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| **Year****group** | **Autumn term** | **Spring term** | **Summer term** |
|  | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
| **EYFS** | **Programming**Children develop early coding skills through hands-on activities, including giving directional commands to Beebots, engaging in unplugged sequencing and logic games, and using programmable toys to explore movement and control. These activities build their understanding of sequencing, problem-solving and basic algorithms.**Information technology**Children use iPads or cameras to take photos, explore digital drawing apps for creative expression, experiment with simple digital music programs, and role-play technology use in the home corner.Digital LiteracyChildren will learn how to navigate the digital world safely and responsibly through online safety lessons. They will engage with digital literacy lessons that teach safe technology use using stories, songs, and activities. Children will be equipped with knowledge and skills from a safeguarding curriculum to stay safe online. Computing concepts will be introduced through play-based learning, incorporating online safety themes to ensure they understand safe technology use. |
| **Y1/2 Cycle A** | **Computing systems and networks (Teach Computing Year 1)**Children will be able to recognise different types of technology and identify a computer and its key components. They will develop skills in using a mouse for various functions and become more confident in using a keyboard to type and edit text. Additionally, they will understand the importance of using technology responsibly and contribute to creating simple rules for safe and appropriate use.Adaptations for Year 2 Progression:* Identifying Technology – Extend learning by encouraging pupils to categorise technology based on its purpose (e.g., communication, entertainment, learning).
* Recognising Computer Parts – Introduce more detailed discussions about hardware, such as the difference between input and output devices.
* Using a Mouse – Progress to using right-click functions, dragging and dropping and adjusting settings like cursor speed.
* Typing and Editing – Move from recognising letters to using basic punctuation, capital letters and spacebar use for sentence structure.
* Creating Rules for Responsible -Use Develop a class agreement on digital etiquette, including concepts like asking for help when unsure and keeping personal information safe.

 --Use technology purposefully to create, organise, store, manipulate and retrieve digital content. -Use technology safely and respectfully, keeping personal information private; identify where to go to for help and support when they have concerns about the content or contact on the internet or other online technologies.Online Safety – Privacy and Security (Year 1 objectives)Online Reputation to be explored throughout the year during assemblies/collective worship.Online safety can be taught as a circle time activity, integrated into another lesson or presented as a standalone lesson, depending on the children's needs.Project Evolve objectives covered within this unit:* I can explain rules to keep myself safe when using technology both in and beyond the home (Health, well-being and lifestyle - Year 1).
* I can say why it belongs to me (e.g. ‘I designed it’ or ‘I filmed it’’) (Copyright and ownership - Year 1)
* I can save my work under a suitable title / name so that others know it belongs to me (e.g. filename, name on content) (Copyright and ownership - Year 1).
 | **Creating media – Digital paining****(Teach Computing Year 1)**Children will be able to describe the functions of different freehand tools and use shape and line tools to create digital artwork. They will learn to make thoughtful choices when painting a digital picture and explain their tool selections. Additionally, they will develop independence in using a computer to create their own digital artwork and compare the experience of painting on a computer with traditional paper-based methods.Adaptations for Year 2 Progression:* Exploring Freehand Tools – Extend learning by encouraging pupils to experiment with different brush types, thicknesses, and colours to create different effects.
* Using Shapes and Lines – Introduce more complex shapes and encourage combining multiple tools to create detailed images.
* Making Careful Choices – Support pupils in planning their artwork before creating it digitally, considering composition and colour choices.
* Explaining Tool Use – Encourage pupils to justify their decisions using simple technical vocabulary (e.g., "I used this brush because it makes smooth lines").
* Independently Creating Digital Art – Provide opportunities for pupils to complete a digital painting project with minimal support, building confidence in navigating software.
* Comparing Digital and Traditional Art – Facilitate discussions on the advantages and challenges of each method, such as ease of correcting mistakes digitally versus the tactile experience of painting on paper.

--Use technology purposefully to create, organise, store, manipulate and retrieve digital content. Online Safety – Copyrightand Ownership (Year 1 objectives)Online Bullying to be explored during Anti-Bullying Week. | **Programming – Moving a robot****(Teach Computing Year 1)**Children will be able to explain the function of a given command and act out commands to demonstrate understanding. They will learn to combine forwards and backwards commands to create sequences and use four direction commands to develop more complex instructions. Additionally, they will plan simple programs and explore multiple solutions to a problem, developing their logical thinking and problem-solving skills.Adaptations for Year 2 Progression:* Explaining Commands – Extend learning by encouraging pupils to predict outcomes before running a command and explain why a command produces a certain result.
