



Computing Rationale at St Erth Primary

Intent

At St Erth Primary school, the intent is to help pupils become independent, creative, safe, respectful and problem-solving digital citizens with a broad and transferrable skillset. We aim to make computing fun for pupils, inspire them to develop skills beyond the classroom and build an awareness of all the opportunities the subject provides.

Implementation

We use iLearn2.co.uk, an online scheme of learning to deliver the computing curriculum in school. ILearn2 provide a balanced curriculum that is sequenced appropriately across the three areas of computing with natural links to other curriculum areas.

The three aspects of the computing curriculum are:

- **Digital Literacy:** online safety, research, uses of technology
- **Information Technology:** data handling, word processing and presentations, digital artwork, photography, animation, video music creation, virtual reality, web design
- **Computer Science:** Programming/coding, simulations, how computers work

Computing lessons focus on collaboration and creativity by providing extended periods of time to work independently and with others to solve problems and develop the knowledge and skills required to be computational thinkers.

In order to develop as computational thinkers, children engage with computational concepts and approaches:

Concepts:

- Logic: predicting and analysing.
- Algorithms: making steps and rules.

- Decomposition: breaking down into parts.
- Patterns: spotting and using similarities.
- Abstraction: removing unnecessary detail.
- Evaluation: making judgements.

Approaches:

- Tinkering: experimenting and playing.
- Creating: designing and making.
- Debugging: fixing and finding errors.
- Persevering: keeping going.
- Collaborating: working together.

Staying safe online is integrated into all areas of the curriculum. It is taught specifically in computing and as part of PHSE.

The whole St Erth curriculum provides pupils with many cross-curricular opportunities, helping apply computing skills across the Key Stage 1 and 2 curriculum.

Impact:

By end of Key stage 1, pupils should be taught to:

- 1) understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
- 2) create and debug simple programs
- 3) use logical reasoning to predict the behaviour of simple programs
- 4) use technology purposefully to create, organise, store, manipulate and retrieve digital content
- 5) recognise common uses of information technology beyond school
- 6) 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.

By the end of KS2, pupils should be taught to:

- 1) design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- 2) use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- 3) use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- 4) 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
- 5) use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- 6) 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
- 7) use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Assessment

Assessment in computing starts with prior knowledge which helps to identify any misconceptions that need to be addressed.

Programs are created on digital devices and as such are not recorded in the same way as written learning. Learning may be recorded in a variety of ways including, but not limited to: uploaded to SeeSaw (school's learning platform), printed screenshots of creations, saved programs, photographs and video recordings. As such, children's work is marked and written feedback given only where appropriate. Otherwise, feedback is given verbally to children in order to support them to progress within and across lessons.