



Computing Progression of Knowledge



Technology is everywhere and will play a pivotal part in students' lives, therefore, we want to model and educate our pupils on how to use technology positively, responsibly and safely. At Manorfield we want pupils to be MASTERS of technology and not slaves to it. We aim to enable children to be creators not consumers and our broad curriculum encompassing computer science, information technology and digital literacy reflects this.

We recognise that technology can allow pupils to share their learning in creative ways and the knowledge rich curriculum has to be balanced with the opportunity for pupils to apply their knowledge creatively which will in turn help our pupils become skilful computer scientists.

We endeavour to try and embed computing across the whole curriculum to make learning creative and accessible.

<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>
<p><u>Autumn</u></p> <p><u>Autumn 1</u></p> <p><u>Video Creation</u> I know how to select images and record a voiceover I know how to highlight and zoom into images as I record.</p> <p><u>Autumn 2</u></p> <p><u>Computational Thinking</u> I understand what algorithms are. I can write simple algorithms. I understand the sequence of algorithms is important.</p> <p><u>Coding/Programming</u> I can create a simple program on a digital device e.g. Bee Bot or tablet. I can use sequence in programs. I can locate and fix bugs in my program.</p> <p><u>Spring</u></p>	<p><u>Autumn</u></p> <p><u>Autumn 1</u></p> <p><u>Computational Thinking</u> I can use logical reasoning to predict the outcome of algorithms. I can debug algorithms.</p> <p><u>Coding/Programming</u> I understand programs follow precise instructions. I can create programs using different digital devices E.g. Bee Bot or ScratchJr on a tablet. I can debug programs of increasing complexity.</p> <p><u>Autumn 2</u></p> <p><u>Animation</u> I know how to create a simple stop motion animation. I know how to explain how an animation/flip book works.</p> <p><u>Computational Thinking</u></p>	<p><u>Autumn</u></p> <p><u>Autumn 1</u></p> <p><u>Word processing/typing</u> I can combine digital images from different sources, objects, and text to make a final piece of a variety of tasks: posters, documents, eBooks, scripts, leaflets.</p> <p><u>Video</u> I can write and record a script using a teleprompter tool.</p> <p><u>Sound</u> I can edit sound effects for a purpose. I can record a radio broadcast or audiobook.</p> <p><u>Autumn 2</u></p> <p><u>Photography and Digital Art</u> I know how to create a digital image using a range of tools, pens, brushes and effects.</p> <p><u>Computational Thinking</u> I understand abstraction is focusing on important information</p>

Spring 1

Presentation

I can order images to create a simple storyboard.
I can sequence a series of pictures to explain my understanding of a topic.

Computational Thinking

I can critically evaluate my work and suggest improvements.

Online Reputation

I can explain how I am developing an online reputation which will allow other people to form an opinion of me.
I can describe some simple ways that help build a positive online Reputation

Spring 2

Animation

I know how to animate a simple image to speak in role.
I know how to add filters and stickers to enhance an animation of a character.

Summer

Summer 1

Presentation

I can create a simple spider diagram.

Computational Thinking

I can critically evaluate my work and suggest improvements

I know how to write algorithms for everyday tasks.

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.

Spring

Spring 1

Presentations, Web Design and eBook Creation

I know how to add voice labels to an image.

Spring 2

Computational Thinking

I know how to write algorithms for everyday tasks.

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.

Coding/Programming

I understand programs follow precise instructions

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.

Self-Image and Identity

I can explain how people can represent themselves in different ways online.

I can explain ways in which someone might change their identity depending on what they are doing online (e.g. gaming; using an avatar; social media) and why.

Spring

Spring 1

Presentations, Web Design and eBook Creation

I know how to create a presentation demonstrating my understanding with a range of media.

Augmented Reality and Virtual Reality

I know how to create my own digital 360 image and explore it in VR.

Spring 2

Video Creation

I know how to sequence clips of mixed media in a timeline and record a voiceover.

Summer

Summer 1

Word Processing/Typing

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><u>Online Reputation</u> I can explain how I am developing an online reputation which will allow other people to form an opinion of me. I can describe some simple ways that help build a positive online reputation.</p> <p><u>Summer 2</u></p> <p><u>Computational Thinking</u> I understand the sequence of algorithms is important. I know how to debug simple algorithms.</p> <p><u>Coding/Programming</u> I know how to create a simple program on a digital device e.g. Bee Bot or tablet. I know how to use sequence in programs. I know how to locate and fix bugs in my program.</p>	<p><u>Summer</u></p> <p><u>Summer 1</u></p> <p><u>Presentations, web design and eBook Creation</u> I know how to add voice labels to an image. I know how to import images to a project from the web and camera roll. I know how to use some build in animations in presentation software.</p> <p><u>Summer 2</u></p> <p><u>Word Processing/Typing</u> I know how to use the space bar only once between words and use touch to navigate to words letter to edit. I know how to copy and paste images and text. I know how to use caps locks for capital letters. I know how to add images alongside text in a word-processed document.</p> <p><u>Data Handling</u> I know how to sort digital objects into a range of charts such as Venn diagrams, carroll diagrams and bar charts using different apps and software. I know how to orally record myself explaining what the data shows me.</p>	<p><u>Presentations, Web Design and eBook Creation</u> I know how to create an interactive comic with sounds, formatted text and video.</p> <p><u>Summer 2</u></p> <p><u>Augmented Reality and Virtual Reality</u> I can create my own digital 360 design and bring it into my surroundings through AR.</p>
<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>

Autumn

Autumn 1

Presentations

I can create an interactive quiz eBook introducing hyperlinks.