* Acting Out Commands – Develop this further by introducing more complex sequences, such as loops or repeated actions, through physical movement.
* Combining Movement Commands – Progress to using precise measurements (e.g., move forward two steps) and introducing turns (e.g., 90-degree left/right).
* Planning Simple Programs – Support pupils in sequencing a set of instructions before testing them, using visual planning tools like flowcharts.
* Exploring Multiple Solutions – Encourage pupils to debug and refine their sequences, discussing different ways to solve the same problem efficiently.

-Understand what algorithm are; how they are implemented as programs on digital devices; and that programs execute by following precise unambiguous instructions. -Create and debug simple programs. -Use logical reasoning to predict the behaviour of simple programs.Online Safety – Self Image and Identity (Year 1 objectives)Safer Internet Day | **Computing systems and networs – IT around us****(Teach Computing Year 2)**Children will be able to recognise what information technology (IT) is and identify some of its key features. They will explore how IT is used in school and in the wider world, understanding how it helps us in daily life. Additionally, they will learn how to use IT safely and begin to recognise that they make choices when using technology.- 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 technologiesOnline Safety – Online Relationships (Year 1 objectives)Project Evolve objectives covered within this unit:* I can explain how it may make others feel if I do not ask their permission or ignore their answers before sharing something about them online (Online relationships - Year 2).
* I can explain simple guidance for using technology in different environments and settings e.g. accessing online technologies in public places and the home environment (Health, well-being and lifestyle - Year 2).
* I can say how those rules / guides can help anyone accessing online technologies (Health, well-being and lifestyle – Year 2)
 | **Creating media – Digital photography****(Teach Computing Year 2)**Children will be able to use a digital device to take a photograph and make choices about how to capture an image. They will learn to describe what makes a good photograph and explore ways to improve their pictures. Additionally, they will use simple tools to change an image and begin to recognise that photographs can be edited.-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 technologiesOnline Safety – Health, Well-being and Lifestyle (Year 1 objectives)Project Evolve objectives covered within this unit:* I can explain why some information I find online may not be real or true.
 | **Programming – Robot algorithms****(Teach Computing Year 2)**Children will be able to describe a series of instructions as a sequence and explain how changing the order affects the outcome. They will use logical reasoning to predict what will happen in a simple program and understand that programming projects can include both code and artwork. Additionally, they will learn to design an algorithm and create and debug a basic program they have written.-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 contentOnline Safety – Managing Online Information (Year 1 objectives). |
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| **Y1/2 Cycle B** | **Creating media – Digital writing****(Teach Computing Year 1)**Children will use a computer to write and add or remove text. They will identify that the appearance of text can be changed and make careful choices when altering it. Children will explain why they selected specific tools and compare typing on a computer to writing on paper.Adaptations for Year 2 Progression:* Children will use a

computer to write more complex sentences and paragraphs.* Children will edit, format and organise text using a variety of tools on a computer.
* Children will recognise and use different fonts, sizes and colours to change the appearance of text.
* Children will make thoughtful decisions about how to present text and understand the effect of these changes.
* Children will explain the purpose of the tools they chose and how they improve their work.
* Children will compare typing on a computer to handwriting and explain the benefits and challenges of each.

-Use technology purposefully to create, organise, store, manipulate and retrieve digital content-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 Online Safety – Privacy and Security (Year 2 objectives)Online Reputation to be explored throughout the year during assemblies/collective worship.Online safety can be taught as a circle time activity, integrated into another lesson or presented as a standalone lesson, depending on the children's needs. | **Date and Information – Grouping Data****(Teach Computing Year 1)**Children will label objects appropriately with names or categories. They will identify that objects can be counted and grouped in various ways. Children will describe objects using different attributes such as size, shape, colour and texture. They will count objects with the same properties and understand how to group them effectively. Children will compare groups of objects using terms like more, less, equal and explain their reasoning. They will answer questions about groups of objects by counting, grouping and comparing.Adaptations for Year 2 Progression:* Children will label objects more precisely, identifying specific characteristics and using appropriate terminology.
* They will recognise and count objects in more complex groupings, such as odd/even or by multiple attributes.
