Gillingstool Computing Long Term Plan

	Autumn	Spring	Summer
Enquiry Focus	**All about me** **Celebrations**	**Superheroes** **Journeys**	**Minibeasts and Growing** **The Farm**
EYFS	**Online safety: (Over Terms 1 and 2)** **Pupils should be taught to:** Understand to tell an adult if something unexpected appears online **Terms 1 and 2: Scheme of work units:** • Ourselves and people • Books and communication **Skills to teach:** Use Talking Tins to record messages. **(M)** Make a musical instrument to record. **(M)** Read an online book. **(M)** Record part of a story using a digital microphone. **(M)** Know how to operate simple equipment. **(CS)** Interacts with age-appropriate computer software **(CS)** Recognise that a range of technology is used in places such as homes and schools. **(CS)**	**Online safety: (Over Terms 3 and 4)** **Pupils should be taught to:** Understand to tell an adult if age-inappropriate games or content appear online. **Terms 3 and 4: Scheme of work units:** • Building and construction • Machines and robots **Skills to teach:** Give instructions to move a turtle on the Interactive Whiteboard. **(P)** Make a course for a Beebot. **(P)** Shows an interest in technological toys with knobs or pulleys, or real objects. **(CS)** Shows skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images. **(CS)** Know that information can be retrieved from computers. **(CS)** Completes a simple program on a computer. **(CS)** They select and use technology for particular purposes. **(CS)**	**Online safety: (Over Terms 5 and 6)** **Pupils should be taught to:** Understand to tell an adult if anyone says something unkind online. **Terms 5 and 6: Scheme of work units:** • Plants and Animals • Places and the Environment **Skills to teach:** Sort items according to given and own criteria e.g. colour, number of legs, initial sound. **(HD)** Sort images on the Interactive Whiteboard according to similarities and differences. **(HD)** Create an image using the Paint program. **(M)** Take photos using a digital camera. **(M)** Make a card using a publishing program. **(M)**
	M – Media	**CS** –Computer Skills	**P** – Programming **HD** – Handling Data

For scheme of work see: https://online.sgcyp.org.uk/803/ComputingSOW/SitePages/Home.aspx

Gillingstool Computing Long Term Plan

Enquiry Focus		Autumn	Spring	Summer
		Geography: Thornbury/Cardiff	**Local Study: Pioneers**	**History: Pirates**
Year 1/2	**A**	**Term 1:** **Online Safety** **(First week of each short term)** Pupils should be taught to: * Know some ways to stay safe online and who to tell if they have a problem **Impact of Technology** Pupils should be taught to: * Recognise where technology is used at home and at school. * Know that there is a range of technology used at home and at school. * Describe some of the benefits with using technology at home and school. * Identify parts of a computer and what they are for. * Describe some of the dangers of using technology. * Know how the use of technology at home and at school have changed over time. * Know about the types of technology that can be used to communicate.	**Term 3:** **Online Safety** **(First week of each short term)** Pupils should be taught to: * Know some ways that people can communicate online and how to be a good friend online. **Data (Split over Terms 3 and 4)** Pupils should be taught to: * Take observational photographs to find out about something. * Use video and sound recording devices to record data to answer questions. * Sort and group pictures and objects by given and own criteria in a number of different ways. * Match pictures and grouped objects to name labels. * Ask questions to show what they want to find out. * Record information using tallying and tables. * Contribute to creating a pictogram. * Create their own pictogram. * Answer questions about a pictogram by counting.	**Term 5:** **Online Safety** **(First week of each short term)** Pupils should be taught to: * Know that you do not always know who you are talking to online. **Programming (Split over Terms 5 and 6)** Pupils should be taught to: * Follow and give instructions using forward, backward and whole, half, quarter and three quarter turns . * Control remote controlled and programmable toys using direction and turn. * Predict the effect of a given instruction on a programmable toy. * Plan and test a sequence of instructions. * Debug a sequence of instructions given to a programmable toy by testing. * Know that controlling a programmable toy is more precise than a remote controlled toy. * Use an on screen resource to replicate movements of a programmable toy. * Plan and test a sequence of instructions on screen * Use direction and turn cards to plan and record an algorithm to achieve a purpose using a remote controlled toy. * Predict what a given algorithm will do related to a real life context. * Write their own algorithm relating to a real life context. * Debug a given algorithm.

