Subject: Computing and IT   **Leader: Sam Forsdick**

Quote that guides us

"We need technology in every classroom and in every student and teacher's hand, because it is the pen and paper of our time, and it is the lens through which we experience much of our world." - David Warlick
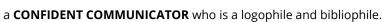
Why is it important to teach Computing?

We have devised a curriculum that matches the ambition of the National Curriculum and has 5 key aims that drive our curriculum. Computing very much feeds into these 5 aims. We want everyone to be:
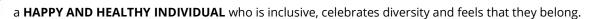
a **DEEP THINKER** who is a fluent reader, knowledgeable, creative and that has mastered key skills in range of subjects.

an **EFFECTIVE LEARNER** who demonstrates curiosity and independence, strives to improve and is a problem solver.

a **CONFIDENT COMMUNICATOR** who is a logophile and bibliophile.

a **HAPPY AND HEALTHY INDIVIDUAL** who is inclusive, celebrates diversity and feels that they belong.

a **PERSON** who **makes a positive difference** to others, the community, the environment and the world.

Computing, especially coding helps children develop their **thinking** skills. It gives lots of opportunities for being an **effective learner** and problem solver. Technology is developing all the time, so the learning for adults and children is continuous. Technology is a key learning and a key **communication** tool, so children need to know how to best use it. The computing curriculum helps open up the whole world to the children and helps them to connect with others cross the world. Technology is a way of making a **positive difference to the world** and children need to learn how it can be used to do this.

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.

Key Concepts:

We have identified 7 golden threads that are the key concepts that weave throughout our Computing curriculum. They are:

- A Learning Tool
- Technology Around Us
- Online Safety
- Programming and Coding
- Digital Media
- Data and Information
- Core Skills

These threads start in the EYFS and link the learning in computing together across the school. They help the children to make connections. By considering these threads when planning the EYFS team start to 'plant the seed' of these concepts and prepare the children for their journey in KS1 and 2.   As the computing lead, I have worked with the EYFS lead to identify key learning for EYFS to prepare them for the study of computing. The children can develop so many of the key skills needed at a very early age. For example, in EYFS, children explore using equipment such as Beebots which lays the foundation for further coding work and they are a great tool in helping children to become confident users of technology.

What we do well as a school:

Through our computing curriculum at Portreath we aim to give our pupils the life-skills that will enable them to embrace and utilise new technology in a socially responsible and safe way in order to flourish. We want our pupils to be able to operate in the 21st century workplace. We want children to become autonomous, independent users of computing technologies, gaining confidence and enjoyment from their activities. We want the use of technology to support learning across the entire curriculum and to ensure that our curriculum is accessible to every child. Not only do we want them to be digitally literate and competent end-users of technology but through our computing lessons we want them to develop creativity, resilience and problem-solving and critical thinking skills. We want our pupils to have a breadth of experience to develop their understanding of themselves as individuals within their community but also as members of a wider global community and as responsible digital citizens. Google Classroom, Tapestry and Google Meets had a huge positive impact during lockdown. The school lent out technology to enable all children to access remote learning.

We applied for a grant from the Belling Trust and was successful and this led to us having a range of new equipment including a touchscreen in every classroom. We have several sets of Chromebooks as well as i-pads.

Curriculum Design

At Portreath, computing is taught in discreet computing lessons. We follow 'Digital Learning Cornwall's' computing programme and we supplement this with other computing resources. Every lesson is individually planned so that it can be effectively taught and so it meets the needs of all our pupils. Having discreet lessons means that the children are able to develop depth in their knowledge and skills over the duration of each of their computing topics. Where appropriate, meaningful links will be made between the computing curriculum at the wider curriculum. In computing lessons the children will use either the iPads or the Chromebooks in order to access a range of apps and software. Discreet computing lessons will focus on the curriculum skills of information technology and digital literacy. We use Scratch, hopscotch and beebots as a platform for coding in years 1 and above. A set of Bluebots/Beebots are kept in the early years for the reception children to programme. A class set of Micro:bits are available for key stage 2. Computing is also used as a teaching and learning tool and technology is used in a range of lessons.

E-Safety

At Portreath School we use Project Evolve to deliver our online-safety lessons. Project Evolve is a software platform designed to educate children, teachers and parents about the dangers online through questioning during the discreet computing lessons.

Training

Over the last couple of years, we have had a number of training sessions in staff meetings. Quick 5 minute sessions demonstrating Apps and 'top tips' for using a chrome book have been delivered on a regular basis this has helped develop staff's subject knowledge. We also make use of experts e.g. Martin Post from the Crofty MAT to support

the staff when the IT Co-ordinator cannot help. Many online training sessions run by the ASPIRE Trust have been attended to support the teachers in this subject. Staff all complete online e-safety training.

More training is needed on the google based documents as we have now moved away from laptops for the children and towards Chromebooks instead.

What does monitoring tell us?

Discussion with children show that children are able to articulate what they have learnt not just activities undertaken. The children demonstrated their enthusiasm about using technology. The computer lead plans to hold pupil conferences this year to gain a deeper insight into children's views, knowledge and skills.

Next steps 2023/2024

- More regular drop ins to lessons and monitoring the subject
- Attend Micro:bits training