Broadway Junior School

Subject: Computing Topic: Spreadsheets Year: 3 Term: Spring 2

NC Purpose of Study
A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science and design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

Intent	Implementation	Impact
Our vision at Broadway Junior School is that all pupils should enjoy Computing and become confident, passionate and responsible users of technology both inside and outside of school. Through interesting, relevant and inclusive lessons, they will be able to leave Year 6 with a good understanding of how computers and the Internet work, along with being able to complete tasks on them creatively, independently and reflectively for a range of purposes and audiences. The Computing curriculum at Broadway is designed to enable pupils to embrace and utilise new technologies through the application of essential knowledge, principles and concepts. Technology is everywhere and will play a pivotal part in students' lives, therefore, we want to model and educate our pupils on how to use technology positively, responsibly and safely. We want our pupils to be creators, not just consumers of content and our broad curriculum encompassing 'Coding & Computational Thinking', 'Information Technology', 'Computing Systems & Networks' and 'Online Safety' reflects this. We recognise that the best prevention for a lot of issues we currently see with technology and social media is through education.	Computing skills are taught explicitly at Broadway with every pupil receiving dedicated Computing lessons throughout each half-term. Each half-term has a focus on either Information Technology, Coding & Computational Thinking or Computing Systems & Networks with Online Safety lessons also included throughout each half-term. The skills acquired are then embedded throughout the curriculum. Learning is sequenced to build knowledge, skills and vocabulary. Throughout units of work teachers encourage children to make links between past learning and new content. We recognise prior learning and build on it with memorable learning experiences and provide targeted support where necessary. The units address the requirements of the National Curriculum and are broken down to cover all elements of the different strands of Computing. The progression of knowledge and skills statements build year on year to deepen and challenge our learners. We use Purple Mash as the core of our curriculum tied with Teach Computing and activities from Project Evolve to create a comprehensive curriculum providing full curriculum coverage and a variety of skills for our children.	The impact of our Computing curriculum is that we provide pupils with a set of skills to embed a lifelong love of learning and that they build on the knowledge and skills from previous learning. We ensure that every child can become a confident user of technology, while being able to use it to accomplish a wide variety of goals, both at home and in school. Children will have a secure and comprehensive knowledge of how technology works in the world around them and will develop their understanding of how to deal with online situations safely. Children will become confident global citizens. The knowledge organisers outline what we want the children to know within each unit. By nature Computing is going to be practical and hands on. We give the children the opportunity to record individually their responses to key questions. Teachers ensure that children understand and apply the correct vocabulary linked to different elements of the curriculum and this is also recorded within the floor books. Prior and future learning links are also included, so that there is a clear sequence in relation to the progression of skills and activities.

Key Vocabulary
Advanced Mode, Bar Graph, Cell Address, Data, Equals, Less Than, More Than, More Than Less Than & Equal To, Pie Chart, Quiz Tool, Spinner Tool, Table.

Knowledge	Skills
• To use the symbols more than, less than and equal to, to compare values. • To use 2Calculate to collect data and produce a variety of graphs. • To use the advanced mode of 2Calculate to learn about cell references.	• Children can create a table of data on a spreadsheet. • Children can use a spreadsheet program to automatically create charts 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.

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Learning Objectives/End Points					
To understand the layout and features of 2Calculate in Advanced Mode. Lesson 1	To use the arrows toolbar to be able to automatically total rows and columns. Lesson 2	To use simple formulae in a spreadsheet by using the formula wizard. Lesson 3	To use advanced formulae in a spreadsheet to calculate totals, averages and to find the highest and lowest values. Lesson 4	To apply spreadsheet skills to solve real-world problems. Lesson 5	To design and use a spreadsheet to answer a series of questions. Lesson 6

Careers	
Linking Curriculum Learning to Careers Discuss how the skills developed in this unit are used in a range of careers, including: Data Analyst – Uses spreadsheets and databases to find patterns and answer questions. Accountant – Uses spreadsheets to track money, budgets, income, and expenses. Database Administrator – Organises and maintains databases so information is stored safely and efficiently. Business Analyst – Uses data to help companies make better decisions. Financial Analyst – Studies financial information using spreadsheets and databases. Data Scientist – Works with large amounts of data to discover trends and make predictions. Marketing Analyst – Analyses customer and advertising data to understand what works. Stock/Inventory Manager – Uses databases and spreadsheets to keep track of products and supplies. Project Manager – Uses spreadsheets and databases to track budgets, tasks, schedules, and resources. HR (Human Resources) Analyst – Uses employee databases and spreadsheets to analyse staffing, salaries, and recruitment. Transferable skills Data literacy: Collecting, organising and presenting information in tables and graphs. Numeracy: Comparing values and using formulae to calculate totals, averages, highest and lowest values. Logical thinking: Using cell references and spreadsheet tools to solve problems. Problem-solving: Applying spreadsheet functions to answer questions and investigate real-world scenarios. Accuracy and attention to detail: Entering data correctly and checking calculations. Analysis and interpretation: Identifying patterns, comparing results and drawing conclusions from data. Digital confidence: Using spreadsheet tools independently to complete tasks.	**Learning from career and labour market information** Introduce careers that involve collecting, organising and interpreting data, such as data analysts, scientists, accountants, statisticians and business professionals. **Addressing the needs of each pupil** Provide inclusive opportunities for pupils to develop confidence with spreadsheets, using modelling, visual examples and differentiated tasks to support different starting points and levels of understanding. **Linking curriculum learning to careers** Link entering data, using cell references, comparing values, applying formulae and creating graphs to the work of people who analyse information, calculate totals, identify patterns and make decisions. **Encounters with employers and employees** Where possible, invite a parent, school staff member or visitor who uses spreadsheets or data in their job to explain how they organise information, calculate figures and present findings. **Experiences of workplaces** Explore how spreadsheets and graphs are used in real workplaces, such as shops to monitor sales, schools to record information, hospitals to organise data and businesses to manage budgets. **Encounters with further and higher education** Introduce pupils to the idea that data-handling and digital skills can be developed further through school, college, university and technical training in areas such as computing, mathematics, science and business.