* Children will describe objects in more detailed ways, considering attributes like weight, length and function.
* They will count and organise objects in a variety of contexts, using more advanced grouping strategies.
* Children will compare and contrast groups of objects, explaining their reasoning using mathematical language like "greater than", "less than" and "equal to".
* They will answer more complex questions about groups of objects, using different counting strategies and visual representations to justify their answers.

-Use technology purposefully to create, organise, store, manipulate and retrieve digital content-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 Online Safety – Copyrightand Ownership (Year 2 objectives)Online Bullying to be explored during Anti-Bullying Week. | **Programming – Programming animations****(Teach Computing Year 1)**Children will choose a command for a given purpose. They will show that a series of commands can be joined together. Children will identify the effect of changing a value. They will explain that each sprite has its own instructions. Children will design the parts of a project. They will use their algorithm to create a program.Adaptations for Year 2 Progression:* Children will choose appropriate commands to achieve a specific purpose and explain why they selected them.
* They will demonstrate how a series of commands can be linked together to create more complex instructions.
* Children will explore how changing values can affect the outcome of their program and predict the results.
* They will recognise that each sprite can be programmed individually with its own set of instructions.
* Children will design the structure of a project with consideration for all necessary components.
* They will create and test a program using their algorithm, debugging and refining it as needed.

-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 contentOnline Safety – Self Image and Identity (Year 2 objectives)Safer Internet Day | **Data and Information – Pictograms** **(Teach Computing Year 2)**Children will recognise that we can count and compare objects using tally charts. They will recognise that objects can be represented as pictures. Children will create a pictogram. They will select objects by attribute and make comparisons. Children will recognise that people can be described by attributes. They will explain that we can present information using a computer.-Use technology purposefully to create, organise, store, manipulate and retrieve digital content-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 Online Safety – Online Relationships (Year 2 objectives)Project Evolve objectives covered within this unit:* I can explain why I have a right to say ‘no’ or ‘I will have to ask someone’. I can explain who can help me if I feel under pressure to agree to something I am unsure about or don’t want to do (Online relationships - Year 2).
* I can explain and give examples of what is meant by ‘private’ and ‘keeping things private’ (Privacy and security Year 2)
 | **Programming – Programming quizzes****(Teach Computing Year 2)**Children will explain that a sequence of commands has a start. They will explain that a sequence of commands has an outcome. Children will create a program using a given design. They will change a given design. Children will create a program using their own design. They will decide how their project can be improved.-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 programsOnline Safety – Health, Well-being and Lifestyle (Year 2 objectives) | **Creating media – Digital music****(Teach Computing Year 2)**Children will say how music can make us feel. They will identify that there are patterns in music. Children will experiment with sound using a computer. They will use a computer to create a musical pattern. Children will create music for a purpose. They will review and refine their computer work.-Use technology purposefully to create, organise, store, manipulate and retrieve digital contentOnline Safety – Managing Online Information (Year 2 objectives).Project Evolve objectives covered within this unit:* I can describe why other people’s work belongs to them (Copyright and ownership - Year 2).
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| Y3/4 Cycle A | **Computing systems and networks – Connecting computers (Teach Computing Year 3)**Children will explain how digital devices function, identify input and output devices, recognise how digital devices can change the way we work, explain how a computer network can be used to share information, explore how digital devices can be connected and recognise the physical components of a network.Adaptations for Year 4 Progression:* Children will describe how digital devices work and their basic functions.
* Children will identify various input and output devices and explain their roles.
* Children will explore how digital devices can make tasks quicker or easier and change the way we work.
* Children will explain how computer networks allow us to share information, such as files or messages.
* Children will demonstrate how different digital devices can be connected, using both wired and wireless methods.
* Children will identify and describe the physical components of a network, such as routers, cables and servers.

