Long Term Plan for Computing 25/26

Havannah First School Computing Coverage

Our curriculum is coverage is designed to address the three main strands of the Computing curriculum.

Digital Literacy – The skills, knowledge and understanding to participate fully and safely in our digital world.

Computer science - How computers and their systems work, are designed and programmed.

Information Technology – Using computers or physical devices for functional purposes, such as collecting and presenting information, or using search technology.

These three main strands have been organised into **four key themes**.

Computer Systems and Networks, Creating Media, Programming and Data and Information.

The units for key stages 1 and 2 are based on a spiral curriculum. This means that each of the themes is revisited regularly (at least once in each year group), and pupils revisit each theme through a new unit that consolidates and builds on prior learning within that theme. This ensures skills and concepts progress from one year group to the next

Digital Literacy will be taught discretely in the first lesson of every half term and should be interwoven within **every** Computing lesson.

R	Continuous provision linked to technology, accessible throughout the year: Remote control cars & Beebots: programming using positional language. iPads: Exploring/Tinkering with an app set up by class teacher. Smartboard: ICT games	Continuous provision linked to technology, accessible throughout the year: Remote control cars & Beebots: programming using positional language. iPads: Exploring/Tinkering with an app set up by class teacher.	Continuous provision linked to technology, accessible throughout the year: Remote control cars & Beebots: programming using positional language. iPads: Exploring/Tinkering with	Continuous provision linked to technology, accessible throughout the year: Remote control cars & Beebots: programming using positional language. iPads: Exploring/Tinkering	Continuous provision linked to technology, accessible throughout the year: Remote control cars & Beebots: programming using positional language. iPads: Exploring/Tinkering	Continuous provision linked to technology, accessible throughout the year: Remote control cars & Beebots: programming using positional language. iPads: Exploring/Tinkering

	Digital Literacy SWGfIL Project Evolve Self-image and identity Online Relationships Health, well-being and lifestyle Privacy and security	Smartboard: ICT games **Digital Literacy** SWGfIL Project Evolve Online Bullying Online reputation Managing online information Copyright and Ownership	an app set up by class teacher. Smartboard: ICT games **Computer Science** Bee-bot basics Bee-bot app Activity 1,2,3	with an app set up by class teacher. Smartboard: ICT games **Computer Science** Using the Beebots and Micebots	with an app set up by class teacher. Smartboard: ICT games **Information Technology** **Using the camera app and photo album app** **Scanning QR codes** **Sign in/out of Seesaw Book Creator-Insert pen drawing, use different pen colours, add pages** **Green Screen opportunities**	with an app set up by class teacher. Smartboard: ICT games **Information Technology** **Using the camera app and photo album app** **Scanning QR codes** **Sign in/out of Seesaw Book Creator-Insert pen drawing, use different pen colours, add pages** **Green Screen opportunities**
Y1	**Autumn**		**Spring**		**Summer**	
	Online Safety					
	Digital Literacy **SWGfL Project Evolve** Self-image and identity	**Digital Literacy** **SWGfL Project Evolve** Online Relationships	**Digital Literacy** **SWGfL Project Evolve** Health, Well-being and Lifestyle	**Digital Literacy** **SWGfL Project Evolve** Managing Online Information	**Digital Literacy** **SWGfL Project Evolve** Online Reputation	**Digital Literacy** **SWGfL Project Evolve** Online Bullying

