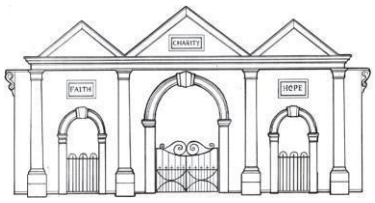
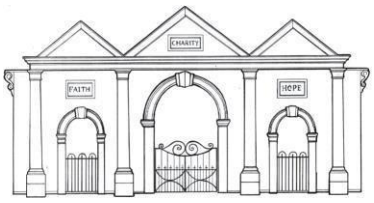


Wortham Primary School

Computing Curriculum

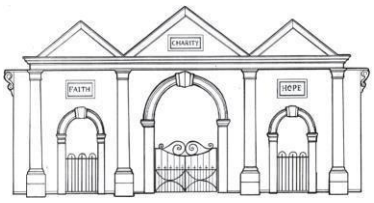
Class	Cycle	Units of work					
Bumblebee class YR. R/1		Online Safety	Group and sorting Pictograms	Lego Builders Maze Explorers	Animated Story Books	Coding	Spreadsheets Technology outside school
Hedgehog class Yr. 2/3	A	Online Safety (2.2) & Coding (2.1)	Spread Sheets (2.3) & Spreadsheets (3.3)	Questioning (2.4)	Making Music (2.7)	Presenting Ideas (2.8) & Simulations (3.7)	Email (3.5)
	B	Online Safety (2.2) & Coding (3.1)	Touch Typing (3.4)	Creating Pictures (2.6)	Branching Databases (3.6)	Effective Searching (2.5) & Graphing(3.8)	Power Point(3.9)
Barn Owl class Yr. 4/5	A	Online Safety (5.2)	Effective Searching(4.7)	Spreadsheets (5.3)	Coding (5.1)	Game Creator(5.5) Animations (4.6)	Concept Maps (5.7) Word Processing (5.8)
	B	Online Safety (4.2) Making Music (4.9)	Hardware Investigators (4.8)	Spreadsheets (4.3)	Coding (4.1)	Logos (4.5) 3D Modelling (5.6)	Databases (5.4)
Otter class		Online Safety and Networks	Blogging	Spreadsheets	Text Adventures	Quizzing	Coding



Bumblebee Class

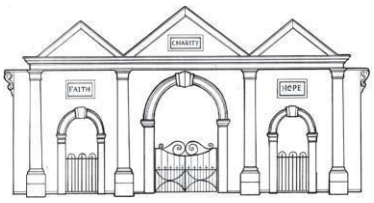
Title	Online Safety 1.1
Overview	The aim of this unit is to ensure that children have an understanding of how touse technology safely, including using individual logins and understanding why it is important to log out of programs once used. This unit also introduces children to using Purple Mash, beginning to have an understanding of havingownership of work online.
Vocabulary	Log in, log out, username, avatar, my work, tools, save, notification, topics,password
Key Learning Objectives	• To understand the importance of keeping personal information private • To understand what personal information is • To be able to login and logout safely • To follow e-safety rules • To know to tell an adult if they see something unexpected or worrying online • To know why it is important to be kind and polite
Suggested Learning Experiences	• Use Hector's World videos to explore online safety • Login to Purple Mash • Create an avatar • Save work and retrieve work • Explore games section

Title	Grouping and Sorting 1.2
Overview	This short unit introduces children to sorting and grouping items physically,and the idea that this can be done using technology.
Vocabulary	Sort, criteria
Key Learning Objectives	• Use technology purposefully to create, organise, store, manipulateand retrieve digital content • I can sort sound, pictures and text. • I can name, save and find my work
Suggested Learning Experiences	• Sort a range of physical items according to different criteria • Sort items on a computer according to different criteria



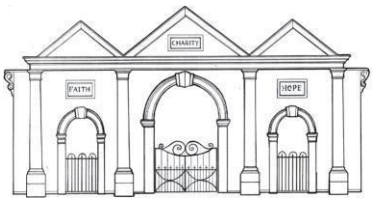
Title	**Pictograms 1.3**
Overview	This unit aims that children will understand how data can be represented in picture form. Children will be involved in collecting class data and use this tocreate a pictogram.
Vocabulary	Pictogram, data, collate
Key Learning Objectives	• To understand that data can be represented by a picture • To contribute to a class pictogram • To use a pictogram to record results of an experiment • I can change content on a file such as text, sound and images • To discuss what a pictogram shows
Suggested Learning Experiences	• Discuss and illustrate methods of travelling to school • Use illustrations to create a class pictogram • Roll a dice 20 times and record the results in a pictogram

Title	**Lego Builders 1.4**
Overview	This unit emphasises the importance of following instructions, considering how the order of instructions affects the result. Children will follow and createsimple instructions on a computer.
Vocabulary	Instruction, program, algorithm, debug, computer
Key Learning Objectives	• To understand the importance of following instructions in order to achieve a desired result • To know an algorithm is a precise, step-by-step set of instructions • To follow and create simple instructions on a computer (and to knowan algorithm written on a computer is called a program) • To know that correcting errors on a program is called debugging
Suggested Learning Experiences	• Follow instructions to build a simple Lego model • Use BeeBots to follow and create simple instructions on a computer • Organise instructions for a simple recipe and find out what happens ifthe precise order is not followed



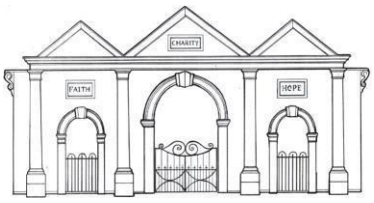
Title	**Maze explorers 1.5**
Overview	This unit will allow children to use the functionality of direction keys by exploring mazes on a computer program. They will create and debug a set of instructions (algorithm) using direction keys. They will have the opportunity toset challenges for each other.
Vocabulary	Direction, challenge, arrow, undo, rewind, forward, backwards, left turn, right turn, debug, instruction, algorithm
Key Learning Objectives	• To be able to use direction keys • To understand how to create and debug a set of instructions (algorithm) • To set challenges for others • I can name, save and find my work
Suggested Learning Experiences	• Use direction keys in 2Go to complete mazes • Add units of measurement in 2Go Challenge 2 • Change background images on their challenges • Complete challenges set by others on 2Do

Title	**Animated Story Books 1.6**
Overview	This unit introduces children to e-books, they will explore the differences between e-books and traditional books. Children will have the opportunity tocreate their own story and learn how to save their work in order to add more features. They will then share their stories.
Vocabulary	e-book, save, animation, sound, voice recording, enhance, copy, paste
Key Learning Objectives	• To be introduced to e-books. • To create a story using 2Create. • To add features to a story including animation and voice recordings. • To be able to save their work, re-open and edit. • I can add sound, pictures and text to a program such as 2Create a Story • I can name, save and find my work
Suggested Learning Experiences	• Create their own story using drawing tools to create a picture. • Add animation to a picture. • Add sound to a picture. • Share their storybook with the class.

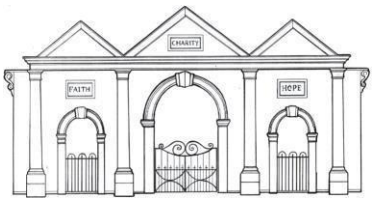


Title	**Coding 1.7**
Overview	This unit of work introduces children to coding and what that means in computing. Children will begin to understand that computers need clear precise instructions in order to make something happen. Children will have the opportunity to create a program using 2Code. They will then explore how they can add different characters, objects and backgrounds and how they cancommand the computer through using code to enable the characters and objects to move.
Vocabulary	Instruction, coding, program, objects, characters, action, command, design
Key Learning Objectives	• To understand what coding means in computing. • To use 2Code to create a simple program. • To use Design Mode to add and change backgrounds and characters. • To use code blocks and play and stop key to make characters move. • To use collision detection to make objects perform actions. • I can explain that an algorithm is a set of instructions. • I know that an algorithm written for a computer is called a program. • I can work out what is wrong when the steps are out of order in instructions.
Suggested Learning Experiences	• Practice following instructions, children can practice giving each other clear instructions and what happens if the instructions are not precise. • Use design mode to add backgrounds and characters. • Use 2Code to write a program to enable characters to move. • Use collision detection to make characters interact. • Program a sound to play when the characters collide. • I can try and fix my code if it isn't working properly.

