Computing at Great Whelnetham

C of E Primary School

Year 6

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 idea of balancing screen time with other parts of their lives.
Knowledge Acquisition	By the end of this topic, pupils will be able to identify secure sights and know the benefits/risks of giving out personal information. They will apply their knowledge of 'digital footprint' to show appropriate behavior. They will understand how to balance screen with other parts of life and identify positive/negative influences of technology on their health. They will understand the difference between the world wide web and the internet; also explaining how accurate and reliable a webpage is.
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.
SuggestedLearning 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.
Knowledge Acquisition	During this unit the children will come to know the different forms of network, with a particular focus on the internet and its associated systems. They will know the acronyms of LAN and WAN, what they stand for and what they can be used for. They will know the history of the internet, its development and will share ideas about its future using reliable sources.
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.
SuggestedLearning 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 their parents ➢ 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 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.
Knowledge Acquisition	By the ends of this unit, the children will know why people use blogs to record information, events and to communicate with an interested audience. They will be familiar with some well-known blogs and bloggers. They will know the various design and layout features that blogs can contain. Through experimentation and discussion, they will understand the most and least effective ways to engage an audience through a blog
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.
SuggestedLearning 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 willcomment on the class blog posts.

Title	Spreadsheets 6.9
Overview	In this unit, the children will build on their knowledge of spreadsheets. They will 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'.
Knowledge Acquisition	The learning in this unit will give children a more in depth understanding of the potential uses of spreadsheet. They will know how to use a tool to introduce formulae into a spreadsheet to help them calculate complex results. They will understand how to use features of a program to generate graphs of those results. They will know how to apply filters to a set of data to add focus to their searches.
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 results of throwing 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 in that 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 and make digital content.
SuggestedLearning Experiences	➢ Create a spreadsheet to answer a mathematical question relating to probability ➢ Use copy and paste shortcuts ➢ Children to create a machine to help them work out the price ofdifferent items in a sale ➢ Use a formula wizard to create formulae ➢ Children to use a spreadsheet to model a real-life situation (pocketmoney 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 to plan their own and 2Create to bring their story to life.
Knowledge Acquisition	In this unit the children will know what a text adventure is and they will this knowledge to create their own. They will know how to add sound and animation features to their own story. They will recap prior knowledge on debugging a code and running tests to be sure it is running smoothly. They will also understand the difference between a map-based game and a sequential story based game.
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
SuggestedLearning Experiences	➢ Explore Red Riding Hood text adventure example ➢ Children to map out a story-based text adventure and use 2Connect to 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 in the style of a game show. They will make a scoreboard which adds up the scores alongside the quiz.
Knowledge Acquisition	Children will know the types of question that can make up a successful quiz by exploring existing examples. They will also know the types of information can that be tested using a quiz, and by using each type of question. They will know how to use 2DIY to create their own design of quiz, and they will understand how they can enhance the quizzing experience for the user by adding sound, animations and choice buttons.
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
SuggestedLearning Experiences	- Make a class 2Connect concept map to brainstorm children's ideas about 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 toexplore 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.
Knowledge Acquisition	By the end of this unit, children will be able to explain what coding is. They will know how to use a coding program to make an object perform a repeated movement and to use timers to control movements. They will be familiar with 'If' statements and know how to use these to select what happens next in the code. They will understand variables and know the difference between string and number variables.
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 from the 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 and debug) - 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 conciseinstructions - 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 repeatingblocks 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 myprogram and attempt a fix.