

Computing Progression Document

Subject Leader: Mr Maguire

Early Years Foundation Stage

The EYFS framework is structured very differently to the national curriculum as it is organised across seven areas of learning rather than subject areas. There is not a specific strand for computing within the EYFS framework (although there was previously one called 'technology' that featured in the 'understanding the world' area of learning). Despite this, there are many opportunities for young children to use technology to solve problems and produce creative outcomes. In particular, many areas of the framework provide opportunities for pupils to develop their ability to use computational thinking effectively. The most relevant statements for computing are taken from the following areas of learning: Personal, Social and Emotional Development; Physical Development; Understanding the World; Expressive Arts and Design. The table below outlines the most relevant statements taken from the Early Learning Goals in the EYFS statutory framework and the Development Matters age ranges for Three and Four-Year-Olds and Reception.

Computing		
Three & Four-year-olds	Personal, Social and Emotional Development	<ul style="list-style-type: none"> Remember rules without needing an adult to remind them.
	Physical Development	<ul style="list-style-type: none"> Match their developing physical skills to tasks and activities in the setting.
	Understanding the World	<ul style="list-style-type: none"> Explore how things work.
Reception	Personal, Social and Emotional Development	<ul style="list-style-type: none"> Show resilience and perseverance in the face of a challenge. Know and talk about the different factors that support their overall health and wellbeing: <ul style="list-style-type: none"> Sensible amounts of screen time.
	Physical Development	<ul style="list-style-type: none"> Develop their small motor skills so that they can use a range of tools competently, safely and confidently.
	Expressive Arts and Design	<ul style="list-style-type: none"> Explore, use and refine a variety of artistic effects to express their ideas and feelings.
ELG	Personal, Social and Emotional Development	Managing self <ul style="list-style-type: none"> Be confident to try new activities and show independence, resilience and perseverance in the face of a challenge. Explain the reasons for rules, know right from wrong and try to behave accordingly.
	Expressive Arts and Design	Creating with materials <ul style="list-style-type: none"> Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.

As such, the use of technology and computational skills to achieve these goals takes place on an ongoing basis at St George & St Martin. Opportunities to use technology to solve problems, engage in role-play and express creative ideas and designs should happen regularly. EYFS has access to a range of hardware and software to achieve this, such as Phonics Bug, Purple Mash, iPads, cameras and laptops. By the end of EYFS, children should:

- Know how to operate simple equipment, e.g. turn on CD player and use a remote control.
- Show an interest in technological toys with knobs or pulleys, or real objects such as cameras or mobile phones.
- Show skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images.
- Know that information can be retrieved from computers
- Complete a simple program on a computer.
- Use ICT hardware to interact with age-appropriate computer software.
- Recognise that a range of technology is used in places such as homes and school.
- Select and use technology for particular purposes.

Computer Science (Programming)

KS1 National Curriculum Objectives:

- 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

Year group	Curriculum	Linked Units
Y1	<ul style="list-style-type: none"> • In Year 1, children will be introduced to the principles of programming through unplugged tasks and the use of Bee-Bots. • They will be introduced to algorithms as a set of step-by-step instructions given to a device • They will learn how to debug simple algorithms and how to use logical reasoning to predict how a program will behave. 	<ul style="list-style-type: none"> • Summer 1 - Beebots
Y2	<ul style="list-style-type: none"> • In Year 2, children will be introduced to on-screen programming through Scratch Jr. • They will explore the way a project looks by investigating sprites and backgrounds. • They will use programming blocks to use, modify, and create programs. • They will also be introduced to the early stages of program design through the introduction of algorithms. • Children will learn how to create, test and debug algorithms, and preparing children to use the language of Turtle Logo. • The children begin by giving and following instructions to move forward and make quarter turns, followed by walking different rectilinear shapes. The language is extended to use the main Turtle Logo commands. Children will create, text and debug algorithms for shapes and routes around school in preparation for using the commands in online programs such as Turtle Logo/Logo Interpreter or MSW Logo. • Once children have completed the Preparing for Turtle Logo unit, they will then use the basic commands in Logo to move and draw using the turtle on screen, and then further develop algorithms using the “repeat” command. • These skills are then developed by teaching children to create algorithms in Scratch using a selection of blocks. 	<ul style="list-style-type: none"> • Autumn 2 - Scratch Jr • Summer 1 - Preparing for Turtle Logo / Scratch • Summer 2 - Turtle Logo / Scratch