Title	**Spreadsheets 1.8**
Overview	Children will be introduced to spreadsheets and allowed time to investigate why we use spreadsheets. Children will learn how to enter data onto a spreadsheet and be taught key vocabulary such as column, row, cells. Theywill also have the opportunity to add images and count these.
Vocabulary	Spreadsheet, row, column, arrow key, backspace key, delete key, lock tool, cells, clipart, speak tool, count tool, move cell tool.
Key Learning Objectives	• To know what a spreadsheet looks like and why we use them. • To enter data onto a spreadsheet. • To add images to a spreadsheet. • To use the 'speak' and 'count' tools in 2Calculate to count items. • I can change content on a file such as text, sound and images
Suggested Learning Experiences	• Create a spreadsheet for a class picnic and list all the things we needand how many of each. • Create their own zoo by adding images to a spreadsheet. • Use the 'speak' and 'count' tools to count the animals. • I can name, save and find my work



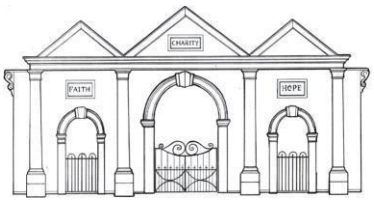
Title	**Technology outside school 1.9**
Overview	This short unit allows children to explore what is meant by 'technology' and it'suses within and outside of school.
Vocabulary	Technology
Key Learning Objectives	• To understand what 'technology' means. • To find examples of technology used outside of school. • To record examples of technology used outside of school.
Suggested Learning Experiences	• Go on a walk around the local community and find examples of weretechnology is used outside of school. • Record examples of technology used outside of school.



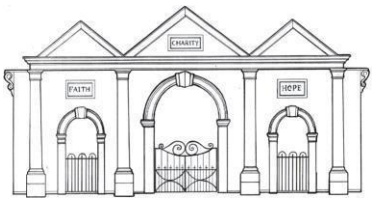
Hedgehog Class

Cycle A

Title	**Online Safety (2.2)**
Overview	In this unit of learning the children will learn how to use the search tool to find resources on Purple Mash. They will explore using 2Paint, Sharing work on a Displayboard and 2Respond (2email). They will understand about the digital footprint they leave online and to think about the information they leave online.
Vocabulary	Search, Displayboard, internet, sharing, email, attachment, digital footprint
Key Learning Objectives	➢ 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. ➢ To introduce Email as a communication tool using 2Respond simulations. ➢ To understand how we talk to others when they aren't there in front ofus. ➢ To open and send simple online communications in the form of email. ➢ To understand that information put online leaves a digital footprint ortrail. ➢ 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.
Suggested Learning Experiences	➢ To use the search tool ➢ Share their work electronically ➢ To communicate using 2Respond ➢ To understand how to communicate appropriately ➢ To discuss and understand how you can leave a digital footprint andthe information you should not share online. ➢ I can share work and communicate electronically – for example using 2Email or the display boards. ➢ I can see where technology is used at school such as in the office or canteen. ➢ I can explain the importance of having a secure password and not sharing itwith others. ➢ I can explain the negative consequences of not keeping passwords safe andsecure.

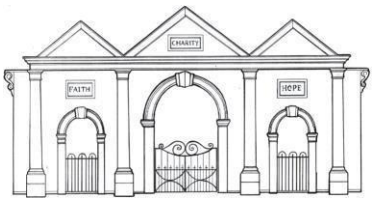


Title	**Coding (2.1)**
Overview	This unit will enable the children to develop their understanding of coding. They will create simple programs and will understand how the repeat and timer commands are used. They will develop an understanding that objectscan behaviour differently and will use this knowledge to predict their behaviour. The children will use their extend knowledge to create a morecomplex program.
Vocabulary	Action, algorithm, bug, character, code block, code design, command, debug/debugging, design mode, input, object, properties, repeat, scale, timer, when clicked, when key
Key Learning Objectives	➢ To understand what an algorithm is. ➢ To create a computer program using simple algorithms. ➢ To compare the Turtle and Character objects. ➢ To use the button object. ➢ To understand how use the Repeat command. ➢ To understand how to use the Timer command. ➢ To know what debugging means and fix my errors ➢ To understand the need to test and debug a program repeatedly. ➢ To debug simple programs. ➢ To create programs using different kinds of objects whose behavioursare limited to specific actions. ➢ To predict what the objects will do in other programs, based on their knowledge of what the object is capable of. ➢ To discuss how logic helped them understand that they could onlypredict specific actions, as that is what the objects were limited to. ➢ I can explain an algorithm is a set of instructions to complete a task. ➢ I know I need to carefully plan my algorithm so it will work when I make itinto code.
Suggested Learning Experiences	➢ Create a simple computer algorithm ➢ Explore how different objects can move ➢ Explore using the repeat and timer commands ➢ To practise debugging programmes ➢ To predict what objects will do in other programmes (using previous knowledge of the characters and logic) ➢ To use their coding knowledge to create a more complex programthat tells a story.



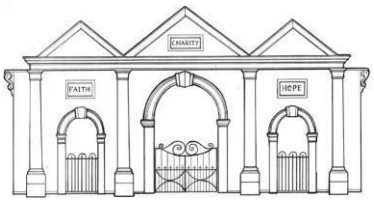
Title	Spreadsheets (2.3)
Overview	The aim of this unit is to teach children how to use a simple spread sheet using 2Calculate. They will develop their skills in using copying and pastingand totalling tools to create price lists, shops and block graphs.
Vocabulary	Backspace key, copy & paste, columns, cells, count tool, delete key, equalstool, image toolbox, lock tool, move cell tool, rows, speak tool, spreadsheet
Key Learning Objectives	➢ Reviewing prior use of spreadsheets ➢ To use Copying and Pasting shortcuts ➢ To use Totalling tools ➢ Using a spreadsheet to add amounts ➢ Creating a table and block graph
Suggested Learning Experiences	➢ Revise previous learning on spreadsheets ➢ Use the 'magic square' to practise using copy and paste and totallingtools. ➢ Create a price list using spreadsheet ➢ Create a shop ➢ Create a block graph

Title	Spreadsheets (3.3)
Overview	The following guide contains a Scheme of Work for teaching the use of spreadsheets as part of the Computing curriculum. It uses some content from the lessons within 2Calculate and some new content. Pupils will create arange of graphs as well as different tools to compare data.
Vocabulary	Column, cell, move cell tool, < > = symbols, delete key, spin tool, equal tool, copy and paste, spread sheet
Key Learning Objectives	➢ To create pie charts and bar graphs ➢ To use the more than, less than and equal tools. ➢ To use advanced mode of 2 calculate and use coordinates. ➢ I can collect data and input it into software. ➢ I can analyse data using features within software to help such as, formula in 2Calculate ➢ I can present data and information using different software such as 2Question (branching database) or 2Graph
Suggested Learning Experiences	➢ Children can create a table of data on a spreadsheet. ➢ Children can use a spreadsheet program to automatically createcharts and graphs from data. ➢ Children can use the 'more than', 'less than' and 'equals' tools to compare different numbers and help to work out solutions to calculations. ➢ Children can use the 'spin' tool to count through times tables. ➢ Children can describe a cell location in a spreadsheet using the notation of a letter for the column followed by a number for the row. ➢ Children can find specified locations in a spreadsheet.

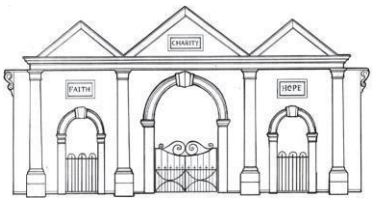


Title	**Making Music (2.7)**
Overview	This series of three lessons will provide the children with the knowledge and understanding to create simple and more complex animations using 2Sequence. The children can use 2Sequence to explore harmony and buildup musical scores.
Vocabulary	Bpm. Composition, digitally, instrument, music, sound effects (Sfx), soundtrack, tempo, volume
Key Learning Objectives	➢ To be introduced to making music digitally using 2Sequence. ➢ To explore, edit and combine sounds using 2Sequence. ➢ To add sounds to a tune they've already created to change it. ➢ To think about how music can be used to express feelings and createtunes which depict feelings. ➢ 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 tothe Sounds section.
Suggested Learning Experiences	➢ Use 2Seqeunce to make music digitally ➢ Children to select instruments into their 'bar' ➢ Experiment with the speed of the music (bpm) ➢ Select from a wider range of instruments to create a tune. ➢ Create music / tunes to convey feelings. ➢ Create a soundtrack for a film or cartoon they have seen.

