Y1 Computing

Online Safety

Autumn One (4 lessons)

Statutory NC Objectives KS1 Computing:

- 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.

Key Vocabulary

ANCHOR WORDS

Button - An area where you click to make something happen.
Log out - Leaving a computer system.
Password - A series of letters, numbers and special characters that is entered after the username to access an online site.
Private - Keeping information restricted from other people.
Saving - Store your work as you create something so it can be accessed later.
Search - A way of finding specific resources.

GOLDILOCKS WORDS

Device - A piece of electrical equipment made for a purpose.
File Name - The name given to an online piece of work.
Icon - An image on a web page that you can click on to navigate to somewhere.
Log in - Using a username and password to access a system.
Menu - A button which gives the Notification user different options

STEP-ON WORDS

Alert - A system that lets you know if you have something to look at.
Avatar - A digital picture to represent someone.

Key Knowledge

By the end of this unit, the pupils should know how:

- To log in safely.
- To learn how to find saved work in the Online Work area and find teacher comments.
- To learn how to search.
- To become familiar with the icons and types of resources available in the Topics section.
- To start to add pictures and text to work.
- To learn how to open, save and print.
- To understand the importance of logging out.

"Bridging Back" (previous years/cross-curricular content)

"Bridging Forward" (future years/cross curricular content)

Year 2 – Online Safety, Effective Searching
Year 3 – Online Safety, Email
Year 4 – Online Safety, Effective Searching
Year 5 – Online Safety, Word Processing
Year 6 – Online Safety, Blogging

Y1 Computing

Grouping and Sorting

Autumn 2 (2/3 lessons)

Statutory NC Objectives KS1 Computing:

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

Key Vocabulary			Key Knowledge
ANCHOR WORDS	**GOLDILOCKS WORDS**	**STEP-ON WORDS**	<u>By the end of this unit, the pupils should know how:</u>
Sort - Put things together by features they have in common.	**Groups** - Objects arranged and put together because they have features in common.	**Criteria** - A way in which something is judged.	• To sort items using a range of criteria. • To sort items on the computer using the 'Grouping' activities.
"Bridging Back" (previous years/cross-curricular content)			**"Bridging Forward"** (future years/cross curricular content) Year 2 – Questioning Year 3 – Branching Databases, Graphing Year 5 – Databases

Y1 Computing

Pictograms

Spring 2 (3 lessons)

Statutory NC Objectives KS1 Computing:

- recognise common uses of information technology beyond school

Key Vocabulary			Key Knowledge
ANCHOR WORDS	**GOLDILOCKS WORDS**	**STEP-ON WORDS**	<u>By the end of this unit, the pupils should know how:</u>
Compare - Looking at what is the same and what is different. Title - The name given to a piece of work.	**Data** - A collection of information, used to help answer questions. **Pictogram** - A diagram that uses pictures to represent data. **Record Results** - Writing down what you have found out.	**Collect Data** - Gathering facts and information.	• To understand that data can be represented in picture format. • To contribute to a class pictogram. • To use a pictogram to record the results of an experiment.
"Bridging Back" (previous years/cross-curricular content)			**"Bridging Forward"** (future years/cross curricular content) Year 2 – Spreadsheets, Questioning Year 3 – Spreadsheets, Branching Databases, Graphing Year 4 – Spreadsheets Year 5 – Databases Year 6 - Spreadsheets

Y1 Computing

Lego Builders

Summer 1 (3 lessons)

Statutory NC Objectives KS1 Computing:

- 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

Key Vocabulary

ANCHOR WORDS	GOLDILOCKS WORDS	STEP-ON WORDS
Computer - An electronic device for storing and processing data. **Instructions** - Detailed information about how something should be done or operated.	**Code** - Instructions that a programmer enters into a computer that cause the computer to perform a certain way. **Debugging** - To find and remove errors from computer hardware or software. **Program** - An algorithm that has been coded into something that can be run by a machine, e.g., a computer or a robot.	**Algorithm** - A precise, step-by-step set of instructions used to solve a problem or achieve an objective.

Key Knowledge

By the end of this unit, the pupils should know how:

- To compare the effects of adhering strictly to instructions to completing tasks without complete instructions.
- To follow and create simple instructions on the computer.
- To consider how the order of instructions affects the result.

"Bridging Back" (previous years/cross-curricular content)

"Bridging Forward" (future years/cross curricular content)

Year 2 – Coding, Questioning
Year 3 – Coding, Branching Databases
Year 4 – Coding, Logo, Animation
Year 5 – Coding
Year 6 – Coding, Text Adventures, Binary

Y1 Computing

Maze Explorers

Summer 1 (3 lessons)

Statutory NC Objectives KS1 Computing:

- 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

Key Vocabulary			Key Knowledge
ANCHOR WORDS	**GOLDILOCKS WORDS**	**STEP-ON WORDS**	<u>By the end of this unit, the pupils should know how:</u>
Direction - The path that something travels. For example, a robot moving forwards, backwards or diagonal. **Instruction** - Detailed information about how something should be done or operated. **Route** - A path an object or thing takes to get somewhere.	**Command** - An action such as left command. **Left and Right** - A position which relates to something. For example, make the fish move left of the screen. **Undo** - If we make a mistake, we can press the undo button.	**Algorithm** - A precise, step-by-step set of instructions used to solve a problem or achieve an objective.	• To understand the functionality of the direction keys. • To understand how to create and debug a set of instructions (algorithm). • To use the additional direction keys as part of an algorithm. • To understand how to change and extend the algorithm list. • To create a longer algorithm for an activity.

