Broadway Junior School

Subject: Computing Topic: Spreadsheets Year: 5 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
Axis/Axes Budget Conversion Income Continuous Data Forecast Formula Line Graph Meteorologist Plot/Plotting Trend Function

Knowledge	Skills
• To refresh and extend understanding of formulae and functions from previous learning. • To use formulae in 2Calculate to convert measurements between different units. • To use 2Calculate to create and interpret line graphs that show how data changes over time. • To analyse weather data by using spreadsheets to identify patterns. • To use spreadsheets to plan and budget for an event. • To use a spreadsheet to plan a holiday.	• I can use basic formulae correctly. • I understand that writing formulae manually increases the chance of making a mistake. • I can apply a range of formulae in spreadsheets to perform calculations efficiently. • I can enter data accurately into a spreadsheet. • I can use multiplication and division to convert between units. • To use 2Calculate to create and interpret line graphs that show how data changes over time. • I can apply formulae to solve conversion problems. • To use 2Calculate to create and interpret line graphs that show how data changes over time. • I can enter income and cost items accurately. • I can use formulae to calculate totals and profit or loss. • I can present my budget clearly in a spreadsheet for others to understand. • I can extract relevant information from a brochure and enter this into a spreadsheet. • I can design a spreadsheet that uses formulae to calculate total costs.

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	• I can format and present a spreadsheet that clearly shows a plan.

	Learning Objectives/End Points				
To refresh and extend understanding of formulae and functions from previous learning. Lesson 1	To use formulae in 2Calculate to convert measurements between different units. Lesson 2	To use 2Calculate to create and interpret line graphs that show how data changes over time. Lesson 3	To analyse weather data by using spreadsheets to identify patterns. Lesson 4	To use spreadsheets to plan and budget for an event. Lesson 5	To use a spreadsheet to plan a holiday. 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 Numeracy: applying formulae, multiplication and division to solve calculations and convert measurements. Digital literacy: using spreadsheet software to organise, calculate and present data. Data analysis: interpreting line graphs and identifying patterns and trends. Financial awareness: calculating costs, income, profit and loss, and managing a budget. Problem-solving: choosing appropriate formulae to solve practical problems efficiently. Accuracy and attention to detail: entering data carefully and checking calculations. Planning and organisation: using spreadsheets to plan events and holidays within a budget. Decision-making: comparing options, forecasting costs and using evidence to make informed choices	**Learning from career and labour market information** Children explore how professionals use spreadsheets to manage finances, analyse information and plan projects. They consider the role of data and budgeting in careers such as accountancy, business management, meteorology and tourism. **Addressing the needs of each pupil** Children practise entering data, applying formulae and interpreting graphs through structured activities with appropriate scaffolding and extension. Tasks allow pupils to develop confidence in calculations, data handling, budgeting and independent problem-solving. **Linking curriculum learning to careers** Children apply mathematics and computing skills to convert measurements, interpret line graphs, analyse weather data and calculate budgets for events and holidays. These activities link directly to careers involving finance, data analysis, science, weather forecasting and travel planning. **Encounters with employers and employees** Children learn how professionals use spreadsheets to forecast weather, monitor spending, calculate costs and analyse trends. Learning could be extended through a case study or guest speaker from finance, business, science or tourism. **Experiences of workplaces** Children complete practical tasks similar to those undertaken in workplaces, including creating budgets, comparing holiday costs, analysing weather patterns and presenting calculations clearly. They learn how accurate spreadsheet work supports planning and informed decision-making. **Encounters with further and higher educatio**n Children recognise that computing and mathematics support further study in business, finance, economics, statistics, data science and environmental science. They begin to understand how these subjects can lead to academic and vocational pathways.