Title	**Presenting Ideas (2.8)**
Overview	This unit will enable the children to explore the different ways of presenting information. The children will explore different programmes including 2Quizand 2Connect to make quizzes and fact files to present information.
Vocabulary	Concept map, node, animated, quiz, non-fiction, presentation, narrative,audience
Key Learning Objectives	➢ To explore how a story can be presented in different ways. ➢ To make a quiz about a story or class topic. ➢ To make a fact file on a non-fiction topic. ➢ To make a presentation to the class.
Suggested Learning Experiences	➢ Children will explore how a traditional tale can be presented as amind map, quiz, e-book and fact file. ➢ Make their own quiz using 2Quiz ➢ Make their own fact file using 2Connect ➢ To present their work to the class.

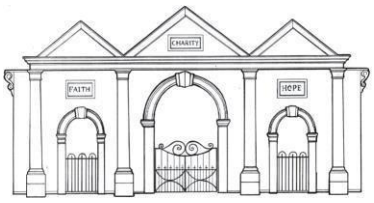


Title	**Simulations (3.7)**
Overview	The two simulations used in these lessons are 'Locked Out' and 'The DarkSide of Elpmis'. Children will explore simulations, including how they are created and what they are used for. Pupils will then analyse and evaluatesimulations.
Vocabulary	Simulation, analyse, evaluate
Key Learning Objectives	➢ To consider what simulations are ➢ To explore simulations ➢ To analyse and evaluate simulations
Suggested Learning Experiences	➢ Children know that a computer simulation can represent real and imaginary situations. ➢ Children can give some examples of simulations used for fun and forwork. ➢ Children can give suggestions of advantages and problems of simulations. ➢ Children can explore a simulation. ➢ Children can use a simulation to try out different options and to test predictions. ➢ Children can begin to evaluate simulations by comparing them withreal situations and considering their usefulness. ➢ Children can recognise patterns within simulations and make and test predictions. ➢ Children can identify the relationships and rules on which the simulations are based and test their predictions. ➢ Children can evaluate a simulation to determine its usefulness for purpose.



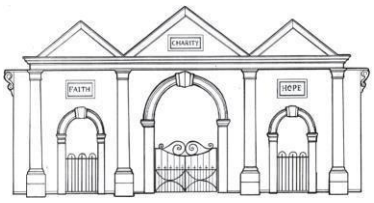
Title	**Emails (3.5)**
Overview	Children will discuss different methods of communication including private and public posts. They will open and respond to emails as well as analysing emails forpotential threats/spam.
Vocabulary	Compose, email, attachment, address book, report, cc, formatting, password, send,save a draft
Key Learning Objectives	➢ To open and respond to an email ➢ To send an email using an address book ➢ To learn how to email safety ➢ To add an attachment to an email ➢ To explore a simulated email scenario ➢ I can create purposeful (appropriate) content and attach this to emails
Suggested Learning Experiences	➢ Children can open an email and respond to it. ➢ Children have sent emails to other children in the class. ➢ Children have written rules about how to stay safe using email. ➢ Children have contributed to classmates' rules. ➢ Children have created a quiz about email safety which explores scenariosthat they could come across in the future. ➢ Children can attach work to an email. ➢ Children know what CC means and how to use it ➢ Children can read and respond to a series of email communications. • ➢ Children can attach files appropriately and use email communication toexplore ideas.

Title	**Questioning (2.4)**
Overview	This unit is designed to help children learn about the importance of phrasing questions and that certain data handling resources are limited in the answersthey can provide.
Vocabulary	Pictogram, question, data, collate, Binary tree, Avatar, database
Key Learning Objectives	➢ To show that the information provided on pictograms is of limited usebeyond answering simple questions. ➢ To use yes/no questions to separate information. ➢ To construct a binary tree to separate different items. ➢ To use 2Question (a binary tree) to answer questions. ➢ To use a database to answer more complex search questions. ➢ To use the Search tool to find information. ➢ I can organise data – for example, using a database
Suggested Learning Experiences	➢ Use 2Count to create a simple pictogram ➢ Use the 'Guess Who' board game – using yes/no ➢ Use 2Question to create a binary tree ➢ Use "Investigate to create a database

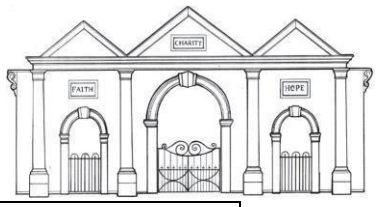


Cycle B

Title	**Online Safety (2.2)**
Overview	In this unit of learning the children will learn how to use the search tool to find resources on Purple Mash. They will explore using 2Paint, Sharing work on a Displayboard and 2Respond (2email). They will understand about the digital footprint they leave online and to think about the information they leave online.
Vocabulary	Search, Displayboard, internet, sharing, email, attachment, digital footprint
Key Learning Objectives	➢ 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. ➢ To introduce Email as a communication tool using 2Respond simulations. ➢ To understand how we talk to others when they aren't there in front ofus. ➢ To open and send simple online communications in the form of email. ➢ To understand that information put online leaves a digital footprint ortrail. ➢ 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.
Suggested Learning Experiences	➢ To use the search tool ➢ Share their work electronically ➢ To communicate using 2Respond ➢ To understand how to communicate appropriately ➢ To discuss and understand how you can leave a digital footprint andthe information you should not share online. ➢ I can share work and communicate electronically – for example using 2Email or the display boards. ➢ I can see where technology is used at school such as in the office or canteen. ➢ I can explain the importance of having a secure password and not sharing itwith others. ➢ I can explain the negative consequences of not keeping passwords safe andsecure.

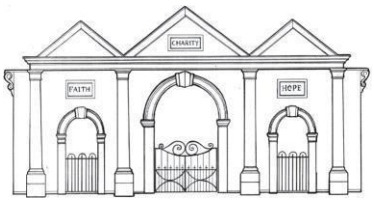


Title	**Coding (3.1)**
Overview	To master coding skills, children need to have the opportunity to explore program design and put computational thinking into practice. Children will be designing before coding in some lessons. Storyboarding their ideas for programs. For example, creating a storyboard when planning a program that will retell part of a story. Creating annotated diagrams. Children will be creating a timeline of events inthe program. For example, creating a game program against the computer, what are all the actions needed from the objects?
Vocabulary	Action, code block, control, algorithm, debug, command, bug, code design, designmode
Key Learning Objectives	➢ To review coding vocabulary that relates to Object, Action, Output, Controland Event. ➢ To use 2Chart to represent a sequential program design. ➢ To use the design to write the code for the program ➢ To design and write a program that simulates a physical system. ➢ To look at the grid that underlies the design and relate this to X and Y properties. ➢ To introduce selection in their programming by using the if command. ➢ To combine a timer in a program with selection ➢ To understand what a variable is in programming. ➢ To create a program with an object that repeats actions indefinitely. • To use a timer to make characters repeat actions. • To explore the use of therepeat command and how this differs from the timer. ➢ To know what debugging means. ➢ To understand the need to test and debug a program repeatedly. ➢ To debug simple programs. ➢ I can identify the difference in using between the effect of a timer or repeat command in my code. ➢ I know that a variable stores information while a program is running (executing)
Suggested Learning Experiences	➢ Children can create a design that represents a sequential algorithm. ➢ Children can use a flowchart design to create the code. ➢ Children can explain what Object, Action, Output, Control and Event are incomputer programming ➢ Children can explain how their program simulates a physical system, i.e.my vehicles move at different speeds and angles. ➢ Children can describe what they did to make their vehicle change angle. ➢ Children can make use of the X and Y properties of objects in their coding. ➢ Children can create an if statement in their program. ➢ Children can use a timer and if statement to introduce selection in their program. ➢ Children can explain what a variable is in programming. ➢ Children can explain why variables need to be named. ➢ Children can show how their character repeats an action and explain howthey caused it to do so. ➢ Children are beginning to understand how the use of the timer differs fromthe repeat command ➢ Children can explain what debug (debugging) means. ➢ Children have a clear idea of how to use a design document to start debugging a program.