"Bridging Back" (previous years/cross-curricular content)	**"Bridging Forward"** (future years/cross curricular content)
	Year 2 – Coding, Questioning Year 3 – Coding. Branching Databases Year 4 – Coding, Logo, Animation Year 5 – Coding, Game Creator, 3D Modelling Year 6 – Coding, Text Adventures

Y1 Computing

Animated Story Books

Autumn 2/Spring 1 (5 lessons)

Statutory NC Objectives KS1 Computing:

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

Key Vocabulary			Key Knowledge
ANCHOR WORDS	**GOLDILOCKS WORDS**	**STEP-ON WORDS**	By the end of this unit, the pupils should know:
Sound - can be uploaded into software from a file or created. **Sound Effect** - A sound other than speech or music made for use in a play, film or computer file. **Text** - Words, letters, numbers or symbols entered into a computer,.	**Animation** - An object that moves on screen. **Background** - An image inserted into a file that sits behind text, objects, or buttons. **Edit** - to change something. For example, change some text to improve it.	**Font** - The style of text used in a piece of writing on a Sound computer or tablet.	• To introduce e-books and the 2Create a Story tool. • To add animation to a story. • To add sound to a story, including voice recording and music the children have composed. • To work on a more complex story, including adding backgrounds and copying and pasting pages. • To share e-books on a class display board.
"Bridging Back" (previous years/cross-curricular content)			**"Bridging Forward"** (future years/cross curricular content) Year 2 – Creating Pictures, Making Music, Presenting Ideas Year 4 – Animation, Making Music Year 5 – Game Creator Year 6 – Text Adventures

Y1 Computing

Coding

Summer 2 (6 lessons)

Statutory NC Objectives KS1 Computing:

- 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

Key Vocabulary

ANCHOR WORDS

Action - The way that objects change when programmed to do so. For example, move.
Command - A single instruction.
Event - An occurrence that causes a block of code to be run. The event could be the result of user action such as the user pressing a key or clicking the screen.
Object - Items in a program that can be given instructions to move or change in some way (action).

GOLDILOCKS WORDS

Code - Instructions that a programmer enters into a computer that cause the computer to perform a certain way.
Coding - Writing instructions that the computer can process (understand) to make programs (software).
Debug/ Debugging - Fixing code that has errors so that the code will run the way it was designed.
Output - Information that comes out of the computer e.g. sound that comes out of the speakers.
Programmer - A person who writes computer programs. Sometimes called a coder.

STEP-ON WORDS

Algorithm - A precise, step-by-step set of instructions used to solve a problem or achieve an objective.
Execute - This is the proper word for when you run the code. We say, 'the program (or code) executes.'
Properties - These determine the look and size of an object.

Key Knowledge

By the end of this unit, the pupils should know that:

- To understand what instructions are and predict what might happen when they are followed.
- To use code to make a computer program.
- To understand what object and actions are.
- To understand what an event is.
- To use an event to control an object.
- To begin to understand how code executes when a program is run.
- To understand what backgrounds and objects are.
- To plan and make a computer program

"Bridging Back" (previous years/cross-curricular content)

"Bridging Forward" (future years/cross curricular content)

Year 2 – Coding, Questioning
Year 3 – Coding, Branching Databases
Year 4 – Coding, Logo, Animation
Year 5 – Coding
Year 6 – Coding, Binary

Y1 Computing

Spreadsheets

Spring 2 (3 lessons)

Statutory NC Objectives KS1 Computing:

- create and debug simple programs
- use logical reasoning to predict the behaviour of simple programs
- use technology purposefully to create, organise, store, manipulate and retrieve digital content

Key Vocabulary

ANCHOR WORDS	GOLDILOCKS WORDS	STEP-ON WORDS
Button - An object you click that performs an action. E.g. print. **Calculations** - Maths calculations can be entered into a cell. **Delete** - Removes contents such as the contents in a cell.	**Cell** - An individual section of a spreadsheet grid. It contains data or calculations. **Column** - Horizontal reference points for the cells in a spreadsheet. **Data** - A collection of information, used to help answer questions. **Row** - Vertical reference points for cells in a spreadsheet. **Spreadsheet** - A computer program that represents information in a grid of rows and columns.	**Lock cell** - This feature lets a user lock a cell so its contents can't be deleted. **Value** - Images can have values given to them. For example, an apple could be given a value of 1 and a pear a value of 2.

Key Knowledge

By the end of this unit, the pupils should know that:

- To know what a spreadsheet program looks like.
- To enter data into spreadsheet cells.
- To use control tools: lock, move cell, speak and count.

"Bridging Back" (previous years/cross-curricular content)

"Bridging Forward" (future years/cross curricular content)

Year 2 – Spreadsheets, Questioning
Year 3 – Spreadsheets, Graphing
Year 4 – Spreadsheets
Year 5 – Spreadsheets, Databases
Year 6 - Spreadsheets

Y1 Computing

Technology Outside School

Spring 1 (2 lessons)

Statutory NC Objectives KS1 Computing:

- 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.

Key Vocabulary			Key Knowledge
ANCHOR WORDS	**GOLDILOCKS WORDS**	**STEP-ON WORDS**	<u>By the end of this unit, the pupils should know that:</u>
Computer - An electronic device for storing and processing data.	**Technology** - Science and engineering knowledge put into practical use to solve problems or invent useful tools.	**Local Community** – The group of people that interacts in the area close to our school.	• To walk around the local community and find examples of where technology is used. • To record examples of technology outside school.
"Bridging Back" (previous years/cross-curricular content)			**"Bridging Forward"** (future years/cross curricular content) Year 2 – Effective Searching Year 3 – Email, Simulations Year 4 – Effective Searching, AI Year 6 – Blogging, Networks