

# St Michael's C.E Primary School

## Computing Curriculum 2024 - 2025

Computing at St Michael's is the process of using computer technology to complete a meaningful project that will inspire pupils and develop a curiosity for learning.

Intent - At St Michael's, Computing aims to equip pupils with the knowledge, understanding and skills to use and manipulate computers in an ever changing digital world.

A Computer Technician is resilient to problem solving and uses a computational thinking to resolve issues.

St Michael's  
C.E. Primary School

## Spirituality Across the Curriculum

Our definition of spirituality at St Michael's CE Primary School:

*To talk about spirituality is to talk about something which is beyond words.*

*Spirituality is linked to big questions about the meaning and purpose of life; it includes ideas relating to oneself, others, the natural world and the transcendent.*

*We refer to this as:*

*The stillness of the mind*

*The settling of the soul*

*The uplifting of the spirit*

*Being at one in the world and finding meaning and purpose in life.*

*For some, but not all, this will be experienced, expressed or explained through faith or belief.*

*When discussing this with our pupils, we refer to spirituality as:*

*The way WOWS, OWS and NOWS shape me into the person that I am and will become.*

Spiritual development contains many facets and it is concerned with a number of areas of an individual's life. Therefore, when developing spirituality in pupils and adults, we, in line with our distinctively Christian vision and our school's definition for spirituality, look at four key areas: self, others, transcendence (beyond), and nature.



## Spirituality Opportunities

### Self

#### Opportunities

- Have students create personal blogs or digital journals where they reflect on their spiritual journey and personal growth.
- Encourage students to design digital work that represent their goals, values, and spiritual aspirations.
- Use coding to create simple mindfulness apps or websites that guide users through meditation and relaxation exercises.

#### Potential Question Prompts

- How does coding or designing make you feel? Does it connect to a bigger purpose or goal in your life?
- What message or story would you want to share with the world through a game, app, or website?
- What can you do to make sure your relationship with technology is healthy and balanced?
- How do you feel when you're trying to solve a problem in coding? Does it teach you anything about patience or persistence?
- How can technology help you understand yourself better? Can you think of any apps or tools that help you reflect on your emotions or thoughts?
- Have you used any tools, like journaling apps, to keep track of your personal growth? How does this make you feel about your own journey?

### Others

#### Opportunities

- Engage students in creating digital solutions for community issues, such as developing apps that connect volunteers with local charities or creating websites that raise awareness about social causes.
- Use technology to connect with students from different countries and cultures, fostering intercultural understanding and empathy.
- Organise projects where students create digital stories or multimedia presentations on themes of compassion, kindness, and community.

#### Potential Question Prompts

- Do you think technology should be used to help others and make the world a better place? What are some examples of how it can do that?
- Consider the importance of online behaviour and how it affects others. How can you ensure your actions online reflect kindness and respect?
- Think about how technology can address social issues. What ideas do you have for using computing to make a difference in the world?
- Reflect on how computing allows us to communicate globally. What have you learned about other cultures through technology?
- Consider the importance of online safety. What steps can you take to ensure that you and your peers are safe while exploring the digital world?
- Think about how understanding others' feelings can shape your online behaviour. How can you show empathy in your digital communications?
- Reflect on how technology can strengthen or weaken connections. What are some positive and negative impacts you've noticed in your own life?



## Transcendence

### Opportunities

- Creating or engaging with technology solutions that focus on environmental sustainability
- Participating in global, collaborative digital art projects (such as those using blockchain technology or digital NFTs).
- Use virtual reality or 3D modelling to create virtual tours of sacred sites from various religions, allowing students to explore these places and their spiritual significance.
- Develop interactive digital versions of sacred texts that include annotations, multimedia elements, and discussion forums to deepen understanding and reflection.
- Encourage students to use digital tools to create art or music inspired by spiritual themes, exploring how technology can enhance spiritual expression.

### Potential Question Prompts

- How has using technology helped you experience a sense of awe or wonder about the universe or nature?
- How does creating or interacting with digital art or music make you feel about the beauty of the world or the universe?
- When working on collaborative coding or open-source projects, do you feel like you're part of a larger community or purpose? How does that shape your sense of contribution?
- In what ways can technology be designed to help people slow down, reflect, and feel more connected to themselves and others?
- How can technology help deepen our connection with nature, even when we're not physically present in it?

## Nature

### Opportunities

- Apps that encourage users to take and share nature photography or create digital art.
- Apps and games that offer puzzles or quizzes about animals, plants, or ecosystems
- Interactive e-books or apps that tell stories about the environment, animals, and nature conservation can spark children's imagination
- Simple digital cameras or apps that encourage children to take pictures of plants, animals, and landscapes help them develop a deeper appreciation of their surroundings.
- Art apps can encourage children to draw and paint scenes from nature.

### Potential Question Prompts

- Reflect on ways that computing can be used to monitor environmental changes or protect wildlife. What technologies have you learned about that help us care for nature?
- Consider how experiences in nature might influence your ideas for projects or designs in computing. What aspects of nature do you find most inspiring when creating something with technology?
- Think about how digital platforms can be used to share information about climate change or conservation. What message would you want to communicate to others about protecting our planet?
- Reflect on how the natural world demonstrates balance and interconnectedness. How can we apply these lessons to ensure that technology works in harmony with nature rather than against it?
- Consider ways you can leverage technology to encourage recycling, energy conservation, or other sustainable behaviours. What projects could you initiate to inspire others to be more environmentally friendly?
- Reflect on how computing can enhance our understanding of natural phenomena. What technologies, such as apps or simulations, have helped you learn more about the environment and its wonders?



St Michael's CE Primary Computing Curriculum  
2024-2025

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	Introduce J2E	Create and Debug 1 & 2		Gather Data / Create Charts	Create a Science E-book	Collect photographs and paint pictures
Year 2	Showcase Your Digital Imagery	Create and Debug		Create a Simple Topic Based eBook	Present Your Research	Interpret Graphs and Charts
Year 3	Research and Present	Gather Opinions	Digital Artwork	Write a Program		Interrogate a database
Year 4	Make an Audio book	Making an Advert	Explain and Present Collect and Analyse Data		Programming and Animation	Making a fact file and soundscape
Year 5	Making Games		Making Animations	Persuasive Writing	Analyse and Interpret data	QR codes
Year 6	Games on!	Research and Present	Understand the Internet	Write Revision Guides	Making a School Leavers Book	Making a School Leavers Book



## Early Years Foundation Stage - Related to Computing

### Understanding the World

Even though the 'Technology' strand has been removed from the 2021 EYFS Framework, we at St Michael's believe that computing and technology are still vitally important subjects to deliver to our Reception children. Our curriculum ensures that children enter KS1 with a strong foundation of knowledge, and that children develop listening skills, problem-solving abilities and thoughtful questioning - as well as improving subject skills across the seven areas of learning. We live in a technological world and there is no escape from the reality that technology is integrated into the lives of our children. Just as we ensure the children in our care are ready for the adult world by teaching them maths and literacy, we believe that we should also make sure that they are fluent in computer literacy and all-important e-safety.

## National Curriculum - Aims and Purpose

### Purpose:

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.



### National Curriculum - Key stage 1

Pupils should be taught to:

- understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
- create and debug simple programs
- use logical reasoning to predict the behaviour of simple programs
- use technology purposefully to create, organise, store, manipulate and retrieve digital content
- recognise common uses of information technology beyond school
- 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.

### National Curriculum - Key Stage 2

Pupils should be taught to:

- 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
  - 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
  - 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
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact...



Milestones for Computing

		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Key Stage 1	Year 1	<p>Introduce J2E</p> <p><u>Knowledge</u></p> <ul style="list-style-type: none"> <li>- To begin to understand school rules on online safety (acceptable use policy).</li> <li>To know what to do if there is something inappropriate online</li> <li>To know the importance of keeping password secures</li> <li>- To develop an understanding that their work on J2E can only be seen by those who have log in's to the platform</li> <li>To know how to login to BGFL</li> <li>To know what text and images are</li> <li>To know how to combine words and text in work</li> <li>To know some of the basic tools of JIT software</li> </ul> <p><u>Skills</u></p> <ul style="list-style-type: none"> <li>To login to BGFL</li> <li>To create a JIT5 write page</li> <li>To name and save work</li> <li>To add background photographs</li> <li>To add text</li> <li>To change the size and colour of text</li> <li>To use JIT 5 paint</li> <li>To combine words and pictures</li> <li>To add pages to my work</li> <li>To can create a JIT5 mix</li> </ul>	<p>Create and Debug - Simple Programs 1</p> <p><u>Knowledge</u></p> <ul style="list-style-type: none"> <li>- To begin to understand school rules on online safety (acceptable use policy).</li> <li>To know what to do if there is something inappropriate online</li> <li>To know the importance of keeping password secures</li> <li>To know what an algorithm is</li> <li>To know debug means to solve a problem</li> <li>To know what logical reasoning means</li> <li>To know basic command words</li> </ul> <p><u>Skills</u></p> <ul style="list-style-type: none"> <li>To create and write a simple algorithm</li> <li>To debug a simple algorithm</li> <li>To program Beebots to complete a simple algorithm</li> <li>To use command tools online to create a simple algorithm</li> <li>To predict the outcome of an algorithm</li> <li>To test simple algorithms</li> </ul>	<p>Create and Debug - Simple Programs 2</p> <p><u>Knowledge</u></p> <ul style="list-style-type: none"> <li>- To begin to understand school rules on online safety (acceptable use policy).</li> <li>To know what to do if there is something inappropriate online</li> <li>To know the importance of keeping password secures</li> <li>To know what an algorithm is</li> <li>To know debug means to solve a problem</li> <li>To know what logical reasoning means</li> <li>To know basic command words</li> </ul> <p><u>Skills</u></p> <ul style="list-style-type: none"> <li>To create and write a simple algorithm</li> <li>To debug a simple algorithm</li> <li>To program Beebots to complete a simple algorithm</li> <li>To use command tools online to create a simple algorithm</li> <li>To predict the outcome of an algorithm</li> <li>To test simple algorithms</li> </ul>	<p>Gather Data</p> <p><u>Knowledge</u></p> <ul style="list-style-type: none"> <li>- To begin to understand school rules on online safety (acceptable use policy).</li> <li>To know what to do if there is something inappropriate online</li> <li>To know the importance of keeping password secures</li> <li>- To develop an understanding that their work on J2E can only be seen by those who have log in's to the platform</li> <li>To know what data is</li> <li>To know what a pictogram is</li> <li>To know how graphs and data show information</li> </ul> <p><u>Skills</u></p> <ul style="list-style-type: none"> <li>To add data to a pictogram</li> <li>To add data to JIT5 chart</li> <li>To add headings and colours to graphs</li> <li>To create charts and graphs</li> <li>To interpret results of charts and graphs</li> <li>To showcase my work on JIT5</li> <li>- To develop an understanding of how to comment/feedback/review other people's work appropriately</li> <li>To give feedback on other's work</li> </ul>	<p>Create a Science based E-Book</p> <p><u>Knowledge</u></p> <ul style="list-style-type: none"> <li>- To begin to understand school rules on online safety (acceptable use policy).</li> <li>To know what to do if there is something inappropriate online</li> <li>To know the importance of keeping password secures</li> <li>To know what templates are</li> <li>To know which templates to use for different purposes</li> </ul> <p><u>Skills</u></p> <ul style="list-style-type: none"> <li>To create a painting using paint software</li> <li>To save work to retrieve later</li> <li>To create pictures and save as pictures</li> <li>To use paintings as backgrounds for work</li> <li>To create a JIT5 animate</li> <li>To create a chart based on real data</li> <li>To showcase work</li> <li>To add pages and choose the correct templates</li> </ul>	<p>Collect Photographs and Paint Pictures</p> <p><u>Knowledge</u></p> <ul style="list-style-type: none"> <li>- To begin to understand school rules on online safety (acceptable use policy).</li> <li>To know what to do if there is something inappropriate online</li> <li>To know the importance of keeping password secures</li> <li>- To develop an awareness of consent when taking peoples photographs</li> <li>To know how to avoid overwriting saved work</li> </ul> <p><u>Skills</u></p> <ul style="list-style-type: none"> <li>To add text to a write file</li> <li>To add photographs that have been shared to work</li> <li>To take photographs</li> <li>To upload photographs to documents</li> <li>To add photos and words on a page</li> <li>To name saved work and reopen it later</li> <li>To paint pictures using apps</li> <li>To combine words and pictures on JIT5 software</li> </ul>