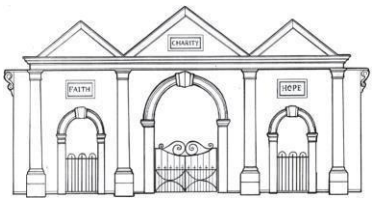
Title	Touch typing (3.4)
Overview	This unit of work uses 2Type and is designed to help the children learn the basics of quick and efficient typing. Typing, as with handwriting, needs regular practice andalthough the unit will give the children a basic understanding regular and consistent practice is needed over the next 4 years to ensure typing skills develop. As well as the activities suggested in these plans there are numerous other activities for thechildren to access.
Vocabulary	Posture, top row keys, bottom row keys, home row keys, space bar
Key Learning Objectives	➢ To introduce typing terminology. ➢ Understand the correct way to sit at the keyboard. ➢ To learn how to use the home, top and bottom row keys. ➢ To practice and improve typing for home, bottom and top rows. ➢ To practice keys typed with the left hand. ➢ To practice keys typed with the right hand.
Suggested Learning Experiences	➢ To understand the names of the fingers. ➢ To understand what is meant by – home, bottom, and top rows. ➢ Developed ability to touch type the home, bottom, and top rows. ➢ I can use two hands to type the letters on the keyboard ➢ I can touch type using my left hand ➢ I can touch type using my tight hand

Title	Creating Pictures (2.6)
Overview	This unit encourages children to think logically about scenarios. Children will be introduced to the term algorithm. This concept is at the core of coding. Thenext unit (maze explorers), builds upon this, linking logical thought processes to the way that computers are programmed.
Vocabulary	Impressionism, palette, pointillism, share, surrealism, template
Key Learning Objectives	➢ To be introduced to 2Paint a Picture ➢ To look at the impressionist style of art (Monet, Degas, Renoir) ➢ To recreate pointillist art and look at the work of pointillist artists suchas Seurat ➢ To look at the work of Piet Monndrian and recreate it using the lines template ➢ To look at the work of William Morris and recreate it using the patterns template ➢ To explain surrealism and eCollage ➢ I can include photos, text and sound in my creations. ➢ I can carry out searches to find digital content on a range of online systems,such as within Purple Mash or on an internet search engine
Suggested Learning Experiences	➢ To study artwork by different artists ➢ To study different styles of artwork ➢ To recreate artwork in the style of an artist ➢ To create artwork in a certain artist style ➢ Have a class gallery



Title	**Effective Searching (2.5)**
Overview	Within this unit, children will be taught how to search using the internet effectively. Children will become familiar with the internet, the web, browsers and search engines. Using this knowledge, they will then learn the basics ofsearching online.
Vocabulary	Internet, search, search engine
Key Learning Objectives	➢ To understand the terminology associated with searching ➢ To gain a better understanding of searching on the internet. ➢ I can find information I need using a search engine. ➢ I know the consequences of not searching online safely. ➢ To create a leaflet to help someone search for information on the internet. ➢ I can find data using specific searches – for example, using 2Investigate ➢ I can use several programs to organise information – for example, usingbinary trees such as 2Question or spreadsheets such as 2Calculate
Suggested Learning Experiences	➢ Complete a quiz about the internet ➢ Identify the basic parts of a web search engine ➢ Search the internet ➢ Create a leaflet to share knowledge of effective internet searching ➢ I can name, save and find my work

Title	**Branching (3.6)**
Overview	A branching database is sometimes referred to as a 'binary tree' or a 'key'. Pupils will use branching databases to classify groups of objects. If you havecreated your branching database correctly, someone else should be able to use it to identify an object that they have in front of them, e.g. to find out the name of an insect, a fruit or vegetable by using a series of simple questionsand yes/no answers.
Vocabulary	Data, database, branching database, debugging, analyse, import
Key Learning Objectives	➢ To sort objects using just 'yes' or 'no' questions. ➢ To complete a branching database using 2Question. ➢ Children can choose a suitable topic for a branching database. ➢ Children can select and save appropriate images. ➢ Children can create a branching database. ➢ Children know how to use and debug their own branching database ➢ To create a branching database of the children's choice.
Suggested Learning Experiences	➢ create their own branching database ➢ import images from the internet ➢ Complete question to add to the branching database. ➢ Classify images using Yes/No answers (like guess who) ➢

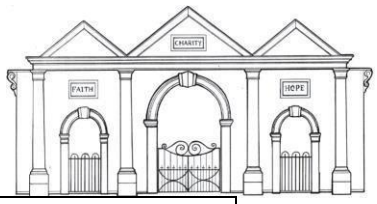


Title	**Graphing (3.8)**
Overview	This short topic will allow children to use their maths skills to present data in graphs.There is an option to link Lesson 2 to a topic being studied in maths, science or another curriculum area. Pupils will solve an investigation and present data in agraphic form.
Vocabulary	Graph, field, data, bar chart, block chart, line graph, pie chart, row, column
Key Learning Objectives	➢ To enter data into a graph ➢ To answer questions based on data ➢ To solve an investigation and present the results in graphic form.
Suggested Learning Experiences	➢ Children can set up a graph with a given number of fields. ➢ Children can enter data for a graph. ➢ Children can produce and share graphs made on the computer. ➢ Children have solved a maths investigation. ➢ Children can present the results in a range of graphical formats

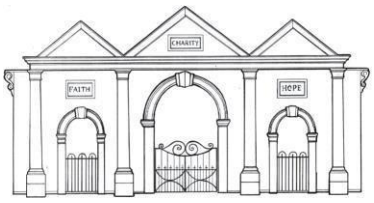
Title	**Power Point (3.9)**
Overview	Within this topic children will learn how to use the Microsoft Program, 'Power Point'. Children will use the program to present information to an audience in an engaging way, such as including text, pictures and videos.
Vocabulary	Animation, audio, design templates, entrance animation, font, media, presentation, presentation program, slide, slideshow, stock image, text box, text formatting,transition, word art,
Key Learning Objectives	➢ To understand the uses of Power Point ➢ 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
Suggested Learning Experiences	➢ Children explore the program 'Power Point' ➢ Children use the features of the program to create an engaging power point slideshow linked to a topic ➢ Children present their presentation

Barn Owls – Cycle A

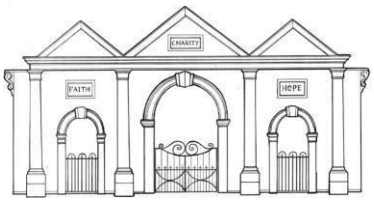
Title	**Online Safety 4.2**
Overview	Children will understand how they can protect themselves from online identity theft. They will understand that information put online leaves a digital footprint or trail and that this can aid identity theft. Pupils will learn key vocab linked to this area includinggrooming and phising. Pupils will also Identify the positive and negative influences of technology on health and the environment. They will understand the importance of balancing game and screentime with other parts of their lives.
Vocabulary	Computer virus Phising Digital footprint Identify theft Cookies Malware Spam Copyright
Key Learning Objectives	➢ To understand how children can protect themselves from online identitytheft. ➢ Understand that information put online leaves a digital footprint or trailand 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. ➢ I have a good understanding of the online safety rules we learn atschool. (4.2 & across curriculum) ➢ I can demonstrate how to use different online technologies safely. (4.2& across curriculum) ➢ I can demonstrate how to use a few different online services safely. ➢ I know I have a right to privacy both on and offline.
Suggested Learning Experiences	➢ Children to analyse emails to identify features of genuine and fake ones/phishing. ➢ Complete online safety top tips 2do programme. ➢ Compare two texts to identify plagiarised work. ➢ Complete screen time fact file ➢ Create charts to present screen time data ➢ I can create and improve my solutions to a problem based on feedback.For example, create a program using 2Code. ➢ To identify the positive and negative influences of technology on healthand the environment. ➢ To understand the importance of balancing game and screen time withother parts of their lives. ➢ I can review solutions that others have created, using a checklist of criteria. ➢ I can work collaboratively to create content and solutions



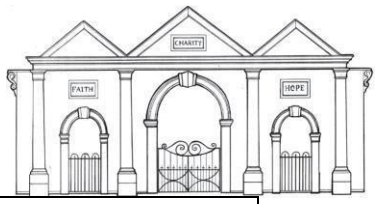
Title	**Hardware investigators 4.8**
Overview	In this short topic pupils will explore different forms of technology as well as specifically focussing on the components to make a computer. Once learnt thechildren will recall these and create a leaflet to explain the components.
Vocabulary	Keyboard and mouse Speaker Monitor Network card Graphic card CPU RAM Motherboard
Key Learning Objectives	➢ To understand the different parts that make up a computer ➢ To recall the different parts that make up a computer. ➢ I recognise the main component parts of hardware which allow computers to join and form a network ➢ I understand that network and communication components can be found in many different devices which allow them to join the internet
Suggested Learning Experiences	➢ Children can name the different parts of a desktop computer. ➢ Children know what the function of the different parts of a computer is. ➢ Children have created a leaflet to show function of computer parts.



