Computing: Intent, Implementation and Impact

Intent	Implementation	Impact
At Lady Jane Grey, we believe that a high-quality Computing curriculum, nurturing pupils' creativity and computational thinking, is essential for preparing for them for the technical challenges of the modern World. We therefore aim to establish and maintain high-quality classroom instruction and resources so that children learn to: ◊ Understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation ◊ Analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems ◊ Evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems ◊ Become responsible, competent, confident and creative users of information and communication technology. ◊ Navigate the online world equipped with a secure knowledge of how to remain safe at all times.	Informed by the *National Curriculum* (2013), and the findings of current research (e.g. Ofsted's research review, 2021), our Computing programme cumulatively builds pupils' knowledge and skills as they progressive through the year-groups where curriculum content increases in range, depth and complexity. We teach Computing in half-termly blocks using the DfE's approved **Teach Computing** scheme of work which gives teachers a clear sequence of progression from which they can utilise their creativity, subject-knowledge and understanding of their pupils to teach engaging and inspiring lessons. To ensure that the children's **schemata of learning** are developed and embedded in the their long-term memory, our curriculum embraces the three principles of **Bruner's spiral approach**: (1) cyclical Learning, (2) increasing depth on each Iteration, and (3) learning by building on prior knowledge. We thus regularly revisit key concepts, and each of our units allows time for practice, retrieval and reinforcement of key ideas and build breadth and depth of knowledge in 4 keys areas: ∗ **Computing systems and networks** ∗ **Creating media** ∗ **Programming** ∗ **Data and information** This curriculum enables us to develop our pupils' skills and knowledge in what Ofsted's subject research review refers to as the pillars of progression: ∗ **Computer science**: knowledge of computers and computation. It includes concepts such as data, system architecture, algorithms and programming. ∗ **Information technology:** the context for how computers are used in society. It includes how they are used in different sectors, as well as the creation of digital artefacts, such as presentations, spreadsheets and videos. ∗ **Digital literacy**: the knowledge and skills needed to use computer technology safely, effectively and with discernment. *Online safety* is embedded throughout our Teach Computing curriculum, ensuring that children learn about safe and responsible online behaviour in a fluid and contextual way. Lessons are reinforced through our own online safety questionnaires as part of our safeguarding provision. Additionally, our Year 6 class participates in an annual online safety survey to further assess understanding and awareness. Multiple methods are used to regularly assess pupils' progress: from teacher observations and evaluations of projects submitted online using the **Google Classroom**, dialogue with pupils and assessment tasks such as end-of-year quizzes. Teachers have access to high-quality computing CPD sessions with **NCCE** to develop and maintain their subject and pedagogical knowledge.	*In collaboration with the senior leadership team, we have a dedicated subject leader who monitors the impact of our Computing curriculum through:* ◊ *Pupil interviews* ◊ *Learning walks* ◊ *Observations* ◊ *Feedback from the teaching team* *We assess pupils' Computing knowledge by using a combination of:* ◊ Every lesson includes formative assessment opportunities for teachers to use. They vary from teacher observation or questioning to marked activities. ◊ Every unit includes an optional summative assessment framework in the form of either a multiple choice quiz (MCQ) or a rubric. ◊ *Google Classroom termly evidencing from group and individual performances* *We then track pupils' progress using the Sonar tracking system. This enables us to identify which pupils may need support and which may need challenging further as we continually refine our curriculum.*