Year 2	Showcase your digital Imagery	Create and Debug 1	-Create and Debug 2	Create an E-Book	Present your Research	Interpret Graphs and Charts
	<p><b>Knowledge</b> To understand school rules on online safety (acceptable use policy). To know safety rules for using the cloud - To develop an awareness of copyright and consent when taking peoples photographs and collecting images online To know what the cloud is To know how a computer network works</p> <p><b>Skills</b> To add images and simple text to information slides To name and save work appropriately To take photographs safely and responsibly To add images from a camera to documents To create digital paint images To upload own digital images to files To create a slideshow to present work</p>	<p><b>Knowledge</b> To understand school rules on online safety (acceptable use policy). - To understand the importance of keeping login details and all personal information safe and not to distribute these online To know what to do if there is something inappropriate online To know what an algorithm is To know debug means to solve a problem To know what logical reasoning means To know basic command words</p> <p><b>Skills</b> To create and write a simple algorithm To debug a simple algorithm To program Beetbots or online characters to complete a simple algorithm To use command tools online to create a simple algorithm To predict the outcome of an algorithm</p>	<p><b>Knowledge</b> To understand school rules on online safety (acceptable use policy). - To understand the importance of keeping login details and all personal information safe and not to distribute these online To know what an algorithm is To know debug means to solve a problem To know what logical reasoning means To know basic command words</p> <p><b>Skills</b> To create and write a simple algorithm To debug a simple algorithm To program sprites to complete a simple algorithm To change basic aesthetic functions e.g. backgrounds and sprites To use command tools online to create a simple algorithm To use backgrounds and sprites to create simple algorithms that tell a story</p>	<p><b>Knowledge</b> To understand school rules on online safety (acceptable use policy). - To understand the importance of keeping login details and all personal information safe and not to distribute these online - To understand the steps to take if they encounter inappropriate content when browsing the internet To develop an understanding that anything saved on cloud-based software can be accessed by anyone with a login To know safety rules for using the cloud - To develop an awareness of copyright and consent when taking peoples photographs and collecting images online To know what the cloud is To know how a computer network works</p> <p><b>Skills</b> To add appropriate backgrounds To add information in pages on JIT To add photographs that have been shared to work To add text to images To create an e-book combining words and text To enter data into chart tools To save files to use again in other software To give respectful feedback</p>	<p><b>Knowledge</b> To understand school rules on online safety (acceptable use policy). - To understand the importance of keeping login details and all personal information safe and not to distribute these online To know what templates are To know which templates to use for different purposes</p> <p><b>Skills</b> To create a write page on JIT5 To create a paint page on JIT5 To name and save work appropriately To plan the content of a presentation To select a suitable layout template to use To use JIT5 animate tools To combine previous work and present them to showcase learning To give respectful feedback</p>	<p><b>Knowledge</b> To understand school rules on online safety (acceptable use policy). - To understand the importance of keeping login details and all personal information safe and not to distribute these online To know what data is To know what a pictogram is To know how graphs and data show information</p> <p><b>Skills</b> To read data from a pictogram To create a chart and choose the best style of chart to present the data To create a J2e vote to gather opinions To name and save work appropriately To interpret results of a survey</p>



