



## Computing at St. Dunstan's

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.

### INTENT

At St Dunstan's it is our intent to provide all of our children with a high-quality education in computing which provides access to an ever changing and expanding digital world.

Staff are encouraged to try and embed computing across the whole curriculum to make learning creative and accessible.

We follow a structured sequence of lessons, helping teachers to ensure that they have covered the skills required to meet the aims of the national curriculum.

We wish to develop a love of computing and provide children with the ability to enhance their knowledge, skills and understanding through different types of media in a responsible, safe and secure way. As well as the benefits of ICT, we are also aware of the risks. This is

why we prepare our children to stay safe online through the use of e-safety awareness units of work, e-safety sessions, circle times and 'Safer Internet' days.

We believe that this will give our children the tools they need to succeed in a digital world. It is our aim that pupils leave primary school as confident, capable and creative users of digital technology.

## **IMPLEMENTATION**

At St Dunstan's we implement Computing by:

- Having a clear and effective scheme of work that provides coverage in line with the National Curriculum and progression of skills. We use Cornerstones Maestro supported by the NCCE scheme.
- