>	<p>Year 3</p>	<p>NC: <i>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</i></p> <p>Copywrite and Ownership</p> <ul style="list-style-type: none"> • To explain why copying someone else’s work from the internet without permission isn’t fair and can explain what problems this might cause. Managing online information • To know how to use key phrases in search engines to gather accurate information online. • To explain what autocomplete is and how to choose the best suggestion. • To explain the difference between a ‘belief’, an 	<p>Data handling</p> <p>NC: <i>Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</i></p> <p>Story graphs</p> <p>Data handling</p> <p>I know how to create my own sorting diagram and complete a data handling activity with it using images and text.</p> <ul style="list-style-type: none"> • I know how to create a feelings chart exploring a story or character’s feelings. <p>I know how to create and publish my own online questionnaire and analyse the results.</p>	<p>Programming</p> <p>Animations in Scratch</p> <p>NC: <i>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts Use sequence, selection, and repetition in programs; work with variables and various forms of input and output Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</i></p> <p>Computational thinking</p> <p>I know how to create algorithms for my programming projects</p>	<p>Presentation</p> <p>NC: <i>Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</i></p> <p>Interactive comics</p> <p>Word processing/Typing</p> <p>I know how to edit the style and effect of my text and images to make my document more engaging and eye-catching. For example, borders and shadows.</p> <p>Presentation, web designs and eBook creation</p> <p>I know how to create an interactive comic with</p>	<p>Cross-curricular D.A.R.E.S projects</p> <p>Video creation- voiceover film</p> <p>Computer networks- Network explorer</p> <p>Sound- podcasting</p> <p>Digital art- digital self portraits</p> <p>Animation- Line draw animation</p> <p>Presentation- Paper based app prototype</p>
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		<p>'opinion' and a 'fact. and give examples of how and where they might be shared online, e.g. in videos, memes, posts, news stories etc.</p>	<p>Key vocabulary</p> <p>Graph, axis, line, shape, background, upload, record, label, pen tool.</p>	<ul style="list-style-type: none"> ● I know how to decompose projects (such as an animation) into steps to create an algorithm ● I understand abstraction is focusing on important information ● I know how to identify patterns in an algorithm <p>Coding/Programming</p> <p>I know how to design a program</p> <ul style="list-style-type: none"> ● I know how to create a program using a design ● I know how to create a sequence of code ● I know how to evaluate my program <p>Key vocabulary</p> <p>Abstraction, information, relevant, pattern, same, different, complex, sequence, code, design, programming language, Scratch</p>	<p>sounds, formatted text and video</p> <p>Key vocabulary</p> <p>Project, template, layout, multimedia, format, import, media, background, audio recording,</p>	
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<p>Class 7</p>	<p>Year 3 & 4</p>	<p>Y3</p> <p>NC: <i>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration</i></p> <p><i>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</i></p> <p>Copywrite and Ownership</p> <ul style="list-style-type: none"> To explain why copying someone else’s work from the internet without permission isn’t fair and can explain what problems this 	<p>Data handling</p> <p>NC: <i>Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</i></p> <p>Story graphs</p> <p>Data handling</p> <p>I know how to create my own sorting diagram and complete a data handling activity with it using images and text.</p> <ul style="list-style-type: none"> I know how to create a feelings chart exploring a story or character’s feelings. <p>I know how to create and publish my own online questionnaire and analyse the results.</p>	<p>Programming</p> <p>Animations in Scratch</p> <p>NC: <i>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</i></p> <p><i>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output</i></p> <p><i>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</i></p> <p>Computational thinking</p> <p>I know how to create algorithms for my programming projects</p> <ul style="list-style-type: none"> I know how to decompose projects (such 	<p>Presentation</p> <p>Interactive comics</p> <p>NC: <i>Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</i></p> <p>Word processing/Typing output</p> <p>I know how to edit the style and effect of my text and images to make my document more engaging and eye-catching. For example, borders and shadows.</p> <p>Presentation, web designs and eBook creation</p> <p>I know how to create an interactive comic with sounds, formatted text and video</p>	<p>Cross-curricular D.A.R.E.S projects</p> <p>Video creation- voiceover film</p> <p>Computer networks- Network explorer</p> <p>Sound- podcasting</p> <p>Digital art- digital self portraits</p> <p>Animation- Line draw animation</p> <p>Presentation- paper based app prototype</p>
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might cause. Managing online information

- To know how to use key phrases in search engines to gather accurate information online.
- To explain what autocomplete is and how to choose the best suggestion.
- To explain the difference between a 'belief', an 'opinion' and a 'fact. and give examples of how and where they might be shared online, e.g. in videos, memes, posts, news stories etc

Y4

Copy write and Ownership

- When searching on the internet for content to use, I can explain why I need to consider who owns it and whether I have the right to reuse it.
- I can give some simple examples of content which I must not use without permission from the owner, e.g. videos, music, images.