Lower Key Stage 2	Year 3	Research and Present	Gather Opinions	Produce Digital Artwork	Write a program 1	Write a Program 2	Interrogate a Database
	<p><u>Knowledge</u> To understand the schools acceptable use policy To understand the importance of keeping login details and all personal information safe and not to distribute these online To understand the steps to take if they encounter inappropriate content when browsing the internet To know what the cloud is To know how a computer network works To know safety rules for using the cloud To know work is saved in an online cloud server -- To continue to develop an understanding that anything saved on cloud-based software can be accessed by anyone with a login To begin to understand copyright and creative commons when using other people's content To know what a Powerpoint Presentation is To know how to use simple tools on powerpoint</p> <p><u>Skills</u> To create an online Powerpoint presentation To add text and images to Powerpoint presentation To change the design of Powerpoint presentation To use several websites to research information To create a Powerpoint using J2e software To add a variety of media within a presentation</p>	<p><u>Knowledge</u> To understand the schools acceptable use policy To understand the importance of keeping login details and all personal information safe and not to distribute these online To understand how to use technology responsibly when commenting on other's work To know what a survey is To know why information in a survey is collected To know how to change the design of a survey To know how to share surveys for others.</p> <p><u>Skills</u> To create a simple survey To add test data To understand how to best interpret the results To change the appearance/design of a survey To share surveys to make accessible for others To analyse and interpret data from surveys/forms To create an online form to collect real data</p>	<p><u>Knowledge</u> To understand the schools acceptable use policy To understand the importance of keeping login details and all personal information safe and not to distribute these online To develop an awareness of copyright and consent when taking peoples photographs and collecting images online - To develop a sense of ownership over everything we do online and understand that it is our responsibility to make sure the content we create is appropriate - To understand the steps to take if they encounter inappropriate content when browsing the internet To know and understand photo composition - light, background, subject To know how to using editing software To know how to crop an image To know how to add filters to an image.</p> <p><u>Skills</u> To take photographs using a digital device To choose suitable images for a purpose To edit photographs using editing software (crop/filters/contrast) To upload saved work To create a digital sketchbook of work To create a range of content that accomplishes a given goal To create art work in the style of an artist</p>	<p><u>Knowledge</u> To understand the schools acceptable use policy To understand the importance of keeping login details and all personal information safe and not to distribute these online To know how to use Scratch To know how to add blocks to create a program in Scratch To know how to change backgrounds and Sprites To know how to write an algorithm in Scratch</p> <p><u>Skills</u> To create and write a simple algorithm To debug a simple algorithm To change basic aesthetic functions eg. backgrounds and sprites To program sprites to complete a simple algorithm To use backgrounds and sprites to create simple algorithms that tell a story To predict the code based on others work To use command tools online to create a simple algorithm</p>	<p><u>Knowledge</u> To understand the schools acceptable use policy To understand the importance of keeping login details and all personal information safe and not to distribute these online To know that programs can be written to create specific tasks To know that parts of a program can be repeated To know how to repeat parts of a program</p> <p><u>Skills</u> To follow a simple algorithm To create and write a simple algorithm To predict the outcome of a simple algorithm To debug a simple algorithm To write simple programs for drawing shapes To write programs that create repeated shapes To copy and paste code to use again To predict the code from a piece of work</p>	<p><u>Knowledge</u> To understand the schools acceptable use policy To understand the importance of keeping login details and all personal information safe and not to distribute these online To know what a database is To know what a filter is and how these are used To know how to refine a filter To know how to sort data To know how to create a graph from data</p> <p><u>Skills</u> To know that a database can be used in a business to control stock To search a database using filters To refine a database search by changing search filters To create an online excel book to collect data To sort and filter data in an excel workbook To create graphs and charts from a database To analyse and interpret the data from graphs and charts created To capture screenshots of information</p>	



