Subject Overview Report : Computing

"Growing and learning Together-Settle Church of England Primary School is a place where all children are loved, valued and flourish to achieve their potential."

Curriculum Intents and Aims

At Settle CE Primary School, our subject leader Mrs Wright, who is Early Years lead and Reception teacher. We provide opportunities for each child from Nursery upwards develop their skills in Computing and are given regular lessons which focus on staying safe Online.

We know that the development of Computing is constantly changing. Its impact on the lives of individuals continues to grow and so is essential that our pupils can take full advantage of its opportunities and understand its effects. It is important therefore that our pupils gain the appropriate skills, knowledge and understanding of Computing and develop the confidence and capability to use it appropriately and effectively.

Our key aims are:

- To ensure children gain the key skills and understanding necessary to enable them to fully access Computing in the world around them.

- To help children appreciate that Computing is a creative tool for learning.

- To improve communication with parents and the wider community by offering extended learning opportunities outside the school day.

- To constantly review and upgrade our hardware and software to keep abreast of new and emerging technologies.

Planning and Resources

We plan using the NCCE Teach Computing Framework. We supplement this with resources from the Barefoot Computing Website and Project Evolve as appropriate.

Lesson Structure / Key Elements

Lessons are usually an hour per week following the Teach Computing lesson plans and assessment. In addition to this, teachers are encouraged to use laptop computers, our ICT suite and iPad trolley to support the children in other curriculum areas.   We also benefit from a dedicated STEM Studio which contains a wide range of robotic toys and class sets of micro-computers to allow for great curriculum coverage with excellent links to maths, science and Design Technology.

Marking

Marking is done via questioning and observing the children's work when using devices. Photographic evidence is stored on each class Seesaw or Tapestry Accounts and examples of work placed onto the shared drive. From teacher observations, each term the children are assessed.

Content and Expectations

Foundation Stage

In the Foundation Stage, Computing plays a key role in all areas of their development, reflecting upon their life experiences. It is essential for our children to learn about technology and its role in the world in which we live. The children have access to a variety of resources such as digital cameras, iPads, tills, CD players, walkie-talkies and metal detectors.

The following expectations and pupil progression will then unfold across the primary years:

Key Stage 1

Pupils will be taught to:

- understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions

- create and debug simple programs

- use logical reasoning to predict the behaviour of simple programs

- use technology purposefully to create, organise, store, manipulate and retrieve digital content

- recognise common uses of information technology beyond school

- use technology safely and respectfully, keeping personal information private;

- identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies

Key Stage 2

Pupils will be taught to:

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.

- use sequence, selection, and repetition in programs; work with variables and various forms of input and output

- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.

- understand computer networks, including the internet; how they can provide multiple services, such as the World Wide Web, and the opportunities they offer for communication and collaboration.

- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.

- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information

- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

Current Strengths

Progression

The NCCE Teach Computing Curriculum and our curriculum map shows the progress of skills throughout the school. Year groups might teach the units in a different order to link with their curriculum topics and adapt where necessary. The programming units must be taught with Unit A before Unit B.

Well-motivated Staff

We have an excellent skills base and Excellent Resources including a class set of Bee-bots, Vex robots, Crumble Kits, micro bits and robot arms.

Computers are provided in all classrooms for individual to small group work. The use of interactive white-boards allows teaching and learning strategies to be maximized through all classroom curriculum activities. Children from Reception to Year 6 benefit from using our bank of school iPads. These which allow teachers to provide children with a wealth of opportunities to engage in well planned activities across the curriculum.

Areas for Development

We need to ensure that all staff feel confident using the iPads and computers to support the children in their class to support other curriculum areas more effectively and to have opportunities to keep abreast of this rapidly evolving subject.

We need to engage further with parents on how to protect their children effectively from the dangers of our Online World.

We need to ensure computing and in particular, internet safety are given sufficient curriculum time in school.

How are we ensuring continuity and consistency across year groups?

As not all teaching staff are confident with the teaching of the 'computer science' element of the curriculum the NCCE Teach Computing Framework allows for consistency and as it is a spiral curriculum, effectively ensures the children build on previously taught units. This will support knowledge retention and confidence.

Enrichment Opportunities

Computing gives scope for excellent enrichment opportunities. The iPad apps allow the support of most curriculum areas and the skills involved in computational thinking benefit all areas of learning.

Action Plan

Targets of 2021-2022	Evaluation of Targets 2021-2022
Introduce the Teach Computing Framework	Successful introduced. Discussions around assessment of children's progress.
Update all the desktop computers in the ICT suite with new SSD's.	This has now been completed future proofing these resources.

Ensure teachers have a good overview of their element of the Computing Curriculum.	Each teacher spoken to each half term to ensure they are happy with what is being asked on their plan.
Monitor teaching and learning of new framework.	Unable to monitor as lockdowns meant the intended curriculum was not covered.
To install a Smart TV into Class 5 to replace the current promethean board.	Awaiting funds to be available- Probably now April 2023.

Targets of 2022-2023	**Evaluation of Targets 2022-2023**
Ensure each class has a dedicated iPad to record progress, send emails and photos to the admin team etc.	5 iPads have been purchased so that now every class has one.
Monitor teaching and learning of new framework.	So far so good. Each teacher in KS 1 is confident using the Teach Computing resources and planning. As Sarah E teaches computing throughout KS 2 she is confident and extremely competent in what she does.
Develop the iPad trolley rota to increase the time the iPads are in use and make it easier for everyone to book them out.	
To develop the assessments with folders for teachers to put samples of work / screen shots on the Share Drive.	
To improve the teaching of Internet Safety with the use of Project Evolve. Giving all staff access to the platform. Training staff so they feel confident using it to support both their teaching and assessment practises.	

Helen Wright - Curriculum Lead