Autumn 2

Sound

I know how to edit sound effects for a purpose
I know how to compose a soundtrack that can be added to a film project.

Video Creation

I know how to add music and sound effects to my films.

Spring

Spring 1

Presentation

I know how to order images to create a simple storyboard.
I know how to sequence a series of pictures to explain my understanding of a topic.

Video Creation

I know how to select images and record a voiceover.

Photography and Digital Art

I know how to use a paint/drawing app to create a digital image.

Autumn

Autumn 1

Word Processing/Typing

I know how to organise and reorganise text on screen to suit a purpose.

Video Creation

I know how to use cutaway and split screen tools in iMovie.
I know how to evaluate and improve the best video tools to best explain my understanding.
I know how to further improve green screen clips using crop and resize and explore more creative ways to use the tool - wearing green clothes and the masking tool.

Computational Thinking

I know how to solve problems by decomposing them into smaller parts.

Autumn 2

Computational Thinking

I know how to use logical reasoning to explain how a variety of algorithms work.
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.

Autumn

Autumn 1

Presentation

I know how to order images to create a simple storyboard.
I know how to sequence a series of pictures to explain my understanding of a topic.

Video Creation

I know how to select images and record a voiceover.

Photography and Digital Art

I know how to use a paint/drawing app to create a digital image.

Augmented Reality and Virtual Reality

I know how to create an animated object and bring it into my surroundings through AR.
I know how to create an AR experience using objects I have created to explain a concept.

Online Reputation

I can explain how I am developing an online reputation which will allow other people to form an opinion of me.
I can describe some simple ways that help build a positive online reputation.

Autumn 2

Animation

I know how to choose and create different types of animations to best explain my learning.

Computational Thinking

I can critically evaluate my work and suggest improvements.

Online Reputation

I can explain how I am developing an online reputation which will allow other people to form an opinion of me.

I can describe some simple ways that help build a positive online.

Spring 2

Animation

I know how to create a presentation demonstrating my understanding with a range of media.

I know how to use line draw tool to create animations.

Video Creation

I know how to add animated titles and transitions.

Photography and Digital Art

I know how to use shapes and drawing tools to create digital art.

Self-Image and Identity

I can demonstrate responsible choices about my online identity, depending on context.

Summer

Summer 1

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 errors.

Spring

Spring 1

Animation

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.

Video Creation

I know how to evaluate and improve the best video tools to best explain my understanding.

Spring 2

Summer

Summer 1

Animation

I know how to effectively use animation tools in presenting software to create animations.

Presentations, web design and eBook Creation

I can make an animated talking Gif of a cartoon character.

Video Creation

I know how to create videos using a range of media – green screen, animations, film and image.

Computational Thinking

I know how to critically evaluate my work and suggest improvements.

Online Reputation

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

Spring

Spring 1

Animation

I know how to choose and create different types of animations to best explain my learning.

Video Creation

I know how to create videos using a range of media – green screen, animations, film and image.

Computational Thinking

I know how to critically evaluate my work and suggest improvements.

Online Reputation

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

<p><u>Word Processing/Typing</u> I know how to combine digital images from different sources, objects, and text to make a final piece of a variety of tasks: posters, documents, eBooks, scripts, leaflets.</p> <p><u>Presentations, Web Design and eBook Creation</u> I know how to import images to a project from the web and camera roll.</p> <p><u>Summer 2</u></p> <p><u>Word Processing/Typing</u> I know how to confidently and regularly use text shortcuts such as cut, copy and paste and delete to organise text.</p> <p><u>Data Handling</u> I know how to create and publish my own online questionnaire and analyse the results.</p>	<p>I know how to create and export an interactive presentation including a variety of media, animations, transitions and other effects.</p> <p><u>Photography and Digital Art</u> I know how to manipulate shapes to create digital art.</p> <p><u>Online Reputation</u> I can explain the ways in which anyone can develop a positive online reputation.</p> <p><u>Summer 2</u></p> <p><u>Presentations, web design and eBook Creation</u> I can create a webpage and embed video.</p> <p><u>Video Creation</u> I know how to evaluate and improve the best video tools to best explain my understanding.</p>	<p><u>Spring 2</u></p> <p><u>SATS</u></p> <p><u>Summer</u></p> <p><u>Summer 1</u></p> <p><u>Word processing/typing</u> I can combine digital images from different sources, objects, and text to make a nal piece of a variety of tasks: posters, documents, eBooks, scripts, leaflets.</p> <p><u>Video</u> I can write and record a script using a teleprompter tool.</p> <p><u>Sound</u> I can experiment with live loops to create a song. I can edit sound effects for a purpose. I can record a radio broadcast or audiobook.</p> <p><u>Summer 2</u></p> <p><u>Data Handling</u> I can write spreadsheet formula to solve more challenging maths problems.</p>
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