-Use sequence, selection, and repetition in programs; work with variables and various forms of input and output -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-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 informationOnline Safety – Privacy and Security (Year 3 objectives)Online Reputation to be explored throughout the year during assemblies/collective worship.Online safety can be taught as a circle time activity, integrated into another lesson or presented as a standalone lesson, depending on the children's needs. | **Creating media – Stop frame animation****(Teach Computing Year 3)**Children will explain that animation is a sequence of drawings or photographs, relate animated movement with a sequence of images, plan an animation, identify the need to work consistently and carefully, review and improve an animation and evaluate the impact of adding other media to an animation.Adaptations for Year 4 Progression:• Children will describe how animation is made up of a sequence of images or drawings to create movement.• Children will relate the movement in animations to the sequence of images used to create it.• Children will plan an animation, choosing the sequence and style of images to include.• Children will recognise the importance of working consistently and carefully when creating an animation.• Children will review their animation and make improvements to enhance its quality.• Children will evaluate how adding other media, such as sound or text, affects the animation.-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 contactOnline Safety – Copyrightand Ownership (Year 3 objectives)Online Bullying to be explored during Anti-Bullying Week.Project Evolve objectives covered within this unit:* I can explain why copying someone else’s work from the internet without permission isn’t fair and can explain what problems this might cause (Copyright and ownership – Year 3)
* I can demonstrate how to use key phrases in search engines to gather accurate information online (Managing online animation – Year 3).
 | **Programming – Sequencing sounds****(Teach Computing Year 3)**Children will explore a new programming environment, identify that commands have an outcome, explain that a program has a start, recognise that a sequence of commands can have an order, change the appearance of their project and create a project from a task description.Adaptations for Year 4 Progression:• Children will explore and navigate a new programming environment, understanding how to use basic functions.• Children will identify that commands in a program produce specific outcomes and can be tested.• Children will explain that every program begins with a start command and understand its role in the sequence.• Children will recognise that commands in a program must be ordered correctly to work as intended.• Children will change the appearance of their project by adjusting settings such as colours, shapes or backgrounds.• Children will create a project based on a given task description, following the steps to complete it.-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 -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 informationOnline Safety – Self Image and Identity (Year 3 objectives)Safer Internet Day | **Creating media – Diesktop publishing****(Teach Computing Year 3)**Children will recognise how text and images convey information, recognise that text and layout can be edited, choose appropriate page settings, add content to a desktop publishing publication, consider how different layouts can suit different purposes and consider the benefits of desktop publishing.Adaptations for Year 4 Progression:• Children will recognise how text and images work together to communicate information effectively.• Children will recognise that text and layout in a publication can be edited to improve its appearance and clarity.• Children will choose appropriate page settings, such as size, orientation, and margins, to suit their publication.• Children will add different types of content, like text, images, and shapes, to a desktop publishing publication.• Children will consider how different layouts, such as columns or grids, can be used for specific purposes, like newsletters or posters.• Children will consider the benefits of desktop publishing, such as producing professional-looking documents easily and quickly.- 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 search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital contentOnline Safety – Online Relationships (Year 3 objectives)Project Evolve objectives covered within this unit:* I can demonstrate how to use key phrases in search engines to gather accurate information online (Managing online animation – Year 3).
* I can explain why copying someone else’s work from the internet without permission isn’t fair and can explain what problems this might cause (Copyright and ownership – Year 3)
 | **Computing systems and networks – The internet (Teach Computing Year 4)**Children will describe how networks physically connect to other networks, recognise how networked devices make up the internet, outline how websites can be shared via the World Wide Web (WWW), describe how content can be added and accessed on the World Wide Web (WWW), recognise how the content of the WWW is created by people and evaluate the consequences of unreliable content.-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 contactOnline Safety – Managing Online Information (Year 4 objectives).Project Evolve objectives covered within this unit:* 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 (Copyright and ownership – Year 4).
* I can give some simple examples of content which I must not use without permission from the owner, e.g. videos, music, images (Copyright and ownership – Year 4).