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Gillingstool Computing Long Term Plan

		Autumn	Spring	Summer
Enquiry Focus		**Geography: Thornbury/Cardiff**	**Local Study: Pioneers**	**History: Pirates**
Year 1/2	**A**	**Term 2:** **Online Safety** **(First week of each short term)** Pupils should be taught to: * Know that personal information should not be shared online and what to do if they are asked for it. **Media** Pupils should be taught to: * Use different brushes and tools (including fill and shapes) in a paint program to create pictures. * Take a range of digital images and choose the best focused to share with an audience. * Record sounds and their voice on digital devices for a specific purpose. * Write sentences using a word processing program, using index fingers on a keyboard, spaces between words, return / enter to start a new line and backspace to delete as they go. * Add content to a page by selecting from an image and word bank and save their work. * Be supported to film something and watch it back. * Contribute ideas to an online discussion.	**Term 4:** **Online Safety** **(First week of each short term)** Pupils should be taught to: * Know what to do if someone is mean to them online.	**Term 6:** **Online Safety** **(First week of each short term)** Pupils should be taught to: * Know that some websites are safe to visit and what to do if they find an unsafe site.

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Gillingstool Computing Long Term Plan

		Autumn	Spring	Summer
Enquiry Focus		**Geography: Weather**	**Local Study: Flight**	**History: Castles**
Year 1/2	**B**	**Term 1:** **Online Safety** **(First week of each short term)** Pupils should be taught to: * Know what to look for in a website that will help to keep them safe **Impact of Technology** Pupils should be taught to: * Be able to describe what a device needs in order to work * Know about the different types of device that can access the internet and the different ways they are used * Know how technology supports people in their daily lives * Know how technology is used in some jobs * Know what sort of information can be found on web sites and how this is a benefit to people * Know how people can be contacted to get help online and that this has changed over time	**Term 3:** **Online Safety** **(First week of each short term)** Pupils should be taught to: * Know what information is safe to share and what is personal and should not be shared online **Data (Split over terms 3 and 4)** Pupils should be taught to: * Think about what information they will need to collect to answer questions. * Ask questions that they want to find the answers to including questions that can be answered yes no * Collect data in a variety of ways including digital microscopes to capture images * Use data to create charts and graphs * Answer questions from charts and graphs * Create decision trees using objects or photographs * Explore a branching database * Save their data and retrieve it * Find information from different sources such as web sites	**Term 5:** **Online Safety** **(First week of each short term)** Pupils should be taught to: • Know how to communicate online appropriately and identify when online communication is inappropriate and what to do if this happens. **Programming (Split over Terms 5 and 6)** Pupils should be taught to: * Follow and give instructions using forward, backward and whole, half, quarter and three quarter turns. * Control remote controlled and programmable toys using direction and turn. * Predict the effect of a given instruction on a programmable toy. * Plan and test a sequence of instructions. * Debug a sequence of instructions given to a programmable toy by testing. * Know that controlling a programmable toy is more precise than a remote controlled toy. * Use an on screen resource to replicate movements of a programmable toy. * Plan and test a sequence of instructions on screen. * Use direction and turn cards to plan and record an algorithm to achieve a purpose using a remote controlled toy. * Predict what a given algorithm will do related to a real life context. * Write their own algorithm relating to a real life context. * Debug a given algorithm.

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Gillingstool Computing Long Term Plan

Enquiry Focus		Autumn	Spring	Summer
		Geography: Weather	**Local Study: Flight**	**History: Castles**
Year 1/2	**B**	**Term 2:** **Online Safety** **(First week of each short term)** Pupils should be taught to: * Know that the information they put online leaves a 'digital footprint' **Media** Pupils should be taught to: * Be able to describe what a device needs in order to work * Know about the different types of device that can access the internet and the different ways they are used * Know how technology supports people in their daily lives * Know how technology is used in some jobs * Know what sort of information can be found on web sites and how this is a benefit to people * Know how people can be contacted to get help online and that this has changed over time	**Term 4:** **Online Safety** **(First week of each short term)** Pupils should be taught to: * Know that not all websites are safe for them to visit and know some ways they can identify safe and unsafe websites * Know how to avoid inappropriate websites by using safer searching	**Term 6:** **Online Safety** **(First week of each short term)** Pupils should be taught to: * Identify the features and advantages that help you to keep safe in different types of online communication - link to media unit

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Gillingstool Computing Long Term Plan