Computer Science (Programming)

KS2 National Curriculum Objectives:

- 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

Year group	Curriculum	Linked Units
Y3	<ul style="list-style-type: none"> • In Year 3, the children will explore the concept of sequencing in programming through Scratch. It begins with an introduction to the programming environment, which will be new to most learners. • They will be introduced to a selection of motion, sound, and event blocks which they will use to create their own programs, featuring sequences. The final project in Autumn 2 is to make a representation of a piano. The unit is paced to focus on all aspects of sequences, and make sure that knowledge is built in a structured manner. Learners also apply stages of program design through this unit. • Following this, in Summer 2 the children will explore the links between events and actions, while consolidating prior learning relating to sequencing. • Children begin by moving a sprite in four directions (up, down, left, and right). They then explore movement within the context of a maze, using design to choose an appropriately sized sprite. • This unit also introduces programming extensions, through the use of Pen blocks. Learners are given the opportunity to draw lines with sprites and change the size and colour of lines. • The unit concludes with learners designing and coding their own maze-tracing program. 	<ul style="list-style-type: none"> • Autumn 2 – Scratch (Sequencing Sounds) • Summer 2 – Scratch (Events & Actions)
Y4	<ul style="list-style-type: none"> • In Year 4, the children build on earlier units on programming using Scratch Jr on tablet and Turtle Logo / Scratch on a computer. • In Autumn 1 the children write quizzes by combining questions. While specific skills in Scratch are taught, the unit aims to teach children the wider programming skills of solving problems, testing, debugging, improving and evaluating. • In Spring 2, children will explore the concept of repetition in programming using the Scratch environment. The unit begins with a Scratch activity building on prior learning of Turtle Logo, where learners can discover similarities between two environments. • Children look at the difference between count-controlled and infinite loops, and use their knowledge to modify existing animations and games using repetition. • Their final project is to design and create a game which uses repetition, applying stages of programming design throughout. 	<ul style="list-style-type: none"> • Autumn 1 – Scratch (Create A Quiz) • Spring 2 – Scratch (Repetition In Games)

<p>Y5</p>	<ul style="list-style-type: none"> • In Year 5, children begin by building on the previous unit in Year 4 (Questions and Quizzes) using Scratch to build and edit algorithms for simple games. • The unit is designed to help children develop their skills in writing their own algorithms as well as editing and debugging existing codes. • In Summer 1, children’s learning focuses on bringing together elements of all the four programming constructs: sequence, repetition, selection and variables. They have the opportunity to use all of these constructs in a different, but still familiar environment, while also utilising a physical device — the micro:bit. • The unit begins with a simple program for learners to build in and test in the programming environment, before transferring it to their micro:bit. • They then take on three new projects with each lesson adding more depth. • Design features prominently in this unit. A design template is introduced in Lesson 3, initially scaffolded to give learners the opportunity to create code from a given design. In Lesson 4 that scaffolding is gradually reduced, then in Lesson 5, learners create their own design, using the same template and learners will apply their knowledge of the programming constructs and use their design to create their own micro:bit-based step counter. 	<ul style="list-style-type: none"> • Autumn 1 – Scratch (Maze Games) • Summer 1 – Micro:bit devices
<p>Y6</p>	<ul style="list-style-type: none"> • In Year 6, children will be given the opportunity to use and develop all four programming constructs (sequence, repetition, selection and variables) they used in Year 5 in their Micro:bit unit, this time applying it to Scratch as they design, build and program Ping Pong games inspired by the arcade game ‘Pong’, manufactured by Atari in 1972. They will: <ul style="list-style-type: none"> ○ Write a program that combines more than one attribute. ○ Develop a sequenced program that has repetition and variables identified. ○ Design algorithms that use repetition and 2-way selection. 	<ul style="list-style-type: none"> • Autumn 1 – Scratch (Ping Pong Games)

Information Technology

KS1 National Curriculum Objectives:

- Use technology purposefully to create, organise, store, manipulate and retrieve digital content.