 | **Programming – Events and actions in programs****(Teach Computing Year 3)**Children will explain how a sprite moves in an existing project, create a program to move a sprite in four directions, adapt a program to a new context, develop their program by adding features, identify and fix bugs in a program and design and create a maze-based challenge.Adaptations for Year 4 Progression:• Children will explain how a sprite moves in an existing project and understand how different commands affect its movement.• Children will create a program that allows a sprite to move in four directions using specific coding blocks or commands.• Children will adapt a program to fit a new context, changing elements like the sprite’s behaviour or its surroundings.• Children will develop their program by adding new features, such as additional sprites, backgrounds or interactive elements.• Children will identify and fix bugs in their program, using debugging strategies to ensure it runs smoothly.• Children will design and create a maze-based challenge, programming a sprite to navigate through obstacles to reach a goal.-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-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 informationOnline Safety – Health, Well-being and Lifestyle (Year 3 objectives) |
| **Y3/4 Cycle B** | **Creating media – Desktop publishing****(Teach Computing Year 3)**This will need editing so that children are not doing the same as Cycle A.Children will recognise how text and images convey information, recognise that text and layout can be edited, choose appropriate page settings, add content to a desktop publishing publication, consider how different layouts can suit different purposes and consider the benefits of desktop publishing.Adaptations for Year 4 Progression:• Children will recognise how text and images work together to communicate information effectively.• Children will recognise that text and layout in a publication can be edited to improve its appearance and clarity.• Children will choose appropriate page settings, such as size, orientation, and margins, to suit their publication.• Children will add different types of content, like text, images, and shapes, to a desktop publishing publication.• Children will consider how different layouts, such as columns or grids, can be used for specific purposes, like newsletters or posters.• Children will consider the benefits of desktop publishing, such as producing professional-looking documents easily and quickly.- 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 search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital contentOnline Safety – Online Relationships (Year 4 objectives)Project Evolve objectives covered within this unit:* I can demonstrate how to use key phrases in search engines to gather accurate information online (Managing online animation – Year 3).

I can explain why copying someone else’s work from the internet without permission isn’t fair and can explain what problems this might cause Online Safety – Privacy and Security (Year 2 objectives)Online Reputation to be explored throughout the year during assemblies/collective worship.Online safety can be taught as a circle time activity, integrated into another lesson or presented as a standalone lesson, depending on the children's needs. | **Date and Information – Branching databases****(Teach Computing Year 3)**Children will create questions with yes/no answers, identify the attributes needed to collect data about an object, create a branching database, explain why it is helpful for a database to be well structured, plan the structure of a branching database and independently create an identification tool.Adaptations for Year 4 Progression:• Children will create simple yes/no questions to gather information about an object.• Children will identify key attributes (e.g., colour, size, shape) needed to collect data about an object accurately.• Children will create a branching database that uses yes/no questions to sort and classify objects.• Children will explain why it is important for a database to be well-structured, so it is easy to use and understand.• Children will plan the structure of a branching database by deciding on the right order of questions and categories.• Children will independently create an identification tool, such as a branching database, to classify and identify objects based on their attributes. Online Safety – Copyrightand Ownership (Year 4 objectives)Online Bullying to be explored during Anti-Bullying Week. | **Programming – Repetition in shapes****(Teach Computing Year 4)**Children will identify that accuracy in programming is important, create a program in a text-based language, explain what ‘repeat’ means, modify a count-controlled loop to produce a given outcome, decompose a task into small steps and create a program that uses count-controlled loops to produce a given outcome.-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-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 Online Safety – Self Image and Identity (Year 4 objectives)Safer Internet Day | **Data and Information – Data logging****(Teach Computing Year 4)**Children will explain that data gathered over time can be used to answer questions, use a digital device to collect data automatically, explain that a data logger collects ‘data points’ from sensors over time, recognise how a computer can help us analyse data, identify the data needed to answer questions and use data from sensors to answer questions.-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 logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs Online Safety – Online Relationships (Year 4 objectives)Project Evolve objectives covered within this unit:* I can explain why I have a right to say ‘no’ or ‘I will have to ask someone’. I can explain who can help me if I feel under pressure to agree to something I am unsure about or don’t want to do (Online relationships - Year 2).
* I can explain and give examples of what is meant by ‘private’ and ‘keeping things private’ (Privacy and security Year 2)
 | **Programming – Repetition in games****(Teach Computing Year 4)**Children will develop the use of count-controlled loops in a different programming environment, explain that in programming there are infinite loops and count-controlled loops, develop a design that includes two or more loops which run at the same time, modify an infinite loop in a given program, design a project that includes repetition and create a project that includes repetition.- 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 programsOnline Safety – Health, Well-being and Lifestyle (Year 4 objectives) | **Creating media – Audio production****(Teach Computing Year 4)**Children will identify that sound can be recorded, explain that audio recordings can be edited, recognise the different parts of creating a podcast project, apply audio editing skills independently, combine audio to enhance their podcast project and evaluate the effective use of audio.-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 contactOnline Safety – Managing Online Information (Year 3 objectives).Project Evolve objectives covered within this unit:* 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 (Copyright and ownership – Year 4).
* I can give some simple examples of content which I must not use without permission from the owner, e.g. videos, music, images (Copyright and ownership – Year 4).