Title	**Spreadsheets (Y4) 4.3**
Overview	The use of spreadsheets has a strong link to mathematics. Pupils will create spreadsheets, specifically for budgeting. They will explore using a range of tool buttons including timer and spin buttons. Finally, they will explore how to use place value within a spreadsheet document.
Vocabulary	Average Copy and paste Cells Columns Charts Equal tools Formula
Key Learning Objectives	➢ To add, formulae and explore formatting cells ➢ Use timer and spin buttons # ➢ Create a line graph ➢ Use a spreadsheet for budgeting ➢ Use place value within a spreadsheet.
Suggested Learning Experiences	➢ Children can use the number formatting tools within 2Calculate to appropriately format numbers. ➢ Children can add a formula to a cell to automatically make a calculation inthat cell. ➢ Children can use the timer, random number and spin button tools. ➢ Children can combine tools to make fun ways to explore number. ➢ Children can use a series of data in a spreadsheet to create a line graph. ➢ Children can use a line graph to find out when the temperature in the playground will reach 20°C. ➢ Children can make practical use of a spreadsheet to help them plan actions. ➢ Children can use the currency formatting in 2Calculate ➢ Children can allocate values to images and use these to explore placevalue. ➢ Children can use a spreadsheet made in 2Calculate to check their understanding of a mathematical concept.

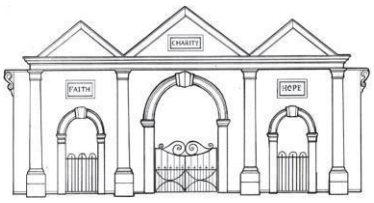


Title	**Coding 4.1**
Overview	To master coding skills, children need to have the opportunity to explore program design and put computational thinking into practice. In this unit pupils will be using a sketch or storyboard to represent a program design and algorithm. Before using thisdesign to create a program. They will be exploring how to use variables to make objects change and respond. Moving into using timers and a controlled simulation.
Vocabulary	➢ Action ➢ Bug ➢ Design mode ➢ Alert ➢ Code design ➢ Event ➢ Algorithm ➢ Command ➢ Input ➢ Bugging/debugging
Key Learning Objectives	➢ To review coding vocabulary. ➢ To use a sketch or storyboard to represent a program design and algorithm. ➢ To use the design to create a program including variables ➢ To introduce the If/else statement and use it in a program. ➢ To create a variable. ➢ To explore a flowchart design for a program with an if/else statement ➢ To create a program which responds to the If/else command, using thevalue of the variable. ➢ To create a program with an object that repeats actions. ➢ To use the Repeat Until command to make objects repeat actions. ➢ To program an object to respond to user keyboard input ➢ To make timers and counting machines using variables to print a newnumber to the screen every second. ➢ To explore how 2Code can be used to investigate control by creating a simulation. ➢ To know what decomposition and abstraction are in computer science. ➢ To take a real-life situation, decompose it and think about the level of abstraction. ➢ I can identify errors in my code by using different methods, such as steeping through lines of code and fixing them ➢ I can turn a real-life situation to solve into an algorithm, using a designthat shows how I can accomplish this in code. ➢ I can use repetition in my code. For example, using a loop that continuesuntil a condition is met such as the correct answer being entered
Suggested Learning Experiences	➢ Pupils can use sketching to design a program and reflect upon their design. ➢ Pupils can create code that conforms to their design ➢ Pupils can set/change the variable values appropriately. ➢ Pupils can interpret a flowchart that depicts an if/else flowchart. ➢ Pupils can create an algorithm modelling the sequence of a simple event. ➢ Pupils can manipulate graphics in the design view to achieve the desiredlook for the program. ➢ Pupils can use an algorithm when making ➢ Pupils can make good attempts to break down their aims for a coding

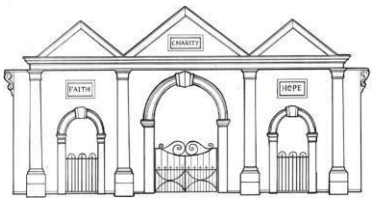


	task into smaller achievable steps.

Title	**Logos (Y4) 4.5**
Overview	Logo is a text based coding language used to control an on-screen turtle to create mathematical patterns. Children were introduced to turtle patterns using 2Go in year 1. In this unit they will: Learn common commands and constructs of the Logo programming language; develop their ability to compose algorithms for drawingmathematical structures and turn these into Logo code.
Vocabulary	Logo RepeatLT RT BK FD SetPC SetPS PUPD
Key Learning Objectives	➢ To learn the structure of the language of Logo. ➢ To input simple instructions in Logo. ➢ Use 2Logo to create letter shapes ➢ Use the repeat button to create letter shapes. ➢ To use and build procedures in Logo
Suggested Learning Experiences	➢ Children know what the common instructions are in Logo and how to typethem. ➢ Children can follow simple Logo instructions to create shapes on paper. ➢ Children can follow simple instructions to create shapes in Logo. ➢ Children can create Logo instructions to draw patterns of increasing complexity. ➢ Children understand the pu and pd commands. ➢ Children can write Logo instructions for a word of four letters. ➢ Children can follow Logo code to predict the outcome. ➢ Children can create shapes using the Repeat function ➢ Children can use the Procedure feature. ➢ Children can create 'flowers' or 'crystals' using Logo.

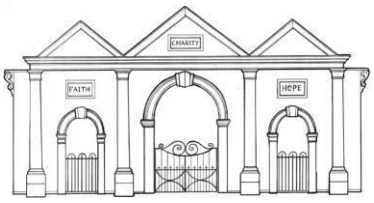


Title	**Databases (Y5) 5.4**
Overview	In this topic pupils will be using their own log in to search for information in a given database. We will move onto adding information into a class database with all pupils contributing. Finally the children will use these skills to create their own databasearound a given topic.
Vocabulary	Avatar Collaborative Record Branching database Sort, group, arrange Charts Statistics and reports Find ➢ Table
Key Learning Objectives	➢ To learn how to search for information in a database ➢ To contribute to a class database ➢ To create a database around a chosen topic. ➢
Suggested Learning Experiences	➢ Pupils understand the different ways to search a database. ➢ Pupils can search a database to answer questions correctly. ➢ Pupils have designed an avatar for a class database. ➢ Pupils have successfully entered information into a class database. ➢ Pupils can create their own database on a chosen topic. ➢ Pupils can add records to their database. ➢ Pupils know what a database field is and can correctly add field information. ➢ Pupils understand how to word questions so that they can be effectively answered using a search of their database.



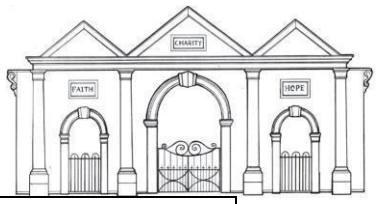
Title	**3D Modelling (Y5) 5.6**
Overview	In this topic, pupils will be introduced to 2Make and use the program in a variety of ways. We will explore the effect of moving points when designing and understand the purpose for our designs. This will help us make good decisions about our designbefore learning about printing and making.
Vocabulary	CAD – computer aided design Polygon Viewpoint 3D printing Modelling 2D 3D Points Template
Key Learning Objectives	➢ To be introduced to 2Design and Make. ➢ To explore the effect of moving points when designing. ➢ To understand designing for a purpose. ➢ To understand printing and making.
Suggested Learning Experiences	➢ Pupils know what the 2Design and Make tool is for. ➢ Pupils have explored the different viewpoints in 2Design and Makewhilst designing a building. ➢ Pupils have adapted one of the vehicle models by moving the pointsto alter the shape of the vehicle while still maintaining its form. ➢ Pupils have explored how to edit the polygon 3D models to design a3D model for a purpose. ➢ Pupils have refined one of their designs to prepare it for printing. ➢ Pupils have printed their design as a 2D net and then created a 3Dmodel. ➢ Pupils have explored the possibilities of 3D printing.

