Year 3

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Coding		**Online Safety**	**Branching Databases**	**Presenting**	**Simulations**
• 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.		• 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. *Graphing Unit taught through Maths (statistics topic)	• To sort objects using just 'yes' or 'no' questions. • To complete a branching database using 2Question. • To create a branching database of the children's choice.	• 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. *Link with English unit on Climates and Biomes	• To consider what simulations are. • To explore a simulation. • To analyse and evaluate a simulation. *Email Unit taught through English

Touch Typing Taught Throughout

Year 4

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Coding	**Logo**	**Online Safety**	**Animations**	**Effective Search**	**Hardware Investigation**
• To begin to understand selection in computer programming. • To understand how an IF statement works. • To understand how to use co-ordinates in computer programming. • To understand the 'repeat until' command. • To understand how an IF/ELSE statement	• To learn the structure of the coding language of Logo. • To input simple instructions in Logo. • Using 2Logo to create letter shapes. • To use the Repeat function in Logo to create shapes. • To use and build procedures in Logo.	• To understand how children can protect themselves from online identity theft. • To understand that information put online leaves a digital footprint or trail and that this can aid identity theft. • To identify the risks and benefits of installing software including apps. • To understand that copying the work of others and presenting it as their own is called 'plagiarism' and to consider the consequences of plagiarism. • To identify appropriate behaviour when participating or contributing to collaborative online projects for learning. • To identify the positive and negative influences of technology on health and the environment. • To understand the importance of balancing game and screen time with other parts of their lives.	• To discuss what makes a good animated film or cartoon. • To learn how animations are created by hand. • To find out how animation can be created in a similar way using the computer. • To learn about onion skinning in animation. • To add backgrounds and sounds to animations. • To be introduced to 'stop motion' animation. • To share animation on the class display board and by blogging.	• To locate information on the search results page. • To use search effectively to find out information. • To assess whether an information source is true and reliable.	• To understand the different parts that make up a computer. • To recall the different parts that make up a computer.

Year 5

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Coding	**Databases**	**Online Safety**	**Game Creator**	**Concept Maps**	**Word Processing**
• To begin to simplify code. • To create a playable game. • To understand what a simulation is. • To program a simulation using 2Code. • To know what decomposition and abstraction are in computer science. • To a take a real-life situation, decompose it and think about the level of abstraction. • To understand how to use friction in code. • To begin to understand what a function is and how functions work in code. • To understand what the different variables types are and how they are used differently. • To understand how to create a string. • To understand what concatenation is and how it works	• To learn how to search for information in a database. • To contribute to a class database. • To create a database around a chosen topic.	• To gain a greater understanding of the impact that sharing digital content can have. • To review sources of support when using technology and children's responsibility to one another in their online behaviour. • To know how to maintain secure passwords. • To understand the advantages, disadvantages, permissions and purposes of altering an image digitally and the reasons for this. • To be aware of appropriate and inappropriate text, photographs and videos and the impact of sharing these online. • To learn about how to reference sources in their work. • To search the Internet with a consideration for the reliability of the results of sources to check validity and understand the impact of incorrect information.	• To plan a game. • To design and create the game environment. • To design and create the game quest. • To finish and share the game. To self and peer evaluate *3D Modelling unit taught in D&T	• To understand the need for visual representation when generating and discussing complex ideas. • To understand the uses of a 'concept map'. • To understand and use the correct vocabulary when creating a concept map. • To create a concept map. • To understand how a concept map can be used to retell stories and information. • To create a collaborative concept and present this to an audience.	• To know what a word processing tool is for. • To add and edit images to a word document. • To know how to use word wrap with images and text. • To change the look of text within a document. • To add features to a document to enhance its look and usability. • To use tables within MS Word to present information. • To introduce children to templates.

Year 6

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Coding	**Understanding Binary**	**Online Safety**	**Networks**	**Spreadsheets**	**Blogging**
- To design a playable game with a timer and a score. - To plan and use selection and variables. - To understand how the launch command works. - To use functions and understand why they are useful. - To understand how functions are created and called. - To use flowcharts to create and debug code. - To create a simulation of a room in which devices can be controlled. - To understand how user input can be used in a program.	- To examine how whole numbers are used as the basis for representing all types of data in digital systems. - To recognise that digital systems represent all types of data using number codes that ultimately are patterns of 1s and 0s (called binary digits, which is why they are called digital systems). - To understand that binary represents numbers using 1s and 0s and these represent the on and off electrical states respectively in hardware and robotics.	- To identify benefits and risks of mobile devices broadcasting the location of the user/device. - To identify secure sites by looking for privacy seals of approval. - To identify the benefits and risks of giving personal information. - To review the meaning of a digital footprint. - To have a clear idea of appropriate online behaviour. - To begin to understand how information online can persist. - To understand the importance of balancing game and screen time with other parts of their lives. - To identify the positive and negative influences of technology on health and the environment.	- To learn about what the Internet consists of. - To find out what a LAN and a WAN are. - To find out how the Internet is accessed in school. - To research and find out about the age of the Internet. - To think about what the future might hold.	- To use a spreadsheet to investigate the probability of the results of throwing many dice. - To use a spreadsheet to calculate the discount and final prices in a sale. - To use a spreadsheet to plan how to spend pocket money and the effect of saving money. - To use a spreadsheet to plan a school charity day to maximise the money donated to charity.	- To identify the purpose of writing a blog. - To identify the features of a successful blog. - To plan the theme and content for a blog. - To understand how to write a blog and a blog post. - To consider the effect upon the audience of changing the visual properties of the blog. - To understand how to contribute to an existing blog. - To understand how and why blog posts are approved by the teacher. To understand the importance of commenting on blogs.