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| **Y5/6 Cycle A** | **Computing systems and networks – Systems and searching** **(Teach Computing Year 5)**Children will explain that computers can be connected together to form systems, recognise the role of computer systems in our lives, experiment with search engines, describe how search engines select results, explain how search results are ranked, and recognise why the order of results is important, and to whom.Adaptations for Year 6 Progression:• Children will explain how computers can be connected together to form systems, such as networks or the internet, and how these systems work together.• Children will recognise the important role computer systems play in our daily lives, including how they support tasks, communication, and entertainment.• Children will experiment with search engines, using them to find information and explore how different search terms affect the results.• Children will describe how search engines select results, understanding the role of keywords, algorithms, and indexing in providing information.• Children will explain how search results are ranked, exploring factors such as relevance, popularity and authority that influence ranking.• Children will recognise why the order of search results is important, understanding how it affects who can access information and why certain results are prioritised.-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-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 contentOnline Safety – Privacy and Security (Year 5 objectives)Online Reputation to be explored throughout the year during assemblies/collective worship.Online safety can be taught as a circle time activity, integrated into another lesson or presented as a standalone lesson, depending on the children's needs.Project Evolve objectives covered within this unit: | **Creating media – Video production****(Teach Computing Year 5)**Children will explain what makes a video effective, identify digital devices that can record video, capture video using a range of techniques, create a storyboard, identify that video can be improved through reshooting and editing, and consider the impact of the choices made when making and sharing a video.Adaptations for Year 6 Progression:• Children will explain what makes a video effective, considering aspects such as clarity, engagement, and the purpose of the video.• Children will identify different digital devices, such as cameras, smartphones or tablets, that can be used to record video and understand their different features.• Children will capture video using a range of techniques, such as framing shots, using angles and considering lighting to enhance the video’s quality.• Children will create a storyboard, planning out their video and considering how each scene will flow to tell a clear and engaging story.• Children will identify how video can be improved through reshooting and editing, understanding how minor adjustments can improve the final product.• Children will consider the impact of the choices made when making and sharing a video, such as the message, the audience, and the ethical considerations of sharing content online.. -Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital contentSelect, 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 contactOnline Safety – Copyrightand Ownership (Year 5 objectives)Online Bullying to be explored during Anti-Bullying Week.Project Evolve objectives covered within this unit:* I can explain how identity online can be copied, modified or altered (Self image and identity - Year 5).
* I can demonstrate how to make responsible choices about having an online identity, depending on context (Self image and identity – Year 5).
* can search for information about an individual online and summarise the information found (Online reputaion – Year 5).
* I can describe ways that information about anyone online can be used by others to make judgments about an individual and why these may be incorrect (Online reputaion- Year 5).
* I can evaluate digital content and can explain how to make choices about what is trustworthy e.g. differentiating between adverts and search results (Managing online information – Year 5).
 | **Programming – Using the Microbit (Selection and Conditionals).**Lesson taken from Microbit – Musical Microbits.Children will need to learn/refamilarise themselves with selection in programming.Children will compose musical phrases and write algorithms to play their phrases on pitched instruments such as glockenspiels, program the micro:bit to play their phrases when events are triggered, experiment with using the accelerometer, and consider whether the micro:bit can be used as a music-making device, especially for those who might not have access to instruments.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-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 Online Safety – Self Image and Identity (Year 5 objectives)Safer Internet Day | **Computing systems and networks – Communication and collaboration****(Teach Comouting Year 6)**Children will explain the importance of internet addresses, recognise how data is transferred across the internet, explain how sharing information online can help people work together, evaluate different ways of working together online, recognise how we communicate using technology and evaluate different methods of online communication.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 - 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 contactOnline Safety – Online Relationships (Year 5 objectives)Project Evolve objectives covered within this unit:* I can explain how sharing something online may have an impact either positively or negatively (Online relationships – Year 6).