Title	**Making Music Y4 4.9**
Overview	This topic encourages pupils to discuss and experiment with the main elements of a piece of music and allows them to compose themselves. It is important to be familiar with Busy Beats before teaching this unit - watching the introduction videos on theprogramme will help with this
Vocabulary	Pitch Melody Tempo Rhythm Dynamics Rippler Pulse Texture House music
Key Learning Objectives	➢ To identify and discuss the main elements of music - • Pulse • Rhythm • Tempo • Pitch • Texture ➢ To understand and experiment with rhythm and tempo. ➢ To create a melodic phrase. ➢ To compose a piece of music
Suggested Learning Experiences	➢ Pupils can use appropriate musical language to discuss a piece ofmusic. ➢ Pupils can identify sounds in a piece of music. ➢ Pupils can explain how a piece of music makes them feel. ➢ Pupils can identify and recall a simple rhythm. ➢ Pupils can explain what tempo is and how changing it can change themood of a piece of music. ➢ Pupils can create their own simple rhythm using Busy Beats ➢ Pupils can show an understanding of melody. ➢ Pupils can create a simple melodic pattern using 2sequence and BusyBeats. ➢ Pupils can use a variety of notes, experimenting with pitch. ➢ Pupils can explore and understand how music is created. ➢ Pupils can experiment with pitch, rhythm, and melody to create a pieceof house music on Busy Beats.



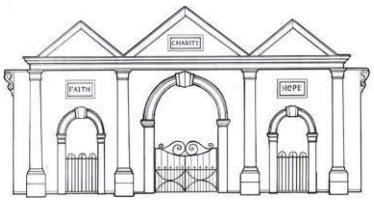
Barn Owls – Cycle B

Title	**Online Safety (Y5) 5.2**
Overview	Pupils will be building on previous work for keeping themselves and others safe while online. They will understand the impact of sharing digital content can have as well as how to gain support when using technology. We will also learn strategies to stay safe online including how to maintain a secure password. Finally, we will focus on how to reference work and search reliably for valid information.
Vocabulary	Online safety Encryption Plagiarism Smart rules Identity theft Citations Password Shared image Reputable Reference Bibliography[hy
Key Learning Objectives	➢ To gain a greater understanding of the impact that sharing digital content can have. ➢ To review sources of support when using technology. ➢ To review pupils' responsibility to one another in their online behaviour. ➢ To be aware of appropriate and inappropriate text, photographs andvideos 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. ➢ Ensuring reliability through using different methods of communication ➢ I know the importance of computer networks and how they help solve problems and enhance communication ➢ I recognise the main dangers that can be perpetuated via computer networks. ➢ I can explain what personal information is and know strategies for keeping this safe. ➢ I can use the most appropriate form of online communication accordingto the digital content. For example, use 2Email, 2Blog and Display Boards ➢ I can report with ease any concerns with content and contact online andknow immediate strategies to keep safe
Suggested Learning Experiences	➢ I think critically about the information that I share online both about myself and others. ➢ I know who to tell if I am upset by something that happens online. ➢ I can use the SMART rules as a source of guidance when online. ➢ Pupils think critically about what they share online, even when asked by



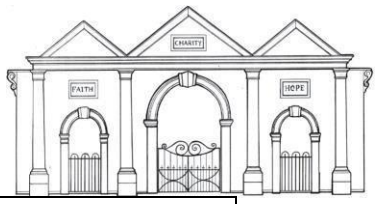
	a usually reliable person to share something. ➢ Pupils have clear ideas about good passwords. ➢ Pupils can see how they can use images and digital technology tocreate effects not possible without technology. ➢ Pupils have experienced how image manipulation could be used to upset them or others even using simple, freely available tools and littlespecialist knowledge. ➢ Pupils can cite all sources when researching and explain the importance of this. ➢ Pupils select keywords and search techniques to find relevant information and increase reliability ➢ Pupils show an understanding of the advantages and disadvantages of different forms of communication and when it is appropriate to useeach.

Title	**Effective searching (Y4) 4.7**
Overview	This unit builds upon the skills and knowledge developed in Year 2 in Unit 2.5 – Effective Searching. The lesson makes use of the Google search engine but could beadapted to be used with an alternative. These lessons are based upon Basic Search Lesson Plans produced by Google, which can be found at https://sites.google.com/site/gwebsearcheducation/lessonplans.
Vocabulary	Easter egg Internet Search engine internet browserwebsite spoof website
Key Learning Objectives	➢ 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. ➢ I understand the purpose of a search engine and the main featureswithin it. ➢ I can look at information on a webpage and make predictions about the accuracy of information contained within it
Suggested Learning Experiences	➢ Children can structure search queries to locate specific information ➢ Children have used search to answer a series of questions. ➢ Children have written search questions for a friend to solve ➢ Children can analyse the contents of a web page for clues about the credibility of the information.



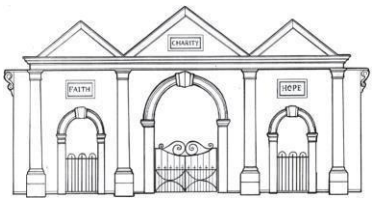
Title	**Spreadsheets (Y5) 5.3**
Overview	During this topic pupils will build on previous knowledge of the 2calculate program which replicates Excel. Pupils will explore new tools in advance mode including howto use text variables to perform calculations. Finally, we will use our new skills to model a real life situation and answer questions.
Vocabulary	Average Charts Random ToolsAdvance modeEquals tool Rows Copy and paste Columns Formula Spin tool Spreadsheet Cells Formula wizard Timer Move cell tool
Key Learning Objectives	➢ Using conversions of measurements ➢ Novel use of the count tool ➢ Formulae using the advance mode ➢ I can use text variables to perform calculations ➢ I can use a spreadsheet to plan an event.
Suggested Learning Experiences	➢ Using the formula wizard to add a formula to a cell to automaticallymake a calculation in that cell. ➢ To copy and paste within 2Calculate. ➢ Using 2Calculate tools to test a hypothesis. ➢ To add a formula to a cell to automatically make a calculation in thatcell. ➢ Using a spreadsheet to model a real life situation and answer questions.

Title	Coding (Y5) 5.1
Overview	To master coding skills, children need to have the opportunity to explore program design and put computational thinking into practice. In this unit pupils will be using a sketch or storyboard to represent a program design and algorithm. Some examples include; creating a storyboard when planning a program that will retell part of a story,creating annotated diagrams, creating an annotated diagram to plan a journey animation that tells the story of an historical event they have been studying, creatinga timeline of events in the program.
Vocabulary	Action Bug Control Alert Code design Debug Algorithm Command Design mode
Key Learning Objectives	➢ To review coding vocabulary. ➢ To use a sketch or storyboard to represent a program design and algorithm. ➢ To use the design to create a program. ➢ To design and write a program that simulates a physical system. ➢ To review the use of number variables in 2Code. ➢ To explore text variables. ➢ To create a playable, competitive game. ➢ To combine the use of variables, If/else statements and Repeats to achievethe desired effect in code. ➢ To read code so that it can be adapted, personalised and improved. ➢ To explore the launch command and use buttons within a program thatlaunch other programs or open websites. ➢ To create a program to inform others.
Suggested Learning Experiences	➢ Pupils can use sketching to design a program and reflect upon their design. ➢ Pupils can create code that conforms to their design. ➢ Pupils can explain how their program simulates a physical system. ➢ Pupils can select the relevant features of a situation to incorporate intotheir simulation by using decomposition and abstraction. ➢ Pupils can reflect upon the effectiveness of their simulation. ➢ Pupils can explain what a variable is in programming. ➢ Pupils can set/change the variable values appropriately. ➢ Pupils know some ways that text variables can be used in coding. ➢ Pupils can create a game which has a timer and score pad. ➢ Pupils can use variables to control the objects in the game.