		Autumn	Spring	Summer
Enquiry Focus		**Geography: Disasters**	**Local Study: WW2 Bristol and Thornbury**	**History: Stone Age to Iron Age**
Year 3/4	**A**	**Term 1:** **Online Safety** **(First week of each short term)** Pupils should be taught to: * Know the benefits of using passwords and strategies for creating strong and secure passwords **Impact of Technology** Pupils should be taught to: * Know what a simulation is and why they are used. * Know that physical systems can be simulated. * Know that simulations can be different to a real life situation. * Know that simulations can be used to test a prediction. * Know that simulations allow people to explore a variety of options * Know that changing options in a simulation may have different outcomes. * Describe some ways in which simulations have an impact on our lives. * Know that simulations produce information that needs to be analysed.	**Term 3:** **Online Safety** **(First week of each short term)** Pupils should be taught to: * Know the differences between communicating in person and online and how to write clear and respectful messages **Data (Split over terms 3 and 4)** Pupils should be taught to: * Use a digital microscope to find detailed information. * Find information from a database to answer straight forward questions. * Add to a database. * Answer questions using information in a branching database. * Ask their own questions and recognise those which have yes /no answers. * Create their own branching database to answer questions. * Record and present data in drawings, pictograms, bar charts and tables. * Answer one-step and two-step questions from collected data. * Use a data logger to monitor changes and describe the findings.	**Term 5:** **Online Safety** **(First week of each short term)** Pupils should be taught to: * Know that you can pay for things online including in-app purchases and how to avoid incurring costs **Programming (Split over Terms 5 and 6)** Pupils should be taught to: * Use logo type commands to control a floor robot. * Understand how instructions given in a logo program relate to instructions given to a programmable robot / toy * Solve problems with a floor robot and replicate their solutions on screen. * Use logo commands to write an algorithm and program e.g. to draw regular shapes. * Explain what a given program does in a logo program and using a visual programming language. * Debug a program written in logo commands and using a visual programming language. * Use repeat in logo to write a program. * Test and debug given programs. * Write an algorithm using logo and using a visual programming language to achieve an outcome. * Explain how an algorithm solves a problem. * Write a program in which an object is used to trigger an action.

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Gillingstool Computing Long Term Plan

		Autumn	Spring	Summer
Enquiry Focus		**Geography: Disasters**	**Local Study: WW2 Bristol and Thornbury**	**History: Stone Age to Iron Age**
Year 3/4	**A**	**Term 2:** **Online Safety** **(First week of each short term)** Pupils should be taught to: * Know that people can connect through the internet and that this can create an online community * Know that some websites are designed to encourage people to buy something and what features are used on sites to do this. **Media** Pupils should be taught to: * Create pictures using a range of tools and effects such as blur, diffuse, darken, reflect and repeats. * Take digital images using zoom and use effects to edit them. * Record sounds and voices and compose music and use tools to add effects to recordings and compositions. * Use all fingers to create text based documents incorporating images selecting appropriate fonts, size and colour for a purpose and emphasis. Use bold, underline and italics for emphasis. * Edit text by highlighting, to change fonts, size, and colour and save their changes. * Contribute their own ideas to a wiki and use resources from a wiki to support planning for a project * Use a spell checker.	**Term 4:** **Online Safety** **(First week of each short term)** Pupils should be taught to: * Communicate effectively by email considering the purpose and audience and adapting the tone accordingly	**Term 6:** **Online Safety** **(First week of each short term)** Pupils should be taught to: * Identify some dangers of using mobile technology and how to keep safe

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Gillingstool Computing Long Term Plan