Year 4	Audio Book	Make an Advert	Explain and Present	Collecting and Analysing	Programming Animation	Fact File and Soundscape
	<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>- To follow, at all times, the schools acceptable use policy;</li> <li>- To understand the importance of keeping login details and all personal information safe and not to distribute these online</li> <li>- To understand the steps to take if they encounter inappropriate content when browsing the internet.</li> </ul> <p>To know what Creative Commons License means.</p> <p>To know how to search for copyright free resources.</p> <p>To know how to use book creator to create an audio book</p> <p>To know what an audio book is.</p> <p><b>Skills</b></p> <p>To plan ideas for an audio book considering audience and purpose.</p> <p>To record audio files.</p> <p>To import images and video from a camera roll.</p> <p>To combine video, audio and images to create an audio book.</p> <p>To upload/import an audio book into an online area.</p> <p>To quality check work and ensure consistency in texts and audio.</p> <p>To evaluate own and other's performances.</p>	<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>- To follow, at all times, the schools acceptable use policy;</li> <li>- To understand the importance of keeping login details and all personal information safe and not to distribute these online</li> <li>- To understand the steps to take if they encounter inappropriate content when browsing the internet.</li> <li>- To understand that anything saved on cloud-based software can be accessed by anyone with a login</li> </ul> <p>To know what Creative Commons License means.</p> <p>To know how to search for copyright free resources.</p> <p>To know the features of an advert, including video and audio effects.</p> <p>To know how to use imovie to edit video clips</p> <p>To know how to add effects to video clips in Imovie</p> <p><b>Skills</b></p> <p>To create a storyboard to plan ideas for an advert.</p> <p>To film and record scenes for an advert</p> <p>To combine movie clips in Imovie to make an advert</p> <p>To import audio and sound effects.</p> <p>To use editing tools to improve work</p> <p>To add effects in I-movie</p> <p>To evaluate own and other's work</p>	<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>- To follow, at all times, the schools acceptable use policy;</li> <li>- To understand the importance of keeping login details and all personal information safe and not to distribute these online</li> <li>- To understand the steps to take if they encounter inappropriate content when browsing the internet.</li> </ul> <p>To know what a spreadsheet is</p> <p>To know what a sheet is</p> <p>To know the letters label the column</p> <p>To know the numbers label the rows</p> <p>To know what a cell is</p> <p>To know how numbers and letters identify individual cells.</p> <p>To know how to generate lists of numbers using autofill tools</p> <p>To know what a formula is</p> <p>To know how to create simple formulas to perform calculations</p> <p>To know how to use all 4 operations in a spreadsheet</p> <p>To know how to create graphs from data within spreadsheets</p> <p><b>Skills</b></p> <p>To use autofill tools to generate lists of numbers</p> <p>To create simple formula to perform calculations in spreadsheets.</p> <p>To use column labels appropriately.</p> <p>To explain how formula work in a spreadsheet</p> <p>To use a spreadsheet to help solve problems.</p> <p>To use editing tools to improve legibility of a spreadsheet table</p> <p>To present information in a graph</p>	<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>- To follow, at all times, the schools acceptable use policy;</li> <li>- To understand the importance of keeping login details and all personal information safe and not to distribute these online</li> <li>- To understand the steps to take if they encounter inappropriate content when browsing the internet.</li> <li>- To understand that anything saved on cloud-based software can be accessed by anyone with a login</li> </ul> <p>To know examples of paper-based databases.</p> <p>To know the differences between a paper based and electronic database.</p> <p>To know advantages of electronic databases.</p> <p>To know what a database field is</p> <p>To know what a database record is.</p> <p>To know different data types for data collection</p> <p>To know how to search a database.</p> <p>To know how to sort a database.</p> <p>To know how data is kept safe</p> <p>To know simple GDPR regulations</p> <p><b>Skills</b></p> <p>To use different data types for data collection.</p> <p>To design a data collection sheet for a specific purpose</p> <p>To use sort tools to analyse data in an electronic database</p> <p>To use the search tool to analyse data in an electronic database.</p> <p>To present data for a specified purpose</p>	<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>- To follow, at all times, the schools acceptable use policy;</li> <li>- To understand the importance of keeping login details and all personal information safe and not to distribute these online</li> <li>- To understand the steps to take if they encounter inappropriate content when browsing the internet.</li> </ul> <p>To know how to use simple Scratch tools</p> <p>To know the 4 main areas of Scratch: Motion, events, Looks and Controls.</p> <p>To know some of the different ways a sprite can move.</p> <p>To know different ways to initiate an event</p> <p>To know how to change the look of sprites</p> <p>To know what Creative Commons License means.</p> <p>To know how to search for copyright free resources.</p> <p><b>Skills</b></p> <p>To create a storyboard and algorithm to plan ideas for an animation.</p> <p>To create a program to set the position of a sprite</p> <p>To create a program to get a sprite to say something</p> <p>To create a program to move a sprite</p> <p>To use the library to change the costume of sprites.</p> <p>To create a program to include sprites interacting</p> <p>To write an algorithm for specific purpose</p> <p>To add sounds to an animation programme.</p> <p>To import files to an online platform.</p>	<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>- To follow, at all times, the schools acceptable use policy;</li> <li>- To understand the importance of keeping login details and all personal information safe and not to distribute these online</li> <li>- To understand the steps to take if they encounter inappropriate content when browsing the internet.</li> <li>- To understand that anything saved on cloud-based software can be accessed by anyone with a login</li> <li>- To be discerning in choosing and evaluating the appropriateness of digital content</li> <li>- To understand that not everything we read and see online is true</li> <li>- To use search technologies with an appropriate degree of caution</li> </ul> <p>To know what Creative Commons License means.</p> <p>To know how to search for copyright free resources.</p> <p>To know how to create soundscapes using online software</p> <p><b>Skills</b></p> <p>To find information on the internet that is appropriate to the task.</p> <p>To compose sound files using an appropriate computer programme</p> <p>To compose sound files to portray mood and purpose.</p> <p>To use editing tools to improve work.</p> <p>To combine words, pictures, and images to create a fact-file</p>



