Computing Intent, Implementation, Impact statement

Computing National Curriculum 2014

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.

Aims

The national curriculum for computing aims to ensure that all pupils:

♣ Can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation.

♣ Can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems.

♣ Can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems.

♣ Are responsible, competent, confident and creative users of information and communication technology.

Computing Intent

Our curriculum is shaped by our school vision which aims to enable all children, regardless of background, ability, additional needs, to fly high and to reach their full potential, within the love of Jesus.

The Computing curriculum at Newton Solney has been designed for all children with these goals in mind:

- To allow children to find, explore, create, analyse, exchange and present information.
- To develop children's learning which results in the acquisition of knowledge of the world around them that ensures all pupils can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation, can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems.
- To be embedded across the curriculum.
- To prepare pupils to live safely, responsibly and positively in an increasingly digital world.

Implementation

At Newton Solney Computing is taught in stand alone lessons and within cross curriculum topics based on a book in KS1 and within child orientated topics in Reception. This allows learning to be more accessible and allow learners to be more creative in demonstrating

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their learning. Our scheme of work is based on the use of Purple Mash. All children have personal log on's which can be accessed at school and home. This ensures that learning continues at home and children can share their work with grownups. Online safety work is covered in each class and school takes part in National Online Safety day each year. Knowledge builds progressively from Reception to Year 1 to Year 2 with knowledge reviewed and consolidated. Tasks are selected and designed to provide appropriate challenge for all learners, in line with the school's commitment to inclusion. Each class has access to tablets and other digital resources required to develop knowledge and skills of digital systems and their applications.

Impact

Children will be confident users of technology, able to use it to accomplish a wide variety of goals, both at home and in school.

Children will be safe users of technology showing and applying the British values of democracy, tolerance, mutual respect, rule of law and liberty when using digital systems.

The way pupils talk about, share, celebrate and publish their work e.g. on Purple Mash will best show the impact of our curriculum.