Year group	Curriculum	Linked Units
Y1	<ul style="list-style-type: none"> • In Year 1, children will first explore information technology in Spring 2. This unit will teach children the basic computer skills that they will need in order to be able to use a desktop or laptop computer. • Children will learn the basic computer skills required to be able to use a PC device successfully. They will explore the different parts of a PC device. Children will be taught how to switch on and shut down a PC device. Children will learn how to navigate a computer mouse or laptop trackpad. Children will also learn about the main keys on a keyboard and how to use their mouse, trackpad and keyboard skills to log on to and log off from a PC device. They will also apply these skills in the following ways: to launch an application; to adjust the window; to save, find and open a file in a folder. • In Summer 2, children will develop their word processing skills, learning basic typing and word processing skills. Children will learn how to type with two hands, use the shift, space and enter key properly, and edit work by using the backspace, delete and arrow keys. Children will then go on to learn how to use undo and redo and to select and format text. 	<ul style="list-style-type: none"> • Spring 2 - Basic computing skills • Summer 2 - Processing skills (Microsoft Word)
Y2	<ul style="list-style-type: none"> • In Year 2, children will develop their presentation skills using Microsoft PowerPoint. Lessons 1 and 6 focus on important computer skills needed for safe and effective computer use and introduce some further skills concerning the use of folders, searching for files and printing. • Lessons 2-5 introduce children to presentations and teach the skills needed to create a simple presentation. 	<ul style="list-style-type: none"> • Spring 1 - Presentation skills (Microsoft PowerPoint)

Information Technology

KS2 National Curriculum Objectives:

- 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.

Year group	Curriculum	Linked Units
Y3	<ul style="list-style-type: none"> • This unit builds on the children’s learning on word processing in Year 1, aimed at teaching basic word-processing skills to children. In this unit, children will learn to use various features for formatting text. • Children will learn how to screenshot text, change case, align, bullet and number text, use keyboard shortcuts using ctrl, and finally insert and format text boxes. 	<ul style="list-style-type: none"> • Spring 2 - Processing skills (Microsoft Word)
Y4	<ul style="list-style-type: none"> • In Year 4, children continue to will build on their word processing skills. • This unit aimed at teaching basic and word processing and text formatting skills. In this unit children will learn about formatting images and organising content into and effective layout. • In this unit, children will: <ul style="list-style-type: none"> ○ Format images for a purpose. ○ Use formatting tools to create an effective layout. ○ Use the spellcheck tool. ○ Insert and format a table in a word processing document. ○ Change a page layout for a purpose. • In Summer 1, children will learn about podcasts. This unit allows children to use software and digital devices for recording sound. Based around the theme of a Radio Station, it is designed to encourage a creative approach that includes interviewing, making adverts and using jingles. Other software is incorporated where children write scripts and design additional advertising for their Radio Station. Children will: <ul style="list-style-type: none"> ○ Use software to create my own sounds by recording, editing and playing. ○ Combine audio effects to create an original radio jingle. ○ Research and plan digital content for a radio podcast. ○ Use software to create and present digital content for a radio podcast. ○ Design and record a persuasive radio advert for a product or service. 	<ul style="list-style-type: none"> • Spring 1 - Processing skills (Microsoft Word) • Summer 1 – Podcasts (Audacity)