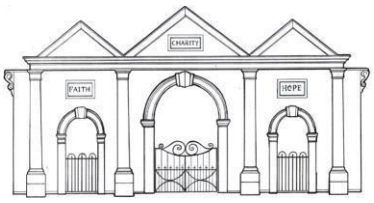


	➢ Pupils can create loops using the timer and If/else statements. ➢ Pupils can include buttons and objects that launch windows to websitesand programs. ➢ Pupils can code a program that informs others.

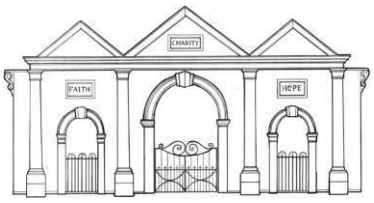
Title	**Game creator (Y5) 5.5**
Overview	These lessons use the Purple Mash tool 2DIY 3D. We will look at setting the scene and creating an exciting environment for their games. We will use our programming skills – maximising the playability to create a game that engages the player. Finally,Pupils will have opportunities to share and evaluate their work.
Vocabulary	Animation Image Texture Computer game Instructions Perspective Customise Interactive Evaluation Screenshot Playability
Key Learning Objectives	➢ I can set the scene ➢ I can create a game environment ➢ I can create a game quest with multiple levels ➢ I can Finish and share my game ➢ I can evaluate my own and other pupil's work.
Suggested Learning Experiences	➢ Pupils can review and analyse a computer game. ➢ Pupils can describe some of the elements that make a successfulgame. ➢ Pupils can begin the process of designing their own game. ➢ Pupils can design the setting for their game so that it fits with the selected theme. ➢ Pupils can upload images or use the drawing tools to create the walls,floor, and roof. ➢ Pupils can design characters for their game. ➢ Pupils can decide upon, and change, the animations and sounds thatthe characters make. ➢ Pupils can make their game more unique by selecting the appropriateoptions to maximise the playability. ➢ Pupils can write informative instructions for their game so that other people can play it. ➢ Pupils can evaluate their own and peers' games to help improve theirdesign for the future.



Title	**Animations (Y4) 4.6**
Overview	In this topic we will explore the different ways to create animations. We will begin bycrating animations by hand using flick books. Moving forward, we will use the program 2Animate to create a simple animation adding the onion skin function afterwards. Finally, we will introduce ourselves to stop animation and evaluate our work from the topic.
Vocabulary	Animation Onion skinning Sound Flipbook Background Stop motion Frame Play Video clip
Key Learning Objectives	➢ To discuss what makes a good animated film or cartoon and whattheir favourites are. ➢ To learn how animations are created by hand. ➢ To find out how 2Animate can be created in a similar way usingthe 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
Suggested Learning Experiences	➢ Pupils have put together a simple animation using paper to createa flick book. ➢ Pupils understand animation frames. ➢ Pupils have made a simple animation using 2Animate. ➢ Pupils know what the Onion Skin tool does in animation. ➢ Pupils can use the Onion Skin tool to create an animated image. ➢ Pupils can use backgrounds and sounds to make more complexand imaginative animations. ➢ Pupils know what 'stop motion' animation is and how it is created. ➢ Pupils have used ideas from existing 'stop motion' films to recreate their own animation. ➢ Pupils have shared their animations and commented on eachother's work using display boards and blogs in Purple Mash.



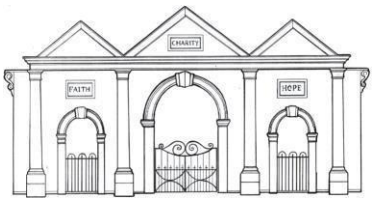
Title	**Concept maps (Y5) 5.7**
Overview	This unit of work uses 2Connect and is designed to help the children learn the basics of concept mapping both individually and in collaborative workinggroups.
Vocabulary	Audience Concept map Node Collaboratively Connection Thought Concept Idea Visual
Key Learning Objectives	➢ To understand the need for visual representation when generatingand discussing complex ideas. ➢ 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 map and present this to an audience. ➢ I can use collaborative modes such as within 2Connect to work withothers and share it
Suggested Learning Experiences	➢ Children can make connections between thoughts and ideas. ➢ Children can see the importance of recording concept mapsvisually. ➢ Children understand what is meant by 'concept maps', 'stage','nodes' and 'connections'. ➢ Children can create a basic concept map. ➢ Children have used 2Connect Story Mode to create an informative text. ➢ Children have used 2Connect collaboratively to create a conceptmap. ➢ Children have used Presentation Mode to present their conceptmaps to an audience.



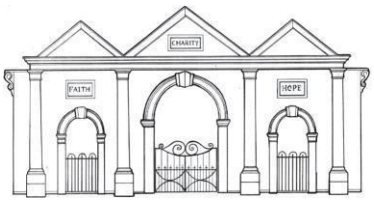
Title	**Word Processing (Y5) 5.8**
Overview	In this topic, pupils will be applying their previous word processing skills to google docs. We will begin by creating documents and adding in basic elements such as text and pictures. Moving forward, we will add extra elements where needed including Text boxes, hyperlinks, automated contents pages and more. Finally, we will learn how to share these with selectedaudiences.
Vocabulary	Copyright Text formattingIn-built styles Curser Merge cells Text wrapping Document Paragraph formatting Textbox Font Readability Template Word processing tool
Key Learning Objectives	➢ I can make a document from a blank page ➢ I can insert images – considering copyright ➢ I can Edit images effectively ➢ I can add text carefully and appropriately ➢ I can add finishing touches including page breaks, text boxes,headers and footers ➢ I can share documents with selected users.
Suggested Learning Experiences	➢ 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 to present information. ➢ To consider page layout including heading and styles. ➢ To understand how to share Google Docs files.

Otter Curriculum

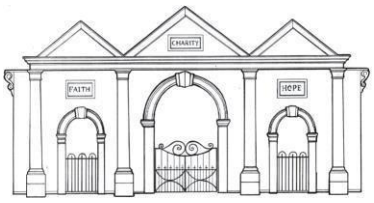
Title	**Online Safety 6.2**
Overview	Within this unit, the children will identify the benefits and risks of mobile devises and social media. They will also explore the idea of having a digital footprint and how to protect this online. The children will also explore the ideaof balancing screen time with other parts of their lives.
Vocabulary	Digital footprint, password, PEGI rating, phishing, screen time
Key Learning Objectives	➢ To be able to identify secure sites ➢ To identify the benefits and risks of giving personal information ➢ To understand the meaning of a digit footprint ➢ To explain what appropriate behaviours online are ➢ I can identify more discrete inappropriate behaviours online. For example, someone who may be trying to groom me or someone else. ➢ To understand the importance of balancing screen time with otherparts of life ➢ To identify the positive and negative influences of technology onhealth and the environment ➢ I can explain the difference between the internet and the World WideWeb ➢ I can explain in detail how accurate and reliable a webpage and itscontent is.
Suggested Learning Experiences	➢ Use example game on Purple Mash site to explore/revise online risksand steps that can be taken to protect themselves. ➢ Use 2Investigate database for children to explore the concept ofdigital footprints. ➢ Children to complete a screen time record card to record their screentime over a week. Children to input this into a class ➢ I can use filters when searching for digital content. ➢ I can explain what a WAN and LAN is and describe the process ofhow access to the internet in school is possible database. ➢ Discuss the positive and negative effects that screen time can have. ➢ I know the value of protecting my privacy and others online



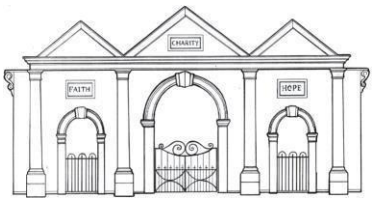
Title	**Networks 6.6**
Overview	In this topic, the children will learn about how computer networks work, including the internet. They will learn how networks can provide multiple services and will explore how networks can be used for communication and collaboration. Finally, they will consider some of the major changes in technology which have taken place during their lifetime and the lifetime of their parents.
Vocabulary	Internet, network, router, World Wide Web, local area network (LAN), widearea network (WAN), wireless, network cables
Key Learning Objectives	➢ To learn about what the internet consists of. ➢ To find out what a LAN and 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 for the internet.
Suggested Learning Experiences	➢ Discuss what they use the internet for, at home and in school ➢ Use 2Connect to create concept maps for the uses of the internet ➢ Watch BBC video clip which explains differences between the internetand the World Wide Web ➢ Children to walk around school and write down all devices they findthat use the internet. Children to answer questions about these devices. ➢ Research Tim Berners-Lee (Who is he? What is he famous for?) Children to complete a profile template ➢ Brainstorm changes in technology during children's lifetimes and theirparents ➢ Discuss how the internet might change/be used in the future.