Upper Key Stage 2	Year 5	Making Games 1 & Making Games 2	Making Animation	Persuasive Writing	Analyse and Interpret	QR codes
	<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>- To follow, at all times, the schools acceptable use policy;</li> <li>- To recognise acceptable and unacceptable behaviour online and how to report this</li> <li>- To understand the importance of keeping login details and all personal information safe and not to distribute these online</li> <li>- To establish a culture of positive, helpful comments when reporting on another's work</li> </ul> <p>To know that Scratch is a programming language To know precise language is needed To know the term selection (if, then) can be used to make something happen. To know inputs, trigger an event To know the difference between the x axis and y axis To know what variables are To know variables can be used to score a game. To understand the importance of using copyright free resources To find copyright free resources to use</p> <p><b>Skills</b></p> <ul style="list-style-type: none"> <li>To create a simple game in Scratch</li> <li>To debug code when it doesn't work as expected</li> <li>To use the selection tool</li> <li>To use different input tools to trigger an event</li> <li>To identify different ways to code a Sprite</li> <li>To use the pen tools within Scratch</li> <li>To explain how to use coordinates to move</li> <li>To write scripts to start randomly, fall, hide, move and appears</li> <li>To design an example of a game.</li> <li>To write variables to include scoring in a game</li> <li>To review a game to make improvements</li> <li>To review a game to debug errors and know where improvements can be made</li> </ul>	<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>- To follow, at all times, the schools acceptable use policy;</li> <li>- To recognise acceptable and unacceptable behaviour online and how to report this</li> <li>- To understand the importance of keeping login details and all personal information safe and not to distribute these online</li> <li>- To establish a culture of positive, helpful comments when reporting on another's work</li> </ul> <p>To know what a Common Craft Animation is To know different filming techniques To know how to use editing tools To know how to frame shots appropriately.</p> <p><b>Skills</b></p> <ul style="list-style-type: none"> <li>To use a storyboard to plan an animation</li> <li>To record a narration of a topic over a visual presentation</li> <li>To design and make visual props for an animation</li> <li>To use accurate recording and filming techniques</li> <li>To frame shots appropriately;</li> <li>To use editing tools to complete an animation</li> <li>To provide constructive feedback to peers</li> </ul>	<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>- To follow, at all times, the schools acceptable use policy;</li> <li>- To recognise acceptable and unacceptable behaviour online and how to report this</li> <li>- To understand the importance of keeping login details and all personal information safe and not to distribute these online</li> <li>- To establish a culture of positive, helpful comments when reporting on another's work</li> <li>- To understand that anything saved on cloud-based software can be accessed by anyone with a login</li> <li>- To be discerning in choosing and evaluating the appropriateness of digital content</li> <li>- To use search technologies with an appropriate degree of caution</li> </ul> <p>To know that work is saved into an online cloud-based server To know work in an online environment can be accessed anywhere with the correct login To know why login details should be kept private To know how to change design and layout in PPT</p> <p><b>Skills</b></p> <ul style="list-style-type: none"> <li>To make sensible choices on design and layout features.</li> <li>To add transitions and animations</li> <li>To create a PPT as a piece of persuasive text</li> <li>To evaluate own work and make amendments to improve it</li> <li>To give responsible, respectful feedback to my peers</li> <li>To give unbiased, feedback in a non-critical manner, based on a set of given success criteria.</li> <li>To accept feedback from others as being helpful</li> </ul>	<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>- To follow, at all times, the schools acceptable use policy;</li> <li>- To recognise acceptable and unacceptable behaviour online and how to report this</li> <li>- To understand the importance of keeping login details and all personal information safe and not to distribute these online</li> <li>- To establish a culture of positive, helpful comments when reporting on another's work</li> <li>- To know the importance of expressing formula correctly;</li> <li>- To know what a variable is</li> <li>- To know that formatting tools can aid presentation</li> <li>- To know some real-life ways that spreadsheets are used.</li> </ul> <p><b>Skills</b></p> <ul style="list-style-type: none"> <li>To create simple formula in Excel independently</li> <li>To create formula for a specific purpose.</li> <li>To understand the importance of using brackets correctly</li> <li>To identify errors in formula and correct them</li> <li>To format cells to present information appropriately</li> <li>To use conditional formatting</li> <li>To identify and change variables within a spreadsheet to answer what if questions.</li> <li>To design and create a functional spreadsheet to solve a real-life problem.</li> <li>To abstract information from a query and use a spreadsheet to model the answers.</li> </ul>	<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>- To follow, at all times, the schools acceptable use policy;</li> <li>- To recognise acceptable and unacceptable behaviour online and how to report this</li> <li>- To understand the importance of keeping login details and all personal information safe and not to distribute these online</li> <li>- To establish a culture of positive, helpful comments when reporting on another's work</li> <li>- To understand that anything saved on cloud-based software can be accessed by anyone with a login</li> <li>- To operate with a degree of caution when scanning QR codes and clicking links</li> </ul> <p>To know that work is saved into an online cloud-based server To know the possible risks of a source of a QR code To know that a QR code hyperlinks to a resources To know how QR codes are used in real life</p> <p><b>Skills</b></p> <ul style="list-style-type: none"> <li>To use a QR code reader to scan QR codes.</li> <li>To create a QR code to link to a file</li> <li>To create QR codes for specific purpose</li> <li>To combine a range of software to create QR codes</li> <li>To add a variety of media to QR codes.</li> </ul>	



