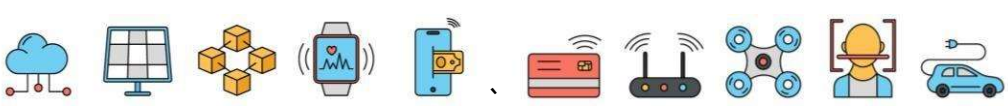
Year Two

Unit 2.1 – Coding

Lesson	Title	Aims (Objectives)	Success Criteria
1	Algorithms	• To understand what an algorithm is. • To create a computer program using an algorithm.	• Children can explain that an algorithm is a set of instructions. • Children can describe the algorithms they created. • Children can explain that for the computer to make something happen, it needs to follow clear instructions.
2	Collision Detection	• To create a program using a given design. • To understand the collision detection event.	• Children can plan an algorithm that includes collision detection. • Children can create a program using collision detection. • Children read blocks of code and predict what will happen when it is run.
3	Using a Timer	• To understand that algorithms follow a sequence. • To design an algorithm that follows a timed sequence.	• Children can create a program that uses a timer-after command. • Children can explain what the timer-after command does in their program. • Children can predict what will happen in a program that includes a timer-after command.
4	Different Object Types	• To understand that different objects have different properties. • To understand what different events do in code.	• Children can create a computer program that includes different object types. • Children can modify the properties of an object. • Children can use different events in their program to make objects move.
5	Buttons	• To create a program using a given design. • To understand the function of buttons in a program.	• Children can create a computer program that includes a button object. • Children can explain what a button does in their program. • Children can modify the properties of a button to fit their program design.
6	'Smelly Code' Debugging	• To know what debugging means. • To understand the need to test and debug a program repeatedly. • To debug simple programs.	• Children can explain what debug (debugging) means. • Children can use a design document to start debugging a program. • Children can debug simple programs.



Unit 2.2 – Online Safety

Lesson	Title	Aims (Objectives)	Success Criteria
1	Searching and Sharing	• To know how to refine searches using the Search tool. • To know how to share work electronically using the display boards. • To use digital technology to share work on Purple Mash to communicate and connect with others locally. • To have some knowledge and understanding about sharing more globally on the Internet.	• Children can use the search facility to refine searches on Purple Mash by year group and subject. • Children can share the work they have created to a display board. • Children understand that the teacher approves work before it is displayed. • Children are beginning to understand how things can be shared electronically for others to see both on Purple Mash and the Internet.
2	Email Using 2Respond	• To introduce Email as a communication tool using 2Respond simulations. • To understand how we talk to others when they are not there in front of us. • To open and send simple online communications in the form of email.	• Children know that Email is a form of digital communication. • Children understand how 2Repond can teach them how to use email. • Children can open and send an email to a 2Respond character. • Children have discussed their own experiences and understanding of what email is used for. • Children have discussed what makes us feel happy and what makes us feel sad.
3	Digital Footprint	• To understand that information put online leaves a digital footprint or trail. • To begin to think critically about the information they leave online. • To identify the steps that can be taken to keep personal data and hardware secure	• Children can explain what a digital footprint is. • Children can give examples of things that they would not want to be in their digital footprint.

Unit 2.3 – Spreadsheets

Lesson	Title	Aims (Objectives)	Success Criteria
1	Reviewing prior use of spreadsheets	• To review the work done in 2Calculate in year 1. • To revise spreadsheet related vocabulary. • To use some 2Calculate tools that were introduced in year 1.	• Children can explain what rows and columns are in a spreadsheet. • Children can open, save and edit a spreadsheet. • Children can add images from the image toolbox and allocate them a value. • Children can add the count tool to count items.
2	Copying and Pasting Totalling tools	• To use copying, cutting and pasting shortcuts in 2Calculate. • To use 2Calcuate totalling tools. • To use 2Calculate to solve a simple puzzle	• Children can use copying, cutting and pasting to help make spreadsheets. • Children can use tools in a spreadsheet to automatically total rows and columns. • Children can use a spreadsheet to solve a mathematical puzzle.
3	Using a spreadsheet to add amounts	• To explore the capabilities of a spreadsheet in adding up coins to match the prices of objects	• Children can use images in a spreadsheet. • Children can work out how much they need to pay using coins by using a spreadsheet to help calculate.
4	Creating a table and block graph	• To add and edit data in a table layout. • To use the data to manually create a block graph.	• Children can create a table of data on a spreadsheet. • Children can use the data to create a block graph manually.