	Unit: Computer Systems and Networks Topic: Technology Around Us	Unit: Creating Media Topic: Digital Painting	Unit: Programming Topic: Moving a Robot	Unit: Data and Information Topic: Grouping Data	Unit: Creating Media Topic: Digital Writing	Unit: Programming Topic: Programming animations
	Technology around us- to identify technology. **Using technology**- identify a computer and its main parts. **Developing mouse skills-** use a mouse in different ways. **Using a computer keyboard-** use a keyboard to type on a computer. **Developing keyboard skills-** use the keyboard to edit text. **Using a computer responsibly-** create rules for using technology responsibly	**How can we paint using a computer?** describe what different freehand tools do. **Using shapes and lines** – use the shape tool and line tools **Making careful choices** – to make careful choices when painting a digital picture. **Why did I choose that?** – explain why I chose the tools I used. **Painting all by myself**– use the computer on my own to paint a picture. **Comparing computer art and painting-** compare painting a picture on a computer and on paper.	**Buttons** – explain what a given command will do. **Directions** – act out a given word **Forwards and backwards** – combine 'forwards' and backwards' commands to make a sequence. **Four directions** – combine four direction commands to make sequences. **Getting there** – plan a simple programme **Routes-** find more than one solution to a problem.	**Label and count** – to label objects. **Group and count** – identify that objects can be counted. **Describe an object** – describe objects in different ways. **Making different groups** – count objects with the same properties. **Comparing groups** – compare groups of objects. **Answering questions-** answer questions about groups of objects.	**Exploring the keyboard** – use a computer to write. **Adding and removing text** – add and remove text on a computer. **Exploring the toolbar** – identify that the look of text can be changed on a computer. **Making changes to text** – make careful choices when changing text. **Explaining my choices** – explain why I used the tools that I chose. **Pencil or keyboard-** compare tying on a computer to writing on paper.	**Comparing tools** – choose a command for a given purpose. **Joining blocks** – show that a series of commands can be joined together. **Make a change** – identify the effect of changing a value. **Adding sprites**– explain that each sprite has its own instructions. **Project design** – design the parts of a project. **Following my design –** use my algorithm to create a program.
Y2	**Autumn**		**Spring**		**Summer**	
	Online Safety					
	Digital Literacy	**Digital Literacy**	**Digital Literacy**	**Digital Literacy**	**Digital Literacy**	**Digital Literacy**

	SWGfL Project Evolve Self-image and identity	**SWGfL Project Evolve** Online Relationships	**SWGfL Project Evolve** Health, Well-being and Lifestyle	**SWGfL Project Evolve** **Managing Online Information**	**SWGfL Project Evolve** **Online Reputation**	**SWGfL Project Evolve** **Online Bullying**
	Unit: Computer Systems and Networks **Topic: IT Around Us**	**Unit: Creating Media** **Topic: Digital Photography**	**Unit: Programming** **Topic: Robot Algorithms**	**Unit: Data and Information** **Topic: Pictograms**	**Unit: Creating Media** **Topic: Digital Music**	**Unit: Programming** **Topic: Programming quizzes**
	What is IT? – recognise the uses and features of information technology **IT in school** – identify the uses of information technology in the school. **IT in the world** – identify information technology beyond school. **The benefit of IT** – explain how information technology helps us. **Using IT safely** – explain how to use information technology safely. **Using IT in different ways –** recognise that choices are made when using information technology.	**Taking photographs** – use a digital device to take a photograph. **Landscape or portrait** – make choices when taking a photograph. **What makes a good photograph?** – describe what makes a good photograph. **Lighting** – decide how photographs can be improved. **Effects** – use tools to change an image. **Is it real? -** recognise that photos can be changed.	**Giving instructions** – describe a series of instructions as a sequence. **Same but different** – explain what happens when we change the order of instructions. **Making predictions** – use logical reasoning to predict the outcome of a program. **Mats and routes** – explain that programming projects can have code and artwork. **Algorithm design** – design an algorithm. **Break it down -** create and debug a program that I have written.	**Counting and comparing** – recognise that we can count and compare using tally charts. **Enter the data** – recognise that objects can be represented as pictures. **Creating pictograms** – create a pictogram. **What is an attribute?** – select objects by attribute and make comparisons. **Comparing people** – recognise that people can be describes as attributes. **Presenting information –** explain that we can present information using a computer.	**How music makes us feel** – say how music can make us feel. **Rhythms and patterns** – identify that there are patterns in music. **How music can be used** – experiment with sound using a computer. **Notes and tempo** – use a computer to create musical pattern. **Creating digital music** – create music for a purpose. **Reviewing and editing music –** review and refine our computer work.	**ScratchJr Recap** – explain that a sequence of commands has a start. **Outcomes** – explain that a sequence of commands has an outcome. **Using a design** – create a program using a given design. **Changing a design** – change a given design. **Designing and creating a program** – create a program using my own design. **Evaluating –** decide how my project can be improved.