I can explain how search engines work and how results are selected and ranked (Managing online information – Year 6).I can explain how to use search technologies effectively (Managing online information – Year 6). | **Creating media – Vector drawing****(Teach Computing Year 5)**Children will identify that drawing tools can be used to produce different outcomes, create a vectordrawing by combining shapes, use tools to achieve a desired effect, recognise that vector drawings consist of layers, group objects to make them easier to work with and apply what they have learned about vector drawings.Adaptations for Year 6 Progression:• Children will identify that digital drawing tools can create different styles and effects, comparing vector graphics with other types of digital images.• Children will create a vector drawing by combining and manipulating shapes, using precise adjustments to design more complex images.• Children will use a range of digital tools, such as rotation, scaling and transparency, to achieve a desired visual effect in their vector artwork.• Children will recognise that vector drawings consist of layers and explore how layering affects the overall design and editing process.• Children will group and ungroup objects to make their designs easier to edit, understanding how grouping helps to structure complex drawings.• Children will apply their knowledge of vector drawings to create a detailed and purposeful digital design, considering elements such as symmetry, balance **and proportion.**-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 informationOnline Safety – Health, Well-being and Lifestyle (Year 5 objectives)Project Evolve objectives covered within this unit:**.** | **Programming – Variables in games****(Teach Computing Year 6)**Children will define a ‘variable’ as something that is changeable, explain why a variable is used in a program, choose how to improve a game by using variables, design a project that builds on a given example, use their design to create a project and evaluate their project.-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 -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 informationOnline Safety – Managing Online Information (Year 15objectives). |
| **Y5/6 Cycle B** | Basic Skills (See Curriculum Overview)In this unit, children will build upon the information technology skills they have learned so far, reinforcing and extending their basic computing abilities.Online Safety – Online Relationships (Year 6 objectives)Project Evolve objectives covered within this unit:Online Reputation to be explored throughout the year during assemblies/collective worship.Online safety can be taught as a circle time activity, integrated into another lesson or presented as a standalone lesson, depending on the children's needs. | Creating media – Web page creation(Teach Computing Year 6)Children will review an existing website and consider its structure, allowing them to analyse how web pages are organised. They will plan the features of their own web page, thinking carefully about design and functionality. As they develop their pages, they will consider the ownership and use of images, understanding the importance of copyright. They will recognise the need to preview pages before publishing and outline the necessity of a clear navigation path. Additionally, they will explore the implications of linking to content owned by others, ensuring they make informed and responsible choices when creating web content.. Online Safety – Copyrightand Ownership (Year 6 objectives)Online Bullying to be explored during Anti-Bullying Week. | Data and information – Flat-file databases(Teach Computing Year 5)Children will use a form to record information, developing their ability to collect and organise data efficiently. They will compare paper-based and computer-based databases, considering the advantages and disadvantages of each. As they explore different ways to manage data, they will outline how questions can be answered by grouping and sorting information. They will explain how specific tools can be used to select relevant data and recognise that computer programs can visually compare data to identify patterns and trends. Finally, they will apply their learning by using a real-world database to answer questions, enhancing their analytical and problem-solving skills.Online Safety – Self Image and Identity (Year 6 objectives)Safer Internet Day | Programming B – Selection in quizzes(Teach Computing Year 5)Children will explain how selection is used in computer programs, understanding its role in decision-making processes. They will relate conditional statements to how a condition connects to a specific outcome, recognising their importance in programming. As they develop their knowledge, they will explain how selection directs the flow of a program, influencing how it responds to different inputs. They will design their own program incorporating selection, before creating it using appropriate coding tools. Finally, they will evaluate their program, reflecting on its effectiveness and identifying any areas for improvement.Online Safety – Online Relationships (Year 6 objectives)Project Evolve objectives covered within this unit: | Data and information – Introduction to Spreadsheets(Teach Computing Year 6)Children will create and build a data set in a spreadsheet, developing their ability to organise and structure information effectively. They will explain how formulas can be used to produce calculated data and apply these formulas to manipulate and analyse their data. As part of their learning, they will create a spreadsheet to plan an event, using their skills to organise information efficiently. Finally, they will choose suitable ways to present data, ensuring clarity and accuracy in their visual representations.Online Safety – Health, Well-being and Lifestyle (Year 6 objectives) | **Programming B - Sensing movement****(Teach Computing Year 6)**Children will create a program to run on a controllable device, developing their understanding of how coding interacts with hardware. They will explain how selection controls the flow of a program, allowing it to respond to different conditions. As they refine their programming skills, they will update a variable using user input and use conditional statements to compare a variable to a given value. They will then design a project that incorporates inputs and outputs on a controllable device before developing their own program to bring their design to life.Online Safety – Managing Online Information (Year 6 objectives).Project Evolve objectives covered within this unit: |