Self Image and Identity

- To explain how my online identity can be different to my offline identity.
- To describe positive ways for someone to interact with

Key vocabulary

Graph, axis, line, shape, background, upload, record, label, pen tool.

as an animation) into steps to create an algorithm

- I understand abstraction is focusing on important information
- I know how to identify patterns in an algorithm

Coding/Programming

I know how to design a program

- I know how to create a program using a design
- I know how to create a sequence of code
- I know how to evaluate my program

Key vocabulary

Abstraction, information, relevant, pattern, same, different, complex, sequence, code, design, programming language, Scratch

Key vocabulary

Project, template, layout, multimedia, format, import, media, background, audio recording,

		<p>others online and understand how this will positively impact on how others perceive them.</p> <ul style="list-style-type: none"> • To explain that others online can pretend to be someone else, including my friends, and suggest reasons why they might do this. 				
Class 8	Year 4	<p>Y4</p> <p><i>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration</i></p> <p><i>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</i></p>	<p>Data handling</p> <p>N.C:</p> <p><i>Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</i></p> <p>Online questionnaire</p> <p>Word processing/Typing</p> <p>I know how to confidently and regularly use text shortcuts such as cut, copy</p>	<p>Animate Anything</p> <p>Animation</p> <p>NC:</p> <p><i>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</i></p> <p><i>Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data</i></p>	<p>Programming</p> <p>Purple Mash-unit 4.1</p> <p>NC:</p> <p><i>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</i></p> <p><i>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output</i></p> <p><i>Use logical reasoning to explain how some simple algorithms work and to detect and</i></p>	<p>Cross-curricular D.A.R.E.S projects</p> <p>Animation- line draw animation</p> <p>Presentation- interactive quiz eBook</p> <p>Sound- movie soundtrack</p>

		<p>Copy write and Ownership</p> <ul style="list-style-type: none"> • When searching on the internet for content to use, I can explain why I need to consider who owns it and whether I have the right to reuse it. • I can give some simple examples of content which I must not use without permission from the owner, e.g. videos, music, images. <p>Self Image and Identity</p> <ul style="list-style-type: none"> • To explain how my online identity can be different to my offline identity. • To describe positive ways for someone to interact with others online and understand how this will positively impact on how others perceive them. • To explain that others online can pretend to be someone else, including my friends, and suggest reasons why they might do this. 	<p>and paste and delete to organise text</p> <p>Data handling</p> <ul style="list-style-type: none"> • I know how to create and publish my own online questionnaire and analyse the results. <p>Key vocabulary</p> <p>Cut, copy, paste, online, questionnaire, formatting, multiple choice, checkbox, share.</p>	<p>and information</p> <p>I know how to take multiple animations of a character I have created and edit them together for a longer video. • I know how to record animations of different characters and edit them together to create an interview.</p> <p>Video creation</p> <p>I know how to evaluate and improve the best video tools to best explain my understanding.</p> <p>Key vocabulary</p> <p>Import, export, trim, clips, media library, subtitles, timeline</p>	<p>correct errors in algorithms and programs</p> <p>Key learning</p> <p>To begin to understand selection in computer programming.</p> <ul style="list-style-type: none"> • To understand how an IF statement works. • To understand how to use co-ordinates in computer programming. • To understand the 'repeat until' command. • To understand how an IF/ELSE statement works. • To understand what a variable is in programming. • To use a number variable. <p>Key vocabulary</p> <p>Action, alert, algorithm, background, button, code blocks, command, debug, design, execute</p>	
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<p>Class 9</p>	<p>Year 5</p>	<p><i>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration</i></p> <p><i>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</i></p> <p>Copy write and Ownership</p> <ul style="list-style-type: none"> • To assess and justify when it is acceptable to use the work of others. • To give examples of content that is permitted to be reused and know how this content can be found online <p>Self image and Identity</p>	<p>Programming</p> <p>Yr5 Scratch Platform Game</p> <p>NC: <i>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</i></p> <p><i>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output</i></p> <p><i>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</i></p> <p>Computational Thinking</p> <p>I know how to use logical reasoning to explain how a variety of algorithms work</p>	<p>Data handling</p> <p>NC: <i>Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</i></p> <p>Google Sheets</p> <p>Data handling</p> <p>I can use simple formulae to solve calculations including =sum</p> <ul style="list-style-type: none"> • I can edit and format difference cells in a spreadsheet. <p>Key vocabulary</p> <p>Spreadsheet, cell, row, column, formula, sum, data, value, calculation</p>	<p>Animation</p> <p>NC: <i>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</i></p> <p><i>Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</i></p> <p>Digital Animated Scenes</p> <p>Animation</p> <p>I know how to effectively use animation tools in presenting software to create animations.</p> <p>Presentation, web design and eBook creation</p> <p>I know how to create and export an interactive presentation including a variety of media, animations, transitions and other effects</p>	<p>Cross-curricular D.A.R.E.S projects</p> <p>Animatin- Character interviews</p> <p>Computer Networks- Search Engines</p> <p>Video Creation- Greenscreen News Report</p>
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- To explain how identity online can be copied, modified or altered.
- To know how to make responsible choices about having an online identity, depending on context.