Y3	Autumn		Spring		Summer	
	Online Safety					
	Digital Literacy **SWGfL Project Evolve** Self-image and identity	**Digital Literacy** **SWGfL Project Evolve** Online Relationships	**Digital Literacy** **SWGfL Project Evolve** Health, Well-being and Lifestyle	**Digital Literacy** **SWGfL Project Evolve** **Managing Online Information**	**Digital Literacy** **SWGfL Project Evolve** **Online Reputation**	**Digital Literacy** **SWGfL Project Evolve** **Online Bullying**
	Unit: Computer Systems and Networks **Topic: Connecting Computers**	**Unit: Creating Media** **Topic: Stop frame animation**	**Unit: Programming** **Topic: Sequencing Sounds**	**Unit: Data and Information** **Topic: Branching Databases**	**Unit: Creating Media** **Topic: Desktop publishing**	**Unit: Programming** **Topic: Events and actions in programs**
	How does a digital device work? – explain how digital devices function. **What parts make up a digital device?** – identify input and output devices. **How do digital devices help us?** – recognise how digital devices can change how we work. **How am I connected** – explain how a computer network can be used to share information. **How are computers connected** – explain how digital devices can be connected. **What does our school network look like? –** recognise the physical components of a network.	**Can a picture move?** – explain that animation is a sequence of drawings or photographs. **Frame by frame** – relate animated movement with a sequence of images. **What's the story** – plan an animation. **Picture perfect** – identify the need to work consistently and carefully. **Evaluate and make it great!** – review and improve an animation. **Lights, camera, action! –** evaluate the impact of adding other media to an animation.	**Introduction to scratch** – explore a new programming environment. **Programming sprites** – identify that commands have an outcome. **Sequences** – explain that a programme has a start. **Ordering commands** – recognise that a sequence of commands have an order. **Looking good** – change the appearance of my project.	**Yes or no questions** – create questions with yes or no answers. **Making groups** – identify the attributes needed to collect data about an object. **Creating a branching database** – create a branching database. **Structuring a branching database** – explain why it is helpful for a database to be well structured. **Planning a branching database** – plan the structure of a branching database.	**Words and pictures** – recognise how text and images convey information. **Can you edit?** – recognise that text and layout can be edited. **Great template!** – choose appropriate page settings. **Becoming a designer** – add content to a desktop publishing publication. **Lay it out** – consider how different layouts can suit different purposes. **Why desktop publishing? –** consider the benefits of	**Moving a sprite** – explain how a sprite moves in an existing project. **Maze movement** – create a program to move a sprite in four directions. **Drawling lines** – adapt a program to a new context. **Adding features** – develop my program by adding features. **Debugging movement** – identify and fix bugs in a program.