Year 6	Game On!	Research and Present findings	Understanding the internet	Making Revision Guides	Making Leavers Books
	<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>- To follow, at all times, the schools acceptable use policy.</li> <li>- To recognise acceptable and unacceptable behaviour online and how to report this</li> <li>- To understand the importance of keeping login details and all personal information safe and not to distribute these online - To establish a culture of positive, helpful comments when reporting on another's work</li> <li>To understand which games are appropriate to my age and age limits on specific apps and games</li> <li>To know how to create variables</li> <li>To know what a nest of code is.</li> <li>To know what makes a good game.</li> <li>To know the components of a game.</li> <li>To know how a game is made.</li> <li>To know the audience and purpose of a game</li> <li>To know what a sensible comment or review of a game is.</li> </ul> <p><b>Skills</b></p> <ul style="list-style-type: none"> <li>To create a variable for a given purpose</li> <li>To change a variable based on a condition being met</li> <li>To create a number of variable and use them correctly</li> <li>To build a nest of code</li> <li>To plan a game identifying the components of the game.</li> <li>To use features within Scratch to develop a game.</li> <li>To debug and recall errors made</li> <li>To identify ways to improve a game.</li> <li>To use technology safely and responsibly and respectfully</li> </ul>	<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>- To follow, at all times, the schools acceptable use policy.</li> <li>- To recognise acceptable and unacceptable behaviour online and how to report this</li> <li>- To understand the importance of keeping login details and all personal information safe and not to distribute these online - To establish a culture of positive, helpful comments when reporting on another's work</li> <li>- To be discerning in choosing and evaluating the appropriateness of digital content</li> <li>- To use search technologies with an appropriate degree of caution</li> <li>To know what copyright is</li> <li>To know what plagiarism is</li> <li>To know how to reference digital content</li> <li>To know the importance of producing original work</li> </ul> <p><b>Skills</b></p> <ul style="list-style-type: none"> <li>To reference sources of information</li> <li>To review and summarise information</li> <li>To select the best software for the task and explain the choices.</li> <li>To recognise the audience when designing and creating digital content</li> <li>To present digital work effectively</li> <li>To reference digital content used in a presentation</li> </ul>	<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>- To follow, at all times, the schools acceptable use policy.</li> <li>- To recognise acceptable and unacceptable behaviour online and how to report this</li> <li>- To understand the importance of keeping login details and all personal information safe and not to distribute these online - To establish a culture of positive, helpful comments when reporting on another's work</li> <li>- To understand that 'viruses' can attack your device and gather stored data</li> </ul> <p>To know that the World Wide Web is only on the services provided by the internet.</p> <p>To know the differences between a web browser and a web server.</p> <p>To know how information on the World Wide Web travels between networked computers and deliver requested information.</p> <p>To know that binary is the most basic computer language a computer understands.</p> <p>To know that digital images are broken down into pixels.</p> <p>To know that each pixel stored as a value to represent its colour.</p> <p>To know that the more pixels a device can display, the better the image appears.</p> <p>To know that information is broken down into smaller pieces known as packets</p> <p>Know that a packet is a basic unit of communication over a digital network.</p> <p>To know that individual packets travel across networks</p> <p>To know that once packets arrive at their destination, the information is then built back to its original state.</p> <p>To know what computer virus is</p> <p>To know what a computer hacker does.</p> <p>To know the dangers viruses and hackers pose to computers and computer networks.</p> <p>To know good practise advice to follow for between computer and network security.</p> <p>To know how search work and how they rank results</p>	<p><b>REVISION UNIT</b></p> <p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>- To follow, at all times, the schools acceptable use policy.</li> <li>- To recognise acceptable and unacceptable behaviour online and how to report this</li> <li>- To understand the importance of keeping login details and all personal information safe and not to distribute these online - To establish a culture of positive, helpful comments when reporting on another's work</li> <li>To know that the internet can be used for revision.</li> <li>To know how material is designed for different audiences and purposes</li> </ul> <p><b>Skills</b></p> <ul style="list-style-type: none"> <li>To use technology to organise and present ideas in different ways</li> <li>To create storyboards to plan ideas for a video</li> <li>To consider audience and purpose</li> <li>To use the internet effectively to support revision</li> <li>To evaluate resources to support revision</li> </ul>	<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>- To follow, at all times, the schools acceptable use policy.</li> <li>- To recognise acceptable and unacceptable behaviour online and how to report this</li> <li>- To understand the importance of keeping login details and all personal information safe and not to distribute these online - To establish a culture of positive, helpful comments when reporting on another's work</li> <li>To know good designing and presenting techniques</li> <li>To know how material is designed for different audiences and purposes</li> </ul> <p><b>Skills</b></p> <ul style="list-style-type: none"> <li>To make purposeful design choices</li> <li>To use appropriate images and text suitable for purpose and audience.</li> <li>To apply good design and presenting techniques</li> <li>To use images and background that are under creative commons licence and abide by any attribution requirements stated.</li> </ul>



