Y3 Computing

Coding
Spring 2 (6 lessons)

Statutory NC Objectives KS2 Computing:
· 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

Key Vocabulary			Key Knowledge
ANCHOR WORDS	**GOLDILOCKS WORDS**	**STEP-ON WORDS**	By the end of this unit, the pupils should know that:
Action - The way that objects change when programmed to do so. For example, move or change a property. **Command** - A single instruction in a computer program. **Event** - An occurrence that causes a block of code to be run. **Flowchart** - A diagram which represents an algorithm. **Input** - Information going into the computer. **Sequence** - When a computer program runs commands in order. **Debug/Debugging** - Fixing code that has errors so that the code will run the way it was designed to.	**Alert** - This is a type of output. It shows a pop-up of text on the screen. **Algorithm** - A precise step by step set of instructions used to solve a problem or achieve an objective. **Bug** - A problem in a computer program that stops it working the way it was designed. **Code** - Writing the code for a computer program. **Properties** - These determine the look and size of an object. Each object has properties such as the image, scale and position of the object.	**Collision Detection Event** - The event of two objects colliding. **Nesting** - When coding commands are put inside other commands. These commands only run when the outer command runs.	• To understand what a flowchart is and how flowcharts are used in computer programming. • To understand that there are different types of timers and select the right type for purpose. • To understand how to use the repeat command. • To understand the importance of nesting. • To design and create an interactive scene.

"Bridging Back" (previous years/cross-curricular content)	**"Bridging Forward"** (future years/cross curricular content)
Year 1 – Coding, Lego Builders, Maze Explorers Year 2 – Coding, Questioning	Year 4 – Coding, Logo, Animation Year 5 – Coding Year 6 – Coding, Binary

Online Safety

Summer 1 (5 lessons)

Statutory NC Objectives KS2 Computing:
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Key Vocabulary			Key Knowledge
ANCHOR WORDS	**GOLDILOCKS WORDS**	**STEP-ON WORDS**	By the end of this unit, the pupils should know that:
Blog - A regularly updated website or web page, typically one run by an individual or small group, that is written in an informal or conversational style. **Password** - A secret word, phrase or combination of letters, numbers and symbols that must be used to gain admission to a site or application such as a website. **Vlog** - A personal website or social media account where a person regularly posts short videos. **Website** - A set of related web pages located under a single name.	**Permission** - When someone shares or accesses content online, it's important that permission is given if it belongs to someone else or has information about them. **Personal Information** - This is information that is personal to someone. For example, their favourite food, their name and age. **Reliable Source** - A source of information that provides thorough, well-reasoned details based on valid evidence. **Verify** - When seeking content online, it is important that a user checks the information.	**Reputable source** - Reputable sources are known places or sites that have accurate information. For example, well known news sites or encyclopaedias. **Spoof** - An imitation of something that appears to look genuine.	 • To know what makes a safe password. • To learn methods for keeping passwords safe. • To understand how the Internet can be used in effective communication. • To understand how a blog can be used to communicate with a wider audience. • To consider the truth of the content of websites. • To learn about the meaning of age restrictions symbols on digital media and devices.

"Bridging Back" (previous years/cross-curricular content)	**"Bridging Forward"** (future years/cross curricular content)
Year 1 – Online Safety, Technology Outside School Year 2 – Online Safety, Effective Searching	Year 4 – Online Safety, Effective Searching Year 5 – Online Safety, Word Processing Year 6 – Online Safety, Blogging

Y3 Computing

Spreadsheets
Autumn 1 (3 lessons)

Statutory NC Objectives KS2 Computing:
- use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- 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

Key Vocabulary			Key Knowledge
ANCHOR WORDS	**GOLDILOCKS WORDS**	**STEP-ON WORDS**	By the end of this unit, the pupils should know that:
Data - A collection of information, especially facts or numbers, obtained by observation, questions or measurement to be analysed and used to help decision-making. **Bar graph** - A chart that uses bars to show quantities or numbers, so they can be easily compared.	**Pie Chart** - A circular chart divided into segments which each represent a part of the total amount. **Spreadsheet** - A computer program that represents information in a grid of rows and columns.	**Cell Address** - Every cell has an address. This can be found by reading the column letter then row number.	• To use the symbols more than, less than and equal to, to compare values. • To use spreadsheet software to collect data and produce a variety of graphs. • To use the advanced mode of a spreadsheet software to learn about cell references.
"Bridging Back" (previous years/cross-curricular content) Year 1 – Spreadsheets, Pictograms Year 2 – Spreadsheets, Questioning			**"Bridging Forward"** (future years/cross curricular content) Year 4 – Spreadsheets Year 5 – Spreadsheets, Databases Year 6 - Spreadsheets

Touch Typing

Autumn 2 (4 lessons)

Statutory NC Objectives KS2 Computing:
- 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

Key Vocabulary			Key Knowledge
ANCHOR WORDS	**GOLDILOCKS WORDS**	**STEP-ON WORDS**	By the end of this unit, the pupils should know that:
Keys - Buttons that are pressed on a computer keyboard or typewriter. These can be described by their position; bottom row, top row and home row (middle row).	**Space bar** - The bar at the bottom of the keyboard. **Typing** - The action or skill of writing something by means of a typewriter or in this case a computer.	**Posture** - The correct way to sit at the computer.	- To introduce typing terminology. - To understand the correct way to sit at the keyboard. - To learn how to use the home, top and bottom row keys. - To practise typing with the left and right hand.
"Bridging Back" (previous years/cross-curricular content) Year 2 – Effective Searching			**"Bridging Forward"** (future years/cross curricular content) Year 4 – Writing for Different Audiences, Effective Searching Year 5 – Concept Maps, Word Processing Year 6 – Blogging

Y3 Computing

Email
Summer 1/Summer 2 (3 lessons)

Statutory NC Objectives KS2 Computing:
- 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.