Online relationships

- To describe some of the ways people may be involved in online communities and describe how they might collaborate constructively with others and make positive contributions. (e.g. gaming communities or social media groups). Online reputation
- To describe ways that information about anyone online can be used by others to make judgments about an individual and why these may be incorrect.

- I know how to evaluate the effectiveness of algorithms

Coding/Programming

I know how to create programs by decomposing them into smaller parts

- I know how to use a variety of selection commands in programs
- I know how to use conditions in repetition commands
- I know how to work with variables
- I know how to create programs that control or simulate physical systems
- I know how to evaluate my work and identify error

Key vocabulary

Evaluation, effectiveness, complexity, data, prediction, condition, data, memory, variables, value, initialisation, control, simulate, physical system

Photography and Digital Art

I know how to manipulate shapes to create digital art.

Online reputation

I can explain the ways in which anyone can develop a positive online reputation.

Key vocabulary

Animate, slide layout, slide show, transitions, embed, publish, instant alpha,

<p>Class 10</p>	<p>Year 5 & 6</p>	<p><i>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</i></p> <p>Copy write and Ownership</p> <ul style="list-style-type: none"> • To assess and justify when it is acceptable to use the work of others. • To give examples of content that is permitted to be reused and know how this content can be found online <p>Self image and Identity</p>	<p>App Prototype</p> <p>NC: <i>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</i></p> <p>Word processing/Typing</p> <p>I know how to confidently choose the best application to demonstrate my learning.</p> <ul style="list-style-type: none"> • I know how to format text to suit a purpose. • I know how to publish my documents online regularly and discuss the audience and purpose of my content 	<p>3-D Letters- Beetleblocks</p> <p>NC: <i>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts Use sequence, selection, and repetition in programs; work with variables and various forms of input and output Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</i></p> <p>Computational Thinking</p> <p>I know how to decompose a design or code to focus on specific parts</p> <ul style="list-style-type: none"> • I know how to use abstraction to hide 	<p>Programming- Microbit Sensors</p> <p>NC: <i>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts Use sequence, selection, and repetition in programs; work with variables and various forms of input and output Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</i></p> <p>Computational Thinking</p> <p>I can decompose a design or code to focus on specific parts</p> <ul style="list-style-type: none"> • I can critically evaluate my work and suggest improvements 	<p>Cross-curricular D.A.R.E.S projects</p> <p>NC objective</p> <p>☑ select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</p> <p>Sound- Four Chord Remix</p> <p>Animation- Character Interviews</p> <p>Computer Networks- Search Engines</p> <p>Data Handling- Google Sheets</p>
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	<ul style="list-style-type: none"> • To explain how identity online can be copied, modified or altered. • To know how to make responsible choices about having an online identity, depending on context. <p>Online relationships</p> <ul style="list-style-type: none"> • To describe some of the ways people may be involved in online communities and describe how they might collaborate constructively with others and make positive contributions. (e.g. gaming communities or social media groups). Online reputation • To describe ways that information about anyone online can be used by others to make judgments about an individual and why these may be incorrect. <p>Y6 Copy write and Ownership</p> <ul style="list-style-type: none"> • To use of search tools to find and access online content which can be reused by others. • To know how to make references to and acknowledge sources I have used from the internet. 	<p>Presentations, Web Design and eBook Creation</p> <p>I know how to design an app prototype that links multimedia pages together with hyperlinks.</p> <ul style="list-style-type: none"> • I know how to choose applications to communicate to a specific audience. • I know how to evaluate my own content and consider ways to improve. <p>Photography and Digital Art</p> <p>I know how to edit a picture to remove items, add backgrounds, merge 2 photos</p> <p>Key vocabulary</p> <p>Prototype, transition, animation, layout, duplicate, navigation, homepage, instant alpha,</p>	<p>complexity in my design or code</p> <ul style="list-style-type: none"> • I know how to recognise and make use of patterns in my design and code • I know how to critically evaluate my work and suggest improvements <p>Coding/Programming</p> <p>I know how to identify the need for, and work with, variables</p> <ul style="list-style-type: none"> • I know how to create procedures to hide complexity in programs <p>Key vocabulary</p> <p>Evaluation, effectiveness, complexity, data, prediction, data, memory, value, initialisation,</p>	<p>Coding/Programming</p> <p>-I can identify the need for, and work with, variables</p> <ul style="list-style-type: none"> • I can use a range of sequence, selection and repetition commands to implement my design <p>Key vocabulary</p> <p>Micro:bit, program, code, algorithm, problem, sensor, temperature, light, input, output</p>	
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Self image and Identity

- To identify and critically evaluate online content relating to gender, race, religion, disability, culture and other groups, and explain why it is important to challenge and reject inappropriate representations online.