Enquiry Focus		Autumn	Spring	Summer
		Geography: Greece / Crete	**Local Study: Romans/Invaders and Settlers**	**History: Ancient Egypt**
Year 3/4	**B**	**Term 1:** **Online Safety** **(First week of each short term)** Pupils should be taught to: * Know how to be responsible and respectful digital citizens in offline and online communities **Impact of Technology** Pupils should be taught to: * Describe the features of a search engine that help you to search. * Know how to select an appropriate search tool. * Describe how to use a search engine effectively (to get best results). * Know why search results are ranked differently. * Know how to check the reliability of a web site. * Know about file structure, naming and organisation and the implications for finding resources. * Know about the different places data can be stored and the benefits and issues of this.	**Term 3:** **Online Safety** **(First week of each short term)** Pupils should be taught to: * Know that websites use the information you post online to target advertising and how to manage this **Data (Split over terms 3 and 4)** Pupils should be taught to: * Ask questions about a population and identify data to be collected to answer them * Plan and create a database * Distinguish between different types of data in a database field such as numerical, text, list * Search and sort data in a database to answer questions * Know how to identify inaccurate data * Present data appropriately for a purpose and audience * Use a data logger and analyse the findings.	**Term 5:** **Online Safety** **(First week of each short term)** Pupils should be taught to: * Know how to compare and refine keyword searches and explain their results **Programming (Split over Terms 5 and 6)** Pupils should be taught to: * Test and improve given programs. * Improve efficiency in programs by comparing different solutions and by using repeat. * Write and edit programs using logo commands. * Write procedures using logo e.g. to draw letters, polygons and other shapes. * Use procedures as part of a program. * Define variables e.g. to draw shapes on screen with logo and to create a score in a game. * Plan and write a program using a flow chart structure. * Use sensors to 'trigger' an action e.g. touching a wall. * Write an algorithm and then create a program that will use a simple selection command for a game.

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Gillingstool Computing Long Term Plan

Enquiry Focus		Autumn	Spring	Summer
		Geography: Greece / Crete	**Local Study: Romans/Invaders and Settlers**	**History: Ancient Egypt**
Year 3/4	**B**	**Term 2:** **Online Safety** **(First week of each short term)** Pupils should be taught to: * Know how to protect themselves from identity theft by considering the information they share online **Media** Pupils should be taught to: * Create pictures by choosing from a range of tools and effects and by copying and pasting sections of a picture. * Take digital images, edit using camera effects and crop them * Edit sound and music files using copy and paste and adding effects. * Create text based documents using appropriate layout for a purpose including use of bullet points, numbering, indenting and columns and selecting appropriate fonts. * Use right click to correct spellings, look up words and find synonyms * Script and plan a film considering shot types and then film it. * Contribute to a blog and know how information in a blog is organised.	**Term 4:** **Online Safety** **(First week of each short term)** Pupils should be taught to: * Know about the impact that hurtful online messages can have and how to deal with cyberbullying and support each other.	**Term 6:** **Online Safety** **(First week of each short term)** Pupils should be taught to: * Know that the type of content you post on line can influence how people see you and the implications for generating positive content * Know about the dangers of online gaming and how to keep safe

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Gillingstool Computing Long Term Plan

		Autumn	Spring	Summer
Enquiry Focus		**Geography: Energy**	**Local Study: Medicine**	**History: Ancient Greece**
Year 5/6	**A**	**Term 1:** **Online Safety** **(First week of each short term)** Pupils should be taught to: * Know about the consequences online behaviour can have **Impact of Technology** Pupils should be taught to: * Plan, debug and test algorithms and programs. * Use looping and repeat until a condition is met in programs. * Group commands to create procedures or sub-routines. * Plan, write, debug and test programs using selection structures. * Write programs in which an input controls an output and edit to give a different output. * Create a program to simulate and control a real life system. Control on screen mimics and physical devices. * Use 4 quadrants to identify position in a visual programming language. * Use understanding of internal angles to program more complex shapes on screen. * Write a program which uses more than one variable. * Use a varying sensor as an input to trigger action in a program e.g. temperature or light.	**Term 3:** **Online Safety** **(First week of each short term)** Pupils should be taught to: * Know that websites try to influence our views and recognise how to distinguish between fact and opinion **Data (Split over terms 3 and 4)** Pupils should be taught to: * Identify data required to answer specific questions. * Present data using different graphs and charts in a spreadsheet. * Collect and record information using databases and spreadsheets. * Complete complex searches (e.g. using and/or; ≤ / ≥) of data in databases and online data sources. * Answer questions by identifying data that can be collected using a data logger and interpreting the findings. * Plan investigations which make use of a data logger to collect data; analyse findings and present outcomes.	**Term 5:** **Online Safety** **(First week of each short term)** Pupils should be taught to: * Know what plagiarism is and how and when they can use the work of others **Programming (Split over Terms 5 and 6)** Pupils should be taught to: * Plan, debug and test algorithms and programs. * Use looping and repeat until a condition is met in programs. * Group commands to create procedures or sub-routines. * Plan, write, debug and test programs using selection structures. * Write programs in which an input controls an output and edit to give a different output. * Create a program to simulate and control a real life system. Control on screen mimics and physical devices. * Use 4 quadrants to identify position in a visual programming language. * Use understanding of internal angles to program more complex shapes on screen. * Write a program which uses more than one variable. * Use a varying sensor as an input to trigger action in a program e.g. temperature or light.