<p>Y5</p>	<ul style="list-style-type: none"> • In Year 5 children will build on presentation skills developed in Year 2. • Children will plan a branching story, creating slide templates and organising slides with hyperlinks. From there children will add themes, transitions and animations, use action settings, insert audio and video and finally evaluate slide layouts and make improvements. 	<ul style="list-style-type: none"> • Spring 1 - Presentation skills (Microsoft PowerPoint)
<p>Y6</p>	<ul style="list-style-type: none"> • In Year 6, children are given an understanding of spreadsheets and how they can be used. In the first five lessons, a different spreadsheet template is provided in which children learn skills in formatting and entering specific formulas. Lessons include investigative skills in using the spreadsheet to solve specific problems. Examples include number calculations, sports league tables and test scores. In the final lesson, children learn how to present their data using graphs and charts. • In Summer 1, children learn about desktop publishing. During this unit, children will become familiar with the terms 'text' and 'images' and understand that they can be used to communicate messages. They will use desktop publishing software and consider careful choices of font size, colour and type to edit and improve premade documents. They will be introduced to the terms 'templates', 'orientation', and 'placeholders' and begin to understand how these can support them in making their own template for a magazine front cover. They will start to add text and images to create their own pieces of work using desktop publishing software. Children will look at a range of page layouts thinking carefully about the purpose of these and evaluate how and why desktop publishing is used in the real world. 	<ul style="list-style-type: none"> • Spring 1 – Spreadsheets (Microsoft Excel) • Summer 1 – Desktop publishing (Microsoft Publisher)

Digital Literacy / E-Safety

KS1 National Curriculum Objectives:

- 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

Year group	Curriculum	Linked Units
Y1	<ul style="list-style-type: none"> • In Year 1, children will be introduced to e-safety through ‘Smartie The Penguin’. During this unit, children will explore: <ul style="list-style-type: none"> ○ Pop ups and in-app purchasing ○ Inappropriate websites ○ Cyberbullying ○ Upsetting images ○ Talking to strangers online • Children will build on this in Spring 1 developing their online safety and digital literacy skills. In this unit, children learn about the potential dangers in the online world and what basic steps we all need to take in order to have positive digital experiences. The first lesson focuses on why it is important for children to name their creative work. They go on to learn about using a search engine safely to find pictures. Children learn the SMART rules and look at what information should be kept safe when using the Internet. The lessons then explore the positives and potential negatives of online communication, such as email, and children will develop the skills to recognise potential dangers and act accordingly to keep themselves and others safe. 	<ul style="list-style-type: none"> • Autumn 1 – Online Safety (Smartie The Penguin) • Spring 1 – Online Safety
Y2	<ul style="list-style-type: none"> • In Year 2, children learn about how what they do online leaves a trail called a digital footprint. They will look at how to improve the efficiency of their online searches, the types of websites that are best for children to access when looking for information, as well as how to identify inappropriate content and the actions they should take if they do. Children will be introduced to the term ‘cyberbullying’ and look at how they should communicate online and deal with instances of people being unkind via digital means. • In Spring 2, children in Year 2 will: <ul style="list-style-type: none"> ○ Identify the many uses of digital technology and to explore how individuals within the class use it. ○ Explore how some things online (people and places) are reliable and others aren’t. ○ Understand what personal information is and how to keep it safe. ○ Understand that sometimes things don’t appear quite ‘right’ online and can be dangerous or distressing. To know when to ask an adult for help or advice. ○ Know what is meant by a safe and unsafe decision online. To identify safe solutions for a range of online scenarios. 	<ul style="list-style-type: none"> • Autumn 1 – Online Safety • Spring 2 – E-Safety Mini Topic

Digital Literacy / E-Safety

KS2 National Curriculum Objectives:

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

Year group	Curriculum	Linked Units
Y3	<ul style="list-style-type: none"> • Year 3 begin their digital literacy / e-safety learning in Autumn 1. In this unit, children are introduced to email and other forms of online communication. They will look at how to write and send emails, as well as how to decide if an email is safe to open. They will build on their existing knowledge of cyberbullying and how to deal with unkind behaviour online. • The use and importance of privacy settings is introduced and children will discuss the types of information we should not share online. They will build on the idea of a digital footprint by thinking about how the adverts they see online are targeted at them. Children will finish the unit by using the knowledge they have gained to plan a party using online communication methods. • In Summer 1, Year 3 build on this learning by learning about what the Internet is, how the Internet works and the three different types of connections that can be used. They will then have the opportunity to explore web browsers and search engines, learning how to detect if a web page can be trusted whilst also ensuring that they know how to stay safe online. Finally, they will learn how to copy and paste images from the web. In lesson 5 the children will reflect on how important it is they know to tell a trusted adult if any images should arise that make them feel uncomfortable. 	<ul style="list-style-type: none"> • Autumn 1 – Online Safety • Summer 1 – Online searchers and surfers
Y4	<ul style="list-style-type: none"> • In Year 4, children continue to build on their digital literacy / e-safety learning. In Autumn 2, children learn about preventing and dealing with cyberbullying; how to use search engines efficiently; how to avoid plagiarism online; and how to be a good digital citizen. • In Summer 2, Year 4 use Google’s ‘Be Internet Legends’ e-safety LKS2 unit. In this unit children will: <ul style="list-style-type: none"> ○ Learn how to protect their online reputation. ○ Work out whether information online is true and reliable. ○ Make strong passwords to secure my information online. ○ Know ways in which they can be ‘kind’ to others online. ○ Understand how screen use can affect the way they feel, and that it’s different for each person. ○ Understand how to form healthy digital habits. 	<ul style="list-style-type: none"> • Autumn 2 – Online Safety • Summer 2 – Be Internet Legends LKS2

