Computing Year 3/4 Medium Term plans and Objectives

Autumn

Unit 3.1 – Coding

Lesson	Title	Aims (Objectives)	Success Criteria
1	Using Flowcharts	• To review previous coding knowledge. • To understand what a flowchart is and how flowcharts are used in computer programming.	• Children can read and explain a flowchart • Children can use a flowchart to create a computer program. • Children can create a computer program that uses click events and timers.
2	Using Timers	• To understand that there are different types of timers. • To be able to select the right type of timer for a purpose.	• Children can create a program that uses a timer-after command • Children can create a program that uses a timer-every command • Children understand there can be different ways to solve a problem.
3	Using Repeat	• To understand how to use the repeat command.	• Children understand how the turtle object moves. • Children can use the repeat command with an object. • Children can create a computer program that includes use of the repeat command.
4	Code, Test and Debug	• To use coding knowledge to create a range of programs. • To understand the importance of nesting.	• Children can create computer programs using prior knowledge. • Children can run, test and debug their programs. • Children can consider nesting when debugging their programs.
5 & 6	Design and Make an Interactive Scene	• To design and create an interactive scene.	• Children can use the properties table to set the properties of objects. • Children can plan their scene and code before they create their program. • Children can confidently make several different things happen in a program.

Unit 3.2 – Online Safety

Lesson	Title	Aims (Objectives)	Success Criteria
1	Safety in Numbers	• To know what makes a safe password, how to keep passwords safe and the consequences of giving your passwords away. • To understand how the Internet can be used to help us to communicate effectively. • To understand how a blog can be used to help us communicate with a wider audience.	• Children understand what makes a good password for use on the Internet. Children are beginning to realise the outcomes of not keeping passwords safe. • Children can contribute to a concept map of all the different ways they know that the Internet can help us to communicate. • Children have contributed to a class blog with clear and appropriate messages. • Extension: Children understand that passwords help to limit who can see personal / private / confidential information.
2	Fact or Fiction?	• To consider if what can be read on websites is always true. • To look at a 'spoof' website. • To create a 'spoof' webpage. • To think about why these sites might exist and how to check that the information is accurate.	• Children understand that some information held on websites may not be accurate or true. • Children are beginning to understand how to search the Internet and how to think critically about the results that are returned. • Children have accessed and assessed a 'spoof' website. • Children have created their own 'spoof' webpage mock-up. • Children have shared their 'spoof' web page on a class display board. • Extension: Children evaluate facts from a website and explain how they fact checked the information that was presented.
3	Appropriate Content & Ratings	• To learn about the meaning of age restrictions symbols on digital media and devices. • To discuss why PEGI restrictions exist. • To know where to turn for help if they see inappropriate content or have inappropriate contact from others.	• Children can identify some physical and emotional effects of playing/watching inappropriate content/games. • Children relate cyberbullying to bullying in the real-world and have strategies for dealing with online bullying including screenshot and reporting.

Unit 3.3 – Spreadsheets

Lesson	Title	Aims (Objectives)	Success Criteria
1	Creating Pie Charts and Bar Graphs	• To add and edit data in a table layout. • To find out how spreadsheet programs can automatically creategraphs from data.	• Children can create a table of data on aspreadsheet. • Children can use a spreadsheet program to automatically create charts and graphs from data.
2	Using more than and Spin Button Tools	• To introduce the 'more than', 'lessthan' and 'equals' tools. • To introduce the 'spin' tool and showhow it can be used to count through times tables.	• 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.
3	Advanced Mode and Cell Addresses	• To introduce the Advanced mode of2Calculate. • To learn about describing cells usingtheir addresses.	• Children can describe a cell location in a spreadsheet using the notation of a letter for thecolumn followed by a number for the row. • Children can find specified locations in aspreadsheet.

Spring

Unit 3.4 – Touch-typing

Lesson	Title	Aims (Objectives)	Success Criteria
1	Home, Top and Bottom Row Keys	• To introduce typing terminology. • To understand the correct way to sit atthe keyboard. • To learn how to use the home, top andbottom row keys.	• Children understand the names of thefingers. • Children understand what is meant by thehome, bottom, and top rows. • Children have developed the ability to touchtype the home, bottom, and top rows.
2	Home, Top and Bottom Row Keys (Consolidation)	• To practice and improve typing forhome, bottom, and top rows.	• Children can use two hands to type theletters on the keyboard.
3	Left Keys	• To practice the keys typed with the lefthand.	• Children can touch type using the left hand.
4	Right Keys	• To practice the keys typed with theright hand.	• Children can touch type using the right hand.