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Gillingstool Computing Long Term Plan

		Autumn	Spring	Summer
Enquiry Focus		**Geography: Energy**	**Local Study: Medicine**	**History: Ancient Greece**
Year 5/6	**A**	**Term 2:** **Online Safety** **(First week of each short term)** Pupils should be taught to: * Know what spam is, the forms it takes and strategies for dealing with it **Media** Pupils should be taught to: * Create pictures using a wide range of effects and tools in a paint program to create images designed for a specific purpose and audience. * Use a variety of tools and effects to edit sounds and music for a specific purpose and audience. * Create text based multimedia documents selecting an appropriate layout, fonts and tools for a purpose and audience. * Script and plan an animation for a specific purpose using green screen where appropriate. * Compare different online communications methods and explain how they are similar and different. * Use word processing software to design and format for specific purposes.	**Term 4:** **Online Safety** **(First week of each short term)** Pupils should be taught to: * Identify how social networking sites share use information and the risks of this	**Term 6:** **Online Safety** **(First week of each short term)** Pupils should be taught to: * Know how to protect devices from harm

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Gillingstool Computing Long Term Plan

Enquiry Focus		Autumn	Spring	Summer
		Geography: Climate	**Local Study: Trade: Slavery/Fair-Trade**	**History: Mayan/Amazon Basin**
Year 5/6	**B**	**Term 1:** **Online Safety** **(First week of each short term)** Pupils should be taught to: How to talk safely online. **Impact of Technology** Pupils should be taught to: * Know how to find out who information on a web page belongs to * Know how web sites are designed to have an impact on the audience * Be able to evaluate web sites and the impact they are designed to have on an audience * Know some ways to evaluate the reliability of web content * Know about intellectual property and copyright * Know how web pages are created and published	**Term 3:** **Online Safety** **(First week of each short term)** Pupils should be taught to: To know that websites must protect private information. Identify secure sites, their privacy policies and seals of approval. **Data (Split over terms 3 and 4)** Pupils should be taught to: * Complete data collection and analysis. * Select, collect, check accuracy and analyse the data through selecting appropriate data manipulation tools, and present results. * Solve problems by manipulating and interrogating data and present their findings. * Question the integrity of data and identify where data may be compromised.	**Term 5:** **Online Safety** **(First week of each short term)** Pupils should be taught to: Know that the media plays a powerful role in shaping ideas about girls and boys. Explore and discuss. **Programming (Split over Terms 5 and 6)** Pupils should be taught to: * Plan an algorithm using flow chart notation and then use it to write a program. * Write a program from a given algorithm to achieve a specified outcome. Use the program to test and improve the original algorithm. * Control on screen mimics and physical devices using more than one input and predict the outputs. * Use selection structures in a program. * Create variables in a program. * Use sensors to measure an input in order to trigger a sequence and procedure. * Edit programs using procedures / subroutines to improve efficiency.

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Gillingstool Computing Long Term Plan

Enquiry Focus		Autumn	Spring	Summer
		Geography: Climate	**Local Study: Trade: Slavery/Fair-Trade**	**History: Mayan/Amazon Basin**
Year 5/6	**B**	**Term 2:** **Online Safety** **(First week of each short term)** Pupils should be taught to: Communicate and exchange information effectively, safely and responsibly. **Media** Pupils should be taught to: * Take and edit digital images in different ways for different purposes and audiences. * Use a variety of tools and effects to change sounds and music in order to have a different impact on an audience. * Create and amend text based documents selecting an appropriate layout, fonts and tools for contrasting purposes and audience. * Incorporate hyperlinks and transitions in documents and presentations. * Plan film or animation for a specific purpose using green screen where appropriate and aiming to have a specific impact on a specified audience. * Choose an online communication mechanism for a specific purpose and explain their reasons for choosing it.	**Term 4:** **Online Safety** **(First week of each short term)** Pupils should be taught to: Know about cyberbullying; the similarities/ dissimilarities to in person bullying and to learn strategies for handling cyberbullying when it arises.	**Term 6:** **Online Safety** **(First week of each short term)** Pupils should be taught to: Review the online safety messages for this year.

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