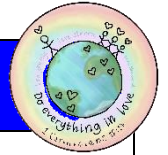




# Computing at St Mary's



## Intent

Computing at St Mary's CEVA Primary School intends to develop 'thinkers of the future' through a modern, ambitious and relevant education in computing. We want to equip pupils to use problem solving in their thinking and creativity that will enable them to become active participants in the digital world. It is important to us that the children understand how to use the ever-changing technology to express themselves, as tools for learning and as a means to, drive their generation forward into the future.

Whilst ensuring they understand the advantages and disadvantages associated with online experiences, we want children to develop as respectful, responsible and confident users of technology, aware of measures that can be taken to keep themselves and others safe online.

## Essential characteristics of computer scientists

A competence in coding for a variety of practical and inventive purposes, including the application of ideas within other subjects.

The ability to connect with others safely and respectfully, understanding the need to act within the law and with moral and ethical integrity.

An understanding of the connected nature of devices.

The ability to communicate ideas well by using IT applications and devices throughout the curriculum.

The ability to collect, organise and manipulate data effectively.

## At the end of Foundation at St Mary's

Children will show resilience and perseverance in the face of a challenge.

Children will develop their fine motor skills so that they can use a range of tools competently, safely and confidently.

Children will know and talk about the different factors that support their overall health and wellbeing: sensible amounts of 'screen time', being safe online

Children will explore how things work and use problem solving to explore their findings

## At the end of Key Stage 1 at St Mary's

Children will understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following a sequence of instructions.

Children write and test simple programs.

Children use logical reasoning to predict the behaviour of simple programs.

## At the end of Key Stage 2 at St Mary's

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

Children will use sequence, selections and repetition in programs; work with variables and various forms of input and output; generate appropriate inputs and predicted outputs to test programs.

Children will use logical reasoning to explain how a simple algorithm works, detect and correct errors in algorithms and programs.

Children will 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.

Children will describe how internet search engines find and store data; use search engines effectively; be discerning in evaluating digital content; respect individuals and intellectual property; use technology responsibly, securely and safely.

<p>Children organise, store, manipulate and retrieve data in a range of digital formats.</p> <p>Children communicate safely and respectfully online, keeping personal information private and recognise common uses of information technology beyond school.</p>	<p>Children will select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</p>
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## Implementation

- Teaching utilised from 'Teach Computing' Curriculums with some areas woven into our curriculum topics.
- Internet safety is taught through discreet computing lessons as well as PSHE through 'Project Evolve – Education for a Connected World' and the NOS framework.
- Several computing clubs are available for students to learn specialist programs.
- Homework is available online through Bedrock and used to support their typing skills outside of school hours.
- Computing is used across the curriculum to support wider learning.
- Basic computing skills are taught from KSI to ensure children can use the computers safely and responsibly.
- Computing rules are reviewed with the children to ensure everyone is safe and responsible using computers.
- Children understand and sign the acceptable use policy.

## Assessment

Children will be assessed through the 'Teach Computing' scheme or by completing independent tasks based on the learning skills and learning from the unit. For example, if the unit is learning Microsoft word Y3, the assessment would be to independently write sentences, changing the font and size of the writing and saving it into the assessment area. The children will save the work in their Year Group folder in the W:SharedDrive or on SharePoint for the Chromebook users.

## Cultural Capital

Children are exposed to news online, programs and products specifically related to IT and careers within this discipline

In EYFS, staff have access to programs to share information and their learning with their parents at home through tapestry.

## Career Professional Development

Useful resources are shared with staff during CPD sessions.

Computing lead delivers CPD sessions on using technology safely and the curriculum.

We develop strong subject knowledge amongst all staff which is achieved through; a comprehensive progression of skills document.

## Spirituality

We believe that computing is not just about technology; it's an opportunity to explore profound questions and understand the modern technological world. Through our computing curriculum, we encourage students to ask big questions such as "How can technology make a positive impact on the world?" or "What responsibilities come with using digital tools?" We aim to empower our students with not only technical skills but also a thoughtful and ethical approach to the use of technology.

## Impact

- Children develop a secure knowledge on how to be safe on the internet and an understanding of how to safely connect with others.
- Children understand the basic computer programs needed for life (Word, Excel, PowerPoint) and develop an understanding of databases and their uses applying them in a range of situations
- Children understand how to use code to move and manipulate objects either physically or through programs.
- Children develop an understanding of instructions, logic and sequences.