SILVERHILL PRIMARY SCHOOL COMPUTING OVERVIEW

Intent Statement for Computing

Computing supports children's creativity and cross curricular learning to engage children and enrich their experiences in school. At Silverhill, we want pupils to be masters of technology and not slaves to it. Technology is everywhere and will play a pivotal part in every aspect of students' lives. Therefore, we want to model and educate our pupils on how to use technology positively, responsibly and safely. We want our pupils to be creators not consumers and our broad curriculum encompassing computer science, information technology and digital literacy reflects this. We want our pupils to understand that there is always a choice with using technology and as a school we utilise technology (especially social media) to model positive use. We recognise that the best prevention for a lot of issues we currently see with technology/social media is through education.

Building our knowledge in this subject will allow pupils to effectively demonstrate their learning through creative use of Technology. We recognise that technology can allow pupils to share their learning in creative ways. We also understand the accessibility opportunities technology can provide for our pupils. Our knowledge rich curriculum has to be balanced with the opportunity for pupils to apply their knowledge creatively which will in turn help our pupils become skilful computer scientists.

We encourage staff to try and embed computing across the whole curriculum to make learning creative and accessible. We want our pupils to be fluent with a range of tools to best express their understanding and hope by Upper Key Stage 2, children have the independence and confidence to choose the best tool to fulfil the task and challenge set by teachers.

As a school we follow the Teach Computing scheme, which maps tightly to the national curriculum, allowing us to provide a progressive and well structured menu for our pupils.

	EYFS Understanding the World	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Computer Systems and Networks	Through the use of the interactive whiteboard children will be guided through the use of an internet browser during whole class input sessions.	To identify technology To identify a computer and its main parts To use a mouse in different ways To use a keyboard to type on a computer To use the keyboard to edit text To create rules for using technology responsibly	To recognise the uses and features of information technology To identify the uses of information technology in the school To identify information technology beyond school To explain how information technology helps us To explain how to use information technology safely To recognise that choices are made when using information technology	To explain how digital devices function To identify input and output devices To recognise how digital devices can change the way we work To explain how a computer network can be used to share information To explore how digital devices can be connected To recognise the physical components of a network	To describe how networks physically connect to other networks To recognise how networked devices make up the internet To outline how websites can be shared via the World Wide Web (WWW) To describe how content can be added and accessed on the World Wide Web (WWW) To recognise how the content of the WWW is	To explain that computers can be connected together to form systems To recognise the role of computer systems in our lives To experiment with search engines To describe how search engines select results To explain how search results are ranked To recognise why the order of results is important, and to whom	To explain the importance of internet addresses To recognise how data is transferred across the internet To explain how sharing information online can help people to work together To evaluate different ways of working together online To recognise how we communicate using technology To evaluate

					created by people To evaluate the consequences of unreliable content		different methods of online communication
Data and Information	Through the use of JIT5, pupils are given the opportunity to experiment with simple pictograms Pupils will have access to a simple word processing application through JIT5 on the interactive whiteboard..	To label objects To identify that objects can be counted To describe objects in different ways To count objects with the same properties To compare groups of objects To answer questions about groups of objects	To recognise that we can count and compare objects using tally charts To recognise that objects can be represented as pictures To create a pictogram To select objects by attribute and make comparisons To recognise that people can be described by attributes To explain that we can present information using a computer	To create questions with yes/no answers To identify the attributes needed to collect data about an object To create a branching database To explain why it is helpful for a database to be well structured To plan the structure of a branching database To independently create an identification tool	To explain that data gathered over time can be used to answer questions To use a digital device to collect data automatically To explain that a data logger collects 'data points' from sensors over time To recognise how a computer can help us analyse data To identify the data needed to answer questions To use data from sensors.	To use a form to record information To compare paper and computer based databases To outline how you can answer questions by grouping and then sorting data To explain that tools can be used to select specific data To explain that computer programs can be used to compare data visually To use a realworld database to answer questions	To create a data set in a spreadsheet To build a data set in a spreadsheet To explain that formulas can be used to produce calculated data To apply formulas to data To create a spreadsheet to plan an event To choose suitable ways to present data
Creating Media	Pupils will use the animate tool within JIT5 to create simple presentations using template backgrounds, colours and and stamps.	To describe what different freehand tools do To use the shape tool and the line tools To make careful choices when painting a digital picture	To use a digital device to take a photograph To make choices when taking a photograph To describe what makes a good photograph To decide how photographs can be improved	To recognise how text and images convey information To recognise that text and layout can be edited To choose appropriate page settings To add content to a	To explain that the composition of digital images can be changed To explain that colours can be changed in digital images To explain how	To explain what makes a video effective To identify digital devices that can record video To capture video using a range of techniques	To review an existing website and consider its structure To plan the features of a web page To consider the ownership and use of images