Progression in Computing Vocabulary

EYFS	Choices Internet Website	Equipment Buttons Movement	Screen Mouse Images Keyboard Paint	Technology Share Create Internet	Collect Set of photos Count Organise	Purpose Online tools Communicate Instructions Robots Patterns Program
Year 1	BGfL/Launchpad 365 Login Password Create Write Paint Tools Name Save Open Retrieve	Data Pictogram Chart Graph Interpret Results Mix	Instructions Robots/Beebots Sprite Program Position Command Predict Algorithm Debug Command	Instructions Program Algorithm Debug Command Predict Create Write Scratch junior	Create Paint Chart Animate eBook Delete Edit Mix Undo Background Template	Photograph Write Text File Folder Font Colour Size Upload Icon Re-open Edit Program Layout
Year 2	BGfL/Launchpad 365 Create Write Program Algorithm Debug Predict Outcome Command Tools Photograph Background	Image Image bank Text Retrieve eBook Shared image bank Text Data Chart Tools Software Graph	Algorithms Debug Program Sprite Background Scene Reasoning Predict Command Tools Visual	Image Text PowerPoint Photograph Camera Files Digital Images Paint Upload Present	Create Write Paint Presentation Layout Template Animate Animation Upload Digital image Mix	Data Pictogram Chart Questionnaire Interpret Results Survey Gather Opinions J2Vote
Year 3	Visual Sequence Selection	Drawings Movie clip Presenting	Surveys Microsoft forms Interpret	Showcase Digital Sketchbook Photo composition	Algorithm Debug Logical reasoning	Microsoft excel Interrogate Database



	<p>Repetition Input Output Navigate Algorithm Debug Program Logical reasoning Errors Code</p>	<p>Data Information Collect Analyse Evaluate PowerPoint Text Images Cloud based server Copyright Creative common Websites Research Media Soundbites</p>	<p>Share Analyse Bar charts Pictograms Tables Link Information Collect Analyse Evaluate Feedback</p>	<p>Lighting Subject Background Edit Crop Filters Contrast Record Observe Review Revisit</p>	<p>Predict Copy Paste Logo Code Program Write Design</p>	<p>Filters Search Screenshot Record Field Sort Graph</p>
Year 4	<p>Storyboard Video iMovie Text titles Voiceover Transition Panning Special effects Audience Purpose Import Technology Copyright Audio Edit Sound effects</p>	<p>Fact file Soundscape GarageBand Internet Sound files Import Technology Copyright</p>	<p>Collect Organise Database Interrogate Sort Analyse Search Function Electronic database Data collection sheet Data types: Alphanumeric Text, Numeric, Currency Date, Time and Multiple choice Graph Field</p>	<p>Audio book Text Images Sound Audience Purpose Import Video Still image Book Creator Evaluate Copyright</p>	<p>Explain Present Spreadsheets Graphs Formulae Cell reference/address Generate Autofill Cursor Column labels</p>	<p>Animation Program Storyboard Algorithms Debug Script Encode Error Audience Purpose Scratch Sprite Motion menu Event menu Look menu Control menu</p>
Year 5	<p>Common craft video Animation Storyboard Scene Import Visual prop Narration</p>	<p>Scratch 2 Scratch 3 Coding/code Design Write Debug Delete</p>	<p>Scratch 2 Scratch 3 Coding/code Design Write Debug Delete</p>	<p>QR code Text Image Drawings Movie clips Websites YouTube clips</p>	<p>Spreadsheets Formulae Conditional formatting Data validation Pick lists Layout Presentation</p>	<p>PowerPoint Presentation Design Layout Insert Slide Background</p>



	Screenshot Interfaces Edit Frame shot Film Record	Rename Resize Selection Direction tools/arrow keys Pen tools Script Variables Sprite	Rename Resize Selection Direction tools/arrow keys Pen tools Script Variables Sprite	Cloud based survey Hyperlinks Resource Scan Prototype Software Soundbites Media	Variables Predict	Font size Transition Bullet points Images Colour Re-order
Year 6	Research Present Information Software Review Summarise Copyright Plagiarism Reference Digital content Digital work Evaluate Repurpose	Game Variables Speed Nest of codes Components Game plan Scratch Design Write Debug Features Errors Script	Revision guide J2Blast Storyboard Video Script Sources Content Copyright Creative Commons License	World Wide Web Internet Web browser Web Server Network Retrieve Deliver Search engines Store Binary data Computer virus Hackers Network security Encryption Digital images Pixels Colour Packets Routes Destination	Design Present Text Images Consumer Font Styles Colour Insert Templates Background Feedback Reflect Copyright	Design Present Text Images Consumer Font Styles Colour Insert Templates Background Feedback Reflect Copyright





**St Michael's**  
C.E. Primary School