Managing online information

- To describe how things shared privately online can have unintended consequences for others. e.g. screen-grabs.

- To explain that taking or sharing inappropriate images of someone (e.g. embarrassing images), even if they say it is okay, may have an impact for the sharer and others; and who can help if someone is worried about this. Online reputation

- To explain strategies anyone can use to protect their 'digital personality' and online reputation, including degrees of anonymity.

Privacy and Security

- To describe how and why people should keep their software and apps up to date, e.g. auto updates.

<p>Class 11</p>	<p>Year 6</p>	<p><i>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration</i></p> <p><i>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</i></p> <p>Copy write and Ownership</p> <ul style="list-style-type: none"> • To use of search tools to find and access online content which can be reused by others. • To know how to make references to and 	<p>Year 6 Presentation- App Prototype</p> <p>NC:</p> <p><i>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</i></p> <p><i>Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</i></p> <p><i>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</i></p>	<p>3-D Letters- Beetleblocks</p> <p>NC:</p> <p><i>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</i></p> <p><i>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output</i></p> <p><i>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</i></p> <p><i>Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the</i></p>	<p>Programming- Microbit Sensors</p> <p>NC:</p> <p><i>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</i></p> <p><i>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output</i></p> <p><i>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</i></p> <p><i>Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for</i></p>	<p>Cross-curricular D.A.R.E.S projects</p> <p>NC objective</p> <p>Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</p> <p>Podcasting</p> <p>AR & VR</p> <p>Animation</p> <p>Artificial Intelligence</p>

	<p>acknowledge sources I have used from the internet.</p> <p>Self-image and Identity</p> <ul style="list-style-type: none"> • To identify and critically evaluate online content relating to gender, race, religion, disability, culture and other groups, and explain why it is important to challenge and reject inappropriate representations online. <p>Managing online information</p> <ul style="list-style-type: none"> • To describe how things shared privately online can have unintended consequences for others. e.g. screen-grabs. • To explain that taking or sharing inappropriate images of someone (e.g. embarrassing images), even if they say it is okay, may have an impact for the sharer and others; and who can help if someone is worried about this. Online reputation • To explain strategies anyone can use to protect their 'digital personality' and online reputation, including degrees of anonymity. <p>Privacy and Security</p> <ul style="list-style-type: none"> • To describe how and why people should keep their 	<p>Word processing/Typing</p> <p>I know how to confidently choose the best application to demonstrate my learning.</p> <ul style="list-style-type: none"> • I know how to format text to suit a purpose. • I know how to publish my documents online regularly and discuss the audience and purpose of my content <p>Presentations, Web Design and eBook Creation</p> <p>I know how to design an app prototype that links multimedia pages together with hyperlinks.</p> <ul style="list-style-type: none"> • I know how to choose applications to communicate to a specific audience. • I know how to evaluate my own content and consider ways to improve. <p>Photography and Digital Art</p> <p>I know how to edit a picture to remove items, add backgrounds, merge 2 photos</p> <p>Key vocabulary</p>	<p>opportunities they offer for communication and collaboration</p> <p>Computational Thinking</p> <p>I know how to decompose a design or code to focus on specific parts</p> <ul style="list-style-type: none"> • I know how to use abstraction to hide complexity in my design or code • I know how to recognise and make use of patterns in my design and code • I know how to critically evaluate my work and suggest improvements <p>Coding/Programming</p> <p>I know how to identify the need for, and work with, variables</p> <ul style="list-style-type: none"> • I know how to create procedures to hide complexity in programs <p>Key vocabulary</p> <p>Evaluation, effectiveness, complexity, data, prediction, data, memory, value, initialisation,</p>	<p>communication and collaboration</p> <p>Computational Thinking</p> <p>I can decompose a design or code to focus on specific parts</p> <ul style="list-style-type: none"> • I can critically evaluate my work and suggest improvements <p>Coding/Programming</p> <p>-I can identify the need for, and work with, variables</p> <ul style="list-style-type: none"> • I can use a range of sequence, selection and repetition commands to implement my design <p>Key vocabulary</p> <p>Micro:bit, program, code, algorithm, problem, sensor, temperature, light, input, output</p>	
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		software and apps up to date, e.g. auto updates.	Prototype, transition, animation, layout, duplicate, navigation, homepage, instant alpha,			
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