	Pupils will access a simple paint package through JIT5 on the interactive whiteboard.	To explain why I chose the tools I used To use a computer on my own to paint a picture To compare painting a picture on a computer and on paper To use a computer to write To add and remove text on a computer To identify that the look of text can be changed on a computer To make careful choices when changing text To explain why I used the tools that I chose To compare typing on a computer to writing on paper	To use tools to change an image To recognise that photos can be changed To say how music can make us feel To identify that there are patterns in music To experiment with sound using a computer To use a computer to create a musical pattern To create music for a purpose To review and refine our computer work	desktop publishing publication To consider how different layouts can suit different purposes To consider the benefits of desktop publishing	cloning can be used in photo editing To explain that images can be combined To combine images for a purpose To evaluate how changes can improve an image	To create a storyboard To identify that video can be improved through reshooting and editing To consider the impact of the choices made when making and sharing a video To identify that drawing tools can be used to produce different outcomes To create a vector drawing by combining shapes To use tools to achieve a desired effect To recognise that vector drawings consist of layers To group objects to make them easier to work with To apply what I have learned about vector drawings	(copyright) To recognise the need to preview pages To outline the need for a navigation path To recognise the implications of linking to content owned by other people To recognise that you can work in three dimensions on a computer To identify that digital 3D objects can be modified To recognise that objects can be combined in a 3D model To create a 3D model for a given purpose To plan my own 3D model To create my own digital 3D model
Programming	Pupils in foundation stage will be using robotics in order to learn how remote controls work	To explain what a given command will do To act out a given word To combine forwards and backwards commands to make a sequence To combine four direction commands to make sequences To plan a simple program To find more than	To describe a series of instructions as a sequence To explain what happens when we change the order of instructions To use logical reasoning to predict the outcome of a program To explain that programming projects can have code and artwork To design an algorithm	To explore a new programming environment To identify that commands have an outcome To explain that a program has a start To recognise that a sequence of commands can have an order	To identify that accuracy in programming is important To create a program in a textbased language To explain what 'repeat' means To modify a countcontrolled loop to produce a given outcome To decompose a	To control a simple circuit connected to a computer To write a program that includes countcontrolled loops To explain that a loop can stop when a condition is met To explain that a loop can be used to repeatedly check whether a condition has been met	To define a 'variable' as something that is changeable To explain why a variable is used in a program To choose how to improve a game by using variables To design a project that builds on a given example To use my design to create a project

		one solution to a problem To choose a command for a given purpose To show that a series of commands can be joined together To identify the effect of changing a value To explain that each sprite has its own instructions To design the parts of a project To use my algorithm to create a program	To create and debug a program that I have written To explain that a sequence of commands has a start To explain that a sequence of commands has an outcome To create a program using a given design To change a given design To create a program using my own design To create a program using my own design	To change the appearance of my project To create a project from a task description To explain how a sprite moves in an existing project To create a program to move a sprite in four directions. To adapt a program to a new context To develop my program by adding features To identify and fix bugs in a program To design and create a mazebased challenge	task into small steps To create a program that uses countcontrolled loops to produce a given outcome To develop the use of countcontrolled loops in a different programming environment To explain that in programming there are infinite loops and count controlled loops To develop a design that includes two or more loops which run at the same time To modify an infinite loop in a given program To design a project that includes repetition To create a project that includes repetition	To design a physical project that includes selection To create a program that controls a physical computing project To explain how selection is used in computer programs To relate that a conditional statement connects a condition to an outcome To explain how selection directs the flow of a program To design a program which uses selection To create a program which uses selection To evaluate my program	To evaluate my project To create a program to run on a controllable device To explain that selection can control the flow of a program To update a variable with a user input To use a conditional statement to compare a variable to a value To design a project that uses inputs and outputs on a controllable device To develop a program to use inputs and outputs on a controllable device

Digital Safety

At Silverhill, promoting Digital Safety is weaved into the very foundations of our learning. Through both our Computing and PSHE scheme, we explicitly teach the children how to use technology safely and respectfully, how to keep personal information private, and where to go if they have any concerns. As a school, we reinforce these messages through assemblies, workshops enrichment days, our SPIRIT values, regular communication with parents and as a golden thread through our cross – curricular learning.

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Class	Computing Systems and Networks	Creating Media	Programming A	Programming B	Data and Information	Creating Media	Digital Safety
Year 1	Technology Around Us	Digital Writing	Moving a Robot	Creating Animations	Grouping Data	Digital Painting	Education for a Connected World
Year 2	IT Around Us	Digital Photography	Robot Algorithms	Programming Quizzes	Pictograms	Digital Music	Education for a Connected World
Year 3	Connecting Computers	Animation	Sequencing Sounds	Events and Actions in Programmes	Branching Databases	Desktop Publishing	Education for a Connected World
Year 4	The Internet	Audio Production	Repetition in Shapes	Repetition in Games	Data Logging	Photo Editings	Education for a Connected World
Year 5	Systems and Searching	Introduction to Vector Graphics	Selection in Physical Computing	Selections in Quizzes	Flat File Databases	Video Production	Education for a Connected World
Year 6	Communication and Collaboration	Web Page Creation	Variables in Games	Sensing Movement	Spreadsheets	3D Modelling	Education for a Connected World