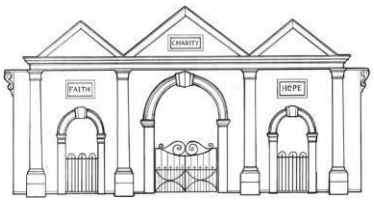
Title	**Blogging 6.4**
Overview	During this unit, the children will identify the purpose of writing a blog and the features of a successful blog. They will then learn how to write a blog and will consider the impact that the presentation of information can have on the audience. The children will explore ways in which to maintain the audience's interest and engagement.
Vocabulary	Blog, audience, blog page, blog post, collaborative, icon
Key Learning Objectives	➢ To identify the purpose of writing a blog and the key features. ➢ To plan the theme and content for a blog. ➢ To consider the effect on the audience of changing the visual properties of a blog. ➢ To understand how to contribute to an existing blog. ➢ To understand the importance of commenting on blogs. ➢ I can explain the difference between the internet and the World WideWeb.
Suggested Learning Experiences	➢ Explore an example blog on 2Blog. Identify the success criteria of ablog. ➢ Work collaboratively to decide on and plan the theme and content fora blog. Use 2Connect programme to plan this. ➢ Write a blog using 2Blog. ➢ Experiment with the visual features and decide what would appealbest to their target audience. ➢ Create a class blog. Children will write their own blog posts to add tothe class blog. ➢ Discuss what makes an appropriate comment for a blog. Children will comment on the class blog posts.



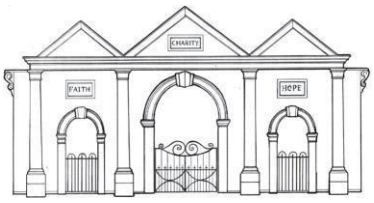
Title	Spreadsheets 6.9
Overview	In this unit, the children will build on their knowledge of spreadsheets. Theywill use different tools within their spreadsheet. They will also begin to use a spreadsheet as a tool for computational modelling and problem solving in the'real world'.
Vocabulary	Spreadsheet, average, columns, cells, count tool, advance mode, copy and paste, charts, dice, equals tool, move cell tool, random tool, formula, rows,timer, formula wizard, spin tool.
Key Learning Objectives	➢ To use a spreadsheet to investigate the probability of the resultsthrowing many dice. ➢ To use the formula wizard to add a formula to a cell to automaticallymake a calculation in that cell. ➢ To create graphs showing the data collected. ➢ To type in a formula for a cell to automatically make a calculation inthat cell. ➢ To use a spreadsheet to create computational models and answer questions. ➢ I can use filters when searching for digital content. ➢ I can consider the intended audience carefully when I design andmake digital content.
Suggested Learning Experiences	➢ Create a spreadsheet to answer a mathematical question relating toprobability ➢ Use copy and paste shortcuts ➢ Children to create a machine to help them work out the price of different items in a sale ➢ Use a formula wizard to create formulae ➢ Children to use a spreadsheet to model a real-life situation (pocket money spending) ➢ Make practical use of their spreadsheet to help plan actions ➢ Use a spreadsheet to plan a charity day (could be a school project ora fictional event). Spreadsheet to be used to calculate budgets and profits



Title	**Text Adventures 6.5**
Overview	In this unit, the children will be working towards coding their own text-based adventure story. They will use 2Code to do this. Prior to this, the children will explore text adventures and learn how they work. They will use 2Connect toplan their own and 2Create to bring their story to life.
Vocabulary	Text-based adventure, concept map, debug, sprite, function
Key Learning Objectives	➢ To find out what a text adventure is ➢ To play a story adventure ➢ To make a story-based adventure ➢ To introduce map-based text adventures ➢ To code a map-based text adventure
Suggested Learning Experiences	➢ Explore Red Riding Hood text adventure example ➢ Children to map out a story-based text adventure and use 2Connectto record their ideas ➢ Use 2Create a Story to make an adventure style book ➢ Add animations and sounds to make the adventure more exciting ➢ Regularly test and debug the story ➢ Children to compare a map-based game with a sequential story-based game ➢ Use Text Adventure Planner document to plan their own map andstory ➢ Use 2Code to code their own adventure game based upon their map



Title	**Quizzing 6.7**
Overview	In this unit, children will explore a range of different question types and quizzes. They will explore different examples before having a go at constructing their own quizzes, in the style of the examples. Finally, they will work collaboratively to create an 'Are you smarter than a 10-year-old?' quiz inthe style of a game show. They will make a scoreboard which adds up the scores alongside the quiz.
Vocabulary	Audience, collaboration, concept map, database, quiz, sequencing questions,grouping and sorting questions, text based questions, multiple-choice questions, labelling questions.
Key Learning Objectives	➢ To create a picture-based quiz for young children ➢ To learn how to use the question types within 2Quiz ➢ To explore the grammar quizzes ➢ To make a quiz that requires the player to search a database ➢ To make a quiz to test your teachers or parents ➢ I can use inputs and outputs within my coded programs such as sound, movement and buttons and represent the state of an object
Suggested Learning Experiences	➢ Make a class 2Connect concept map to brainstorm children's ideasabout quizzing, types of quizzes and audiences ➢ Use 2DIY to create a picture-based quiz for children in reception/year1 ➢ Explore the different types of questions on 2Quiz ➢ Use 2Quiz to make and share a science quiz – incorporate each ofthe different types of questions ➢ Explore grammar quizzes on the Text Toolkit ➢ Use Text Toolkit tool to make their own grammar game (word spottool) ➢ Discuss what a database is and children to use 2Investigate tool to explore the Aliens Database quiz ➢ Children to use an example database to create their own quiz ➢ In groups, children to design a quiz on a given area of the curriculum for parents/teachers to complete (children to choose their own style ofquiz and question types) ➢ Use 2Calculate to make a scoreboard which adds up the scores



Title	**Coding 6.1**
Overview	In this unit, the children will be building on their prior learning about coding.They will use 2Code to develop their skills and try out different coding tools. The children will also go through the process of storyboarding their ideas for programs, as well as debugging their programs as they encounter problems.
Vocabulary	Action, bug, control, alert, code design, debug, algorithm, command, event, input, sequence, output, object, selection, simulation, repeat, timer, variable
Key Learning Objectives	➢ To explain what coding is ➢ To explore 2Code and the different tools ➢ To create a program with an object that repeats actions indefinitely ➢ To use a timer to make objects repeat actions ➢ To explore the use of the repeat command and how this differs fromthe timer ➢ To introduce 'If' statements to allow selection in a program ➢ To understand what a variable is in programming ➢ To use a variable to create a visual timer ➢ To explore number and string variables ➢ To go through the design, code, execute and refine process (test anddebug) ➢ To create a program using the coding skills taught ➢ To create a program that controls or simulates a physical system (i.e. changing the speed and angle of moving objects)
Suggested Learning Experiences	➢ Discuss what coding is ➢ Vocabulary quiz ➢ Play robot and coder game to practice giving clear and concise instructions ➢ Explore 2Code and the different code blocks ➢ In 2Code, children to code a character object to repeat actions ➢ Use the timer and experiment with different methods of repeating blocks of code ➢ Use a storyboard to develop and record their ideas for a program ➢ Create an 'if' statement and use it in their program ➢ Create an 'if/else' statement and use it in their program ➢ Use timer and 'if' statement to respond to the actions of an object ➢ Create a variable in a program ➢ Set/change the variable values appropriately ➢ I can turn a complex programming task into an algorithm. ➢ I can identify the important aspects of a programming task ➢ I can identify a specific line of code that is causing a problem in my program and attempt a fix.