			Making an instrument – create a project from a task description	**Making a dinosaur identifier –** independently create an identification tool.	desktop publishing.	**Making a project –** design and create a maze based challenge
Y4	**Autumn**		**Spring**		**Summer**	
	Online Safety					
	Digital Literacy **SWGfL Project Evolve** Self-image and identity	**Digital Literacy** **SWGfL Project Evolve** Online Relationships	**Digital Literacy** **SWGfL Project Evolve** Health, Well-being and Lifestyle	**Digital Literacy** **SWGfL Project Evolve** Managing Online Information	**Digital Literacy** **SWGfL Project Evolve** Online Reputation	**Digital Literacy** **SWGfL Project Evolve** Online Bullying
	Unit: Computer Systems and Networks **Topic: The Internet**	**Unit: Creating Media** **Topic: Audio Production**	**Unit: Programming** **Topic: Repetition in Shapes**	**Unit: Data and Information** **Topic: Data Logging**	**Unit: Creating Media** **Topic: Photo Editing**	**Unit: Programming** **Topic: Repetition in Games**
	Connecting networks – explain how networks physically connect to other networks. **What is the internet made of?** – recognise how networked devices make up the internet. **Sharing information** – outline how websites can be shared via the world wide web. **What is a website?** – describe how content can be added and accessed on the WWW.	**Recording sound** – identify that sound can be recorded. **Editing audio** – explain that audio recordings can be edited. **Planning a podcast** – recognise the different parts of creating a podcast project. **Creating a podcast** – apply audio editing skills independently. **Behind the scenes?** – combine audio to enhance my podcast project.	**Programming a screen turtle** – identify that accuracy in programming is important. **Programming letters** – create a program in a text-based language. **Patterns and repeats** – explain what 'repeat' means. **Using loops to create shapes** – modify a count controlled loop to produce a given outcome.	**Answering questions** – explain that data gathered over time can be used to answer questions. **Data collection** – use a digital device to collect data automatically. **Logging** – explain that a data logger collects 'data points' from sensors over time. **Analysing data** – recognise how a computer can help us analyse data.	**Changing digital images** – explain that the composition of digital images can be changed. **Recolouring** – explain that colours can be changed in digital images. **Cloning** – explain how cloning can be used in photo editing. **Combining** – explain that images can be combined.	**Using loops to create shapes** – develop the use of count controlled loops in a different programming environment. **Different loops** – explain there are infinite loops and count controlled loops. **Animate your name** – develop a design that includes two or more

	Who owns the web? – recognise how the content of the WWW is created by people. **Can I believe what I read? –** evaluate the consequences of unreliable content.	**Evaluating podcasts–** evaluate the effective use of audio.	**Breaking things down** – decompose a task into small steps. **Creating a program –** create a program that uses count controlled loops to produce a given outcome.	**Data for answers** – identify the data needed to answer questions. **Answering my question –** use data from sensors to answer questions.	**Creating** – combine images for a purpose. **Evaluating –** evaluate how changes can improve an image.	loops which run at the same time. **Modify a game** – modify an infinite loop in a given program. **Designing a game** – design a project that involves repetition. **Creating your games –** create a project that includes repetition.

Year 4 Computing Gateways

Online Safety ***How*** *do I stay safe online?*	• **Know that you should tell a trusted adult if you feel unsafe or worried online** • **Recognise what information should <u>not</u> be shared online** • **Know that not all information shared online is true** • **Understand the behaviours that are appropriate in order to stay safe and be respectful online** • **Know what social media is and that age restrictions apply** • **Understand the importance of limiting the amount of time spent using technology (screen time)**
Computer Systems and Networks ***What*** *are the parts of a computer and how do computers work together?*	• **Recognise basic inputs and outputs** • **Use a mouse to click, drag, fill and select** • **Make text a different style, size and colour using Microsoft Word** • **Demonstrate using the 'copy' and 'paste' functions.** • **Understand what a network is and how a school network might be organised** • **Know what emails are and how to send one**
Programming ***How*** *do computers follow instructions?*	• **Explain what an algorithm is** • **Create algorithms for a specific purpose** • **Code a simple computer program or game** • **Understand what decomposition is** • **Incorporate variables to make code more efficient**
Creating Media ***What*** *can I create using technology?*	• **Take photographs by holding the camera still and considering angles and light** • **Edit photographs and videos using film-editing software** • **Add transitions and texts to videos** • **Develop online searching skills to help find relevant information on the internet**
Data Handling ***What*** *is data and how do I collect and use it?*	• **Collect and input data into a spreadsheet on Microsoft Excel** • **Interpret data from a spreadsheet** • **Identify the correct data to answer certain questions**