Key Vocabulary			Key Knowledge
ANCHOR WORDS	**GOLDILOCKS WORDS**	**STEP-ON WORDS**	By the end of this unit, the pupils should know that:
Email - An Internet service that allows people who have an email address to send and receive instant electronic letters. **Password** - A secret word, phrase or combination of letters, numbers and symbols that must be used to gain admission to a site or application such as email. **Personal Information** - Identifying information about yourself such as your name, address and telephone number.	**Address book** - A list of people who you regularly send an email to. **Attachment** - A file, which could be a piece of work or a picture, that is sent with the email. **Inbox** - The folder where new emails go into when they are received. **Trusted Contact** - A person who you know and trust, making an email from them safe to open.	**BCC, Blind Carbon Copy** - A way of privately sending a copy of your email to other people so they can see the information in it, without the recipient knowing. **CC** - A way of sending a copy of your email to other people so they can see the information in it.	- To think about different methods of communication. - To open and respond to an email using an address book. - To learn how to use email safely. - To add an attachment to an email. - To explore a simulated email scenario.

"Bridging Back" (previous years/cross-curricular content) Year 1 – Online Safety, Technology Outside School Year 2 – Online Safety, Effective Searching	**"Bridging Forward"** (future years/cross curricular content) Year 4 – Online Safety, Effective Searching Year 5 – Online Safety Year 6 – Online Safety, Blogging

Branching Databases
Spring 1 (4 lessons)

Statutory NC Objectives:
- KS2 Computing
- 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

Key Vocabulary			Key Knowledge
ANCHOR WORDS	**GOLDILOCKS WORDS**	**STEP-ON WORDS**	By the end of this unit, the pupils should know that:
Data - A collection of information, especially facts or numbers, obtained by observation, questions or measurement to be analysed and used to help decision-making. **Database** - A collection of data organised in such a way that it can be searched, and information found easily. Database usually refers to data stored on computers.	**Branching database** - Used to classify groups of objects. It is used to help identify the objects by answering questions with either 'yes' or 'no'. Branching databases can also be called binary trees. **Debugging** - The process of identifying and removing errors from computer hardware or software.	**Binary Tree** - Another name for a branching database.	• To sort objects using just 'yes' or 'no' questions. • To complete a branching database. • To create a branching database of the children's choice.
"Bridging Back" (previous years/cross-curricular content) Year 1 – Grouping and Sorting, Pictograms Year 2 – Spreadsheets, Questioning		**"Bridging Forward"** (future years/cross curricular content) Year 4 – Spreadsheets Year 5 – Databases Year 6 - Spreadsheets	

Graphing

Autumn 1 (3 lessons)

Statutory NC Objectives KS2 Computing:
- use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- 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

Key Vocabulary			Key Knowledge
ANCHOR WORDS	**GOLDILOCKS WORDS**	**STEP-ON WORDS**	By the end of this unit, the pupils should know that:
Chart - A diagram that represents data. Charts include graphs and other diagrams such as pie charts or flowcharts. **Data** - A collection of information, especially facts or numbers, obtained by observation, questions or measurement to be analysed and used to help decision-making	**Axis** - A fixed horizontal or vertical reference line for the measurement of coordinates or to plot data in a graph. **Sorting** - Organising data by a rule such as alphabetical or numerical. **Tally Chart** - A way of recording how often something happens by counting in fives.	**Investigation** - A formal inquiry or systematic study.	• To enter data into a graph and answer questions. • To solve an investigation and present the results in graphic form.

"Bridging Back" (previous years/cross-curricular content) Year 1 – Coding, Technology Outside School Year 2 – Coding	**"Bridging Forward"** (future years/cross curricular content) Year 4 – Coding Year 5 – Coding Year 6 - Coding

Presenting with Microsoft PowerPoint
Summer 2 (5 lessons)

Statutory NC Objectives KS2 Computing:
· 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

Key Vocabulary			Key Knowledge
ANCHOR WORDS	**GOLDILOCKS WORDS**	**STEP-ON WORDS**	By the end of this unit, the pupils should know that:
Slide - A single page within a presentation. Slideshow - A collection of pages arranged in sequence that contains text and images to present to an audience.	**Animation** - The process of adding movement to still objects. **Font formatting** - Changing the appearance of text on the screen. **Media** - Information in the form of words, sounds, numbers, images, or graphics in electronic, print or broadcast form. **Text box** - An object that can be inserted into a piece of work in a program that allows the user to input text.	**Layer** - Describes which objects appear in the front (foreground) of a slide and which appear behind other objects. **Transition** - How a slide moves from one to the next.	• To understand the uses of PowerPoint. • To create a page in a presentation. • To add media to a presentation. • To add animations to a presentation. • To add timings to a presentation. • To use the skills learnt to design and create an engaging presentation.
"Bridging Back" (previous years/cross-curricular content) Year 1 – Animated Story Books Year 2 – Creating Pictures, Presenting Ideas			**"Bridging Forward"** (future years/cross curricular content) Year 4 – Writing for Different Audiences Year 5 – Concept Maps, Word Processing Year 6 – Blogging