Broadway Junior School

Subject: Computing Topic: Graphing Year: 6 Term: Autumn 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
Chart Dataset 2Graph 2Calculate Line Graph Pie Chart Comparative Bar Chart Data Dual Bar Chart

Knowledge	Skills
• To create comparative bar charts using graphing software. • To create pie charts using graphing software. • To create line graphs using graphing software. • To present data in graphs to support an argument.	• I can give examples of the advantages of using graphing software compared to traditional methods. • I can create comparative bar charts using graphing software. • I can use export and import functionality of software to combine graphs within one file. • I can compare the steps needed to produce a pie chart manually and by using software. • I can identify common problems with manual creation of pie charts. • I can explain the advantages of using graphing software to create line graphs. • I can use the features of graphing software to create well-presented line graphs. • I can use export and import functionality of software to combine graphs within one file. • I can create pie charts from data using graphing software. • I can choose the most suitable graph type from given data. • I can create graphs to help solve a problem. • I can import graphs into a file to support a point.

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Learning Objectives/End Points			
To create comparative bar charts using graphing software. Lesson 1	To create pie charts using graphing software. Lesson 2	To create line graphs using graphing software. Lesson 3	To present data in graphs to support an argument. Lesson 4

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 analysis: Interpreting datasets and identifying patterns, trends and comparisons.
Digital literacy: Using graphing software to create, edit, import and export graphs.
Problem-solving: Selecting appropriate graph types to answer questions and investigate problems.
Critical thinking: Evaluating how effectively graphs represent information and support an argument.
Numeracy: Applying mathematical understanding to comparative bar charts, pie charts and line graphs.
Communication: Presenting data clearly to explain findings and persuade an audience.
Attention to detail: Checking data accuracy, labels, scales and presentation.
Decision-making: Using evidence from graphs to draw conclusions and make informed recommendations.

Learning from career and labour market information
Explore how organisations use graphs and data to understand trends in areas such as business, sport, science, health and the environment.

Addressing the needs of each pupil
Provide accessible graphing tools, scaffolded instructions and opportunities for pupils to select suitable graph types and work at an appropriate level of challenge.

Linking curriculum learning to careers
Apply mathematical and computing skills to create comparative bar charts, pie charts and line graphs, recognising how these are used in real workplaces to present evidence and solve problems.

Encounters with employers and employees
Discuss how data analysts, scientists, journalists and business professionals use graphs to communicate findings and support decisions. Where possible, invite a professional to explain how they present data in their role.

Experiences of workplaces
Use realistic workplace scenarios, such as presenting survey results, comparing sales figures or showing changes in weather data, to develop pupils' understanding of how graphing software is used professionally.

Encounters with further and higher education
Introduce pupils to how computing, mathematics, statistics and data analysis are developed through secondary education, college, university and technical qualifications.