Unit 2.4 – Questioning

Lesson	Title	Aims (Objectives)	Success Criteria
1	Using and Creating Pictograms	• To show that the information provided on pictograms is of limited use beyond answering simple questions	• Children understand that the information on pictograms cannot be used to answer more complicated questions.
2	Asking Yes / No Questions	• To use yes/no questions to separate information	• Children have used a range of yes/no questions to separate different items.
3	Binary Trees	• To construct a binary tree to separate different items.	• Children understand what is meant by a binary tree. • Children have designed a binary tree to sort pictures of children.
4	Using 2Question - a Computer-Based Binary Tree Program	• Use 2Question (a binary tree) to answer questions	• Children understand that questions are limited to 'yes' and 'no' in a binary tree. • Children understand that the user cannot use 2Question to find out answers to more complicated questions. • Children have matched 2Simple item pictures to names using a binary tree.
5	Using 2Investigate: a Non-Binary Database.	• To use a database to answer more complex search questions. • To use the Search tool to find information.	• Children understand what is meant by a database. • Children have used a database to answer simple and more complex search questions.

Unit 2.5 – Effective Searching

Lesson	Title	Aims (Objectives)	Success Criteria
1	Understanding the Internet and Searching	• To understand the terminology associated with the Internet and searching.	• Children can recall the meaning of key Internet and searching terms. • Children have completed a quiz about the Internet.
2	Searching the Internet	• To gain a better understanding of searching the Internet.	• Children can identify the basic parts of a web search engine search page. • Children have learnt to read a web search results page. • Children can search the Internet for answers to a quiz.
3	Sharing Knowledge of the Internet and Effective Searching	• To create a leaflet to help someone search for information on the Internet.	• Children have created a leaflet to consolidate knowledge of effective Internet searching.

Unit 2.6 – Creating Pictures

Lesson	Title	Aims (Objectives)	Success Criteria
1	Introduction and Impressionism	• To explore 2Paint A Picture. • To look at the work of Impressionist artists and recreate them using the Impressionism template.	• Children can describe the main features of impressionist art. • Children can use 2Paint a Picture to create art based upon this style.
2	Pointillist Art	• To look at the work of pointillist artists such as Seurat. • To recreate pointillist art using the Pointillism template.	• Children can explain what pointillism is. • Children can use 2Paint a Picture to create art based upon this style.
3	Piet Mondrian	• To look at the work of Piet Mondrian and recreate it using the Lines template.	• Children can describe the main features of Piet Mondrian's work. • Children can use 2Paint a Picture to art based upon his style.
4	William Morris and Pattern	• To look at the work of William Morris and recreate it using the Patterns template.	• Children can describe the main features of art that uses repeating patterns. • Children can use 2Paint a Picture to create art by repeating patterns in a variety of ways. • Children can combine more than one effect in 2Paint a Picture to enhance patterns.
5	Surrealism and eCollage	• To look at some surrealist art and create your own using the eCollage function in 2Paint A Picture.	• Children can describe surrealist art. • Children can use the eCollage function in 2Paint a Picture to create surrealist art using drawing and clipart.

Unit 2.7 – Making Music

Lesson	Title	Aims (Objectives)	Success Criteria
1	Introducing 2Sequence	• To be introduced to making music digitally using 2Sequence. • To explore, edit and combine sounds using 2Sequence.	• Children understand what 2Sequence is and how it works. • Children have used the different sounds within 2Sequence to create a tune. • Children have explored how to speed up and slow down tunes. • Children understand what happens to the tune when sounds are moved.
2	Making Music	• To add sounds to a tune to improve it. • To think about how music can be used to express feelings and create tunes which depict feelings.	• Children have added sounds to a tune they have already created to change it. • Children have considered how music can be used to express feelings. • Children can change the volume of the background sounds. • Children have created two tunes which depict two feelings.
3	Soundtracks	• To upload a sound from a bank of sounds into the Sounds section. • To record their own sound and upload it into the Sounds section. • To create their own tune using the sounds which they have added to the Sounds section.	• Children have uploaded and used their own sound chosen from a bank of sounds. • Children have created, uploaded and used their own recorded sound. • Children have created their own tune using some of the chosen sounds.