Broadway Junior School

Subject: Computing Topic: Game Creator Year: 5 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
2D Game Game Environment Playability 3D Game Game Feedback Sprite Game Design Game Genre Sprite Animation

Knowledge	Skills
• To evaluate the features of a successful video game. • To plan a game in 2DIY3D. • To design and use game sprites. • To add features to a game world and check playability. • To evaluate games created by others.	• I can identify the features of a good video game. • I can play 2DIY3D games and evaluate them against criteria. • I can recognise the key customisable features of a 2DIY3D game. • I can consider the features of a good game when I plan and design my own. • I can use 'baddie' sprites in a game. • I can use 'collectable' sprites in a game. • I can successfully finish my game. • I can evaluate the strengths and areas for improvement of other people's games. • I can consider where the sprites should be placed for playability.

Learning Objectives/End Points

Broadway Junior School

Subject: Computing Topic: Game Creator Year: 5 Term: Autumn 2

To evaluate the features of a successful video game. Lesson 1	To plan a game in 2DIY3D. Lesson 2	To design and use game sprites. Lesson 3	To add features to a game world and check playability. Lesson 4	To evaluate games created by others. Lesson 5

Careers	
Linking Curriculum Learning to Careers Discuss how the skills developed in this unit are used in a range of careers, including: Game Designer – Creates the rules, gameplay, levels, and overall player experience. Game Programmer – Writes the code that makes the game work. Game Artist – Designs characters, environments, objects, and visual effects. Game Animator – Creates movement and animations for characters and objects. Game Writer – Develops the story, dialogue, characters, and lore of the game. Transferable skills Creativity: designing original game environments, characters and sprites. Problem-solving: identifying and resolving issues that affect gameplay. Planning and organisation: developing a game concept and deciding how its features will work together. Critical thinking: evaluating successful games and identifying the features that make them engaging. Digital literacy: using digital tools to create and customise interactive games. Attention to detail: positioning sprites and objects to support effective gameplay. Evaluation: testing games, responding to feedback and identifying improvements. Resilience: refining designs and persevering when a game does not work as intended.	**Learning from career and labour market information** Children explore the range of roles involved in creating video games, including game designers, animators, programmers and testers. They begin to understand how digital technology creates opportunities across the creative industries. **Addressing the needs of each pupil** Children access structured game-design activities with opportunities to develop ideas, create sprites and test their games. Different roles and levels of challenge allow pupils to build on individual strengths in creativity, logical thinking, design and evaluation. **Linking curriculum learning to careers** Children apply computing, design and problem-solving skills to plan, create and evaluate a playable game. They consider game environments, genres, sprites, collectables, obstacles and playability, linking their learning to careers in game design, animation, software development and digital art. **Encounters with employers and employees** Children learn about the different professionals involved in producing video games, such as game designers, artists, programmers and quality assurance testers. Learning could be extended through a video interview, career case study or visit from someone working in the gaming industry. **Experiences of workplaces** Children experience aspects of a game designer's workflow by planning a game, creating visual elements, testing playability and evaluating the finished product. They learn that professional games are developed through testing, feedback and continuous improvement. **Encounters with further and higher education** Children recognise that computing, art, design, mathematics and digital media can support further study in game development, animation, computer science and interactive media. They begin to understand that these subjects can lead to different education and training pathways.