Unit 3.5 – Email

Lesson	Title	Aims (Objectives)	Success Criteria
1	Communication	• To think about the differentmethods of communication.	• Children can list a range of different ways tocommunicate. • Children can use 2Connect to highlight the strengths and weaknesses of each method. • Extension: Children can order the various types of communication that have been usedthrough history.
2	Composing Emails	• To open and respond to an email. • To write an email to someone froman address book.	• Children can open an email and respond to it. • Children have sent emails to other children inthe class. • Extension: Children can use the search option in the address book to find a classmate whensending an email.
3	Using Email Safely: Part 1	• To learn how to use email safely.	• Children have written rules about how to staysafe using email. • Children have contributed to classmates' rules. • Extension: Children understand theimportance of draft.
4	Using Email Safely: Part 2	• To learn how to use email safely.	• Children have created a quiz about emailsafety which explores scenarios that they could come across in the future. • Extension: Children create title screens fortheir quizzes explaining what the quiz is about, and how to play it.
5	Attachments	• To add an attachment to an email.	• Children can attach work to an email. • Children know what CC means and how touse it.
6	Email Simulations	• To explore a simulated emailscenario.	• Children can read and respond to a series ofemail communications. • Children can attach files appropriately anduse email communication to explore ideas. • Extension: Children know why the terms CCand BCC are used • Children understand when to use CC or BCC

Unit 3.6 – Branching Databases

Lesson	Title	Aims (Objectives)	Success Criteria
1	Introducing Databases	• To sort objects using just YES/NOquestions.	• Children understand how YES/NO questionsare structured and answered. • Children have used YES/NO questioning to playa simple game with a friend. • Children can explain why they choose a particular question to split their database. • Extension: Children can begin to use 'or more'and 'or less' in their questioning
2	Branching Databases	• To complete a branching database using2Question.	• Children have contributed to a class branchingdatabase about fruit. • Children have completed a branching databaseabout vegetables. • Extension: Children can edit and adapt a branching database to accommodate newentries.
3 and 4	Creating a branching database on the computer	• To create a branching database of the children's choice.	• Children can choose a suitable topic for abranching database. • Children can select and save appropriateimages. • Children can create a branching database. • Children know how to use and debug theirown and others branching databases.

Summer

Unit 3.7 – Simulations

Lesson	Title	Aims (Objectives)	Success Criteria
1	What Are Simulations?	• To find out what a simulation is andunderstand the purpose of simulations.	• Children know that a computer simulation canrepresent real and imaginary situations. • Children can give some examples of simulationsused for fun and for work. • Children can give suggestions of advantages andproblems of simulations.

2	Exploring a Simulation	• To explore a simulation, making choices and discussing their effects.	• Children can explore a simulation. • Children can use a simulation to try out differentoptions and to test predictions. • Children can begin to evaluate simulations bycomparing them with real situations and considering their usefulness. • Children can analyse choices made using abranching database.

3	Analysing and Evaluating a Simulation	• To work through and evaluate amore complex simulation.	• Children can recognise patterns within simulations and make and test predictions. • Children can identify the relationships and ruleson which the simulations are based. • Children can evaluate a simulation to determineits usefulness for purpose. • Children can create their own simple simulation(extension).

Unit 3.8 – Graphing

Lesson	Title	Aims (Objectives)	Success Criteria
1	Introducing 2Graph	• To enter data into a graph andanswer questions.	• Children can set up a graph with a given numberof fields. • Children can enter data for a graph. • Children can produce and share graphs made onthe computer. • Extension: Children can select most appropriatestyle of graph for their data and explain their reasoning.
2	Using 2Graph to Solve an Investigation	• To solve an investigation and present the results in graphic form.	• Children have solved a maths investigation. • Children can present the results in a range ofgraphical formats. • Children can use the sorting option to makeanalysis of their data easier. • Extension: Children can select most appropriatestyle of graph for their data and explain their reasoning.