<p>Y5</p>	<ul style="list-style-type: none"> • In Year 5, during Autumn 2 children will learn about email safety with a focus on preventing and dealing with spam. They will consider the importance of strong passwords and learn how to create them. Children will build on their knowledge of plagiarism and fair use of people’s work by learning how to write citations and references for websites they may use. They will scrutinise photographs that they see online and learn how easy it is to manipulate pictures and present them as reality. • In Summer 2, Year 5 children will: <ul style="list-style-type: none"> ○ Consider the impact of electronic communication content. ○ Understand the terms copyright, plagiarism and fair dealing; know the features of reliable / unreliable websites. ○ Understand the hidden costs of app usage and In-app purchasing; explore information sharing and privacy settings. ○ Understand that people they meet online might not be who they say they are; explore what information and images we should and should not share online. ○ Know the features of a strong password and the importance of keeping passwords safe. 	<ul style="list-style-type: none"> • Autumn 2 – Online Safety • Summer 2 - E-Safety Mini Topic
<p>Y6</p>	<ul style="list-style-type: none"> • In Year 6, children will build on their learning in Autumn 2 by completing the Google’s ‘Be Internet Legends’ UKS2 unit. In this unit children will: <ul style="list-style-type: none"> ○ Explain what a positive digital footprint is and how to achieve this. ○ Critically evaluate what I see on social media and be aware of ‘phishing’ scams. ○ Develop respectful and healthy online relationships. ○ Understand and reflect on how technology plays a role in our digital wellbeing. ○ Use my knowledge and tools to make personal choices to create healthy digital habits. • In Summer 2, Year 6 children will be taking a more in depth look at a variety of online safety issues, most of which they will have been familiarised with in previous years. They will be introduced to the idea of the internet, as a type of media, and how it can shape our ideas about boys and girls through stereotypes. Children will be given ways to deal with online content that they find worrying or even believe to be dangerous. 	<ul style="list-style-type: none"> • Autumn 2 - Be Internet Legends UKS2 • Summer 2 - Online Safety

Digital Literacy

KS1 National Curriculum Objectives:

- 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

Year group	Curriculum	Linked Units
Y1	<ul style="list-style-type: none"> • In Year 1, children begin to develop their digital literacy skills. In Autumn 2, children will learn about a range of technology in familiar settings, such as school and the home. They will learn the difference between technology and information technology and will begin to understand the benefits of using information technology. Children will also consider safety implications of using information technology, linking to online safety. They will have the opportunity to learn about the history of information technology. Finally, children will use their knowledge of technology creatively to design some technology of the future. • Children also develop digital literacy skills in Autumn 1 and Spring 1. Please see above for details in the 'Digital Literacy / E-Safety' progression strand. 	<ul style="list-style-type: none"> • Autumn 2 – Technology All Around Us • Autumn 1 – Online Safety (Smartie The Penguin) • Spring 1 – Online Safety
Y2	<ul style="list-style-type: none"> • In Year 2, children's digital literacy skills are further developed in Autumn 1 and Spring 2. Please see above for details in the 'Digital Literacy / E-Safety' progression strand. 	<ul style="list-style-type: none"> • Autumn 1 – Online Safety • Spring 2 – E-Safety Mini Topic

Digital Literacy

KS2 National Curriculum Objectives:

- 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

Year group	Curriculum	Linked Units
Y3	<ul style="list-style-type: none"> • In Year 3, children build on their digital literacy learning in Spring 1 by exploring systems and networks. During this unit, children develop their understanding of digital devices, with an initial focus on inputs, processes, and outputs. They also compare digital and non-digital devices. Following this, children are introduced to computer networks, including devices that make up a network's infrastructure, such as wireless access points and switches. The unit concludes with children discovering the benefits of connecting devices in a network. • Children also develop digital literacy skills in Autumn 1 and Summer 1. Please see above for details in the 'Digital Literacy / E-Safety' progression strand. 	<ul style="list-style-type: none"> • Spring 1 – Systems and networks (connecting computers) • Autumn 1 – Online Safety • Summer 1 – Internet research and communication
Y4	<ul style="list-style-type: none"> • In Year 4, children's digital literacy skills are further developed in Autumn 2 and Summer 2. Please see above for details in the 'Digital Literacy / E-Safety' progression strand. 	<ul style="list-style-type: none"> • Autumn 2 – Online Safety • Summer 2 – Be Internet Legends LKS2
Y5	<ul style="list-style-type: none"> • In Year 5 Spring 2, children will apply their knowledge and understanding of networks, to appreciate the internet as a network of networks which need to be kept secure. • They will learn that the World Wide Web is part of the internet, and be given opportunities to explore the World Wide Web for themselves to learn about who owns content and what they can access, add, and create. • Finally they will evaluate online content to decide how honest, accurate, or reliable it is, and understand the consequences of false information. • In Year 5, children's digital literacy skills are further developed in Autumn 2 and Summer 2. Please see above for details in the 'Digital Literacy / E-Safety' progression strand. 	<ul style="list-style-type: none"> • Spring 2 - Computing systems and networks (The Internet) • Autumn 2 – Online Safety • Summer 2 - E-Safety Mini Topic

<p>Y6</p>	<ul style="list-style-type: none"> • In Year 6, children build on their learning on computing systems and networks from Year 3 and Year 5 as they learn about systems and searching. • In this unit, children will develop their understanding of computer systems and how information is transferred between systems and devices. Children will consider small-scale systems as well as large-scale systems. They will explain the input, output, and process aspects of a variety of different real-world systems. Learners discover how information is found on the World Wide Web, through learning how search engines work. • In Year 6, children’s digital literacy skills are further developed in Autumn 2 and Summer 2. Please see above for details in the ‘Digital Literacy / E-Safety’ progression strand. 	<ul style="list-style-type: none"> • Spring 2 - Computing systems and networks (Systems and searching) • Autumn 2 - Be Internet Legends UKS2 • Summer 2 - Online Safety
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Year 7 (St Margaret Ward)

As children progress to Year 7, children will continue to build on their learning from EYFS – Year 6.
In Year 7 children will learn:

Autumn	Autumn 1 – Introduction to ICT <ul style="list-style-type: none">• E-Safety• Health & Safety• Accessing the network• Microsoft Word• Introduction to networks – students to look at the hardware / software components that make up a network. Autumn 2 <ul style="list-style-type: none">• Microsoft Publisher• Computers and the law – computer misuse act, copyright, designs and patents act, data protection act.
Spring	Spring 1 <ul style="list-style-type: none">• Creating and designing a spreadsheet (Excel)• Data representation – students will look at how the computer stores information (logic gates, truth table, logic circuits, binary numbers, converting between binary / decimal) Spring 2 – People in technology <ul style="list-style-type: none">• Introduction to PowerPoint• Internet research of pioneers in technology (Nancy Roman, Mae Jemison, Mark Zuckerberg, Tim Berners-Lee)
Summer	Summer 1 <ul style="list-style-type: none">• Algorithms and sorting – students will look at the basic fundamentals of computational thinking including algorithms, representing algorithms, linear / binary search, bubble / insertion sort Summer 2 <ul style="list-style-type: none">• Living in a digital world – students will be able to define and apply their knowledge to a variety of situations (communication, on the move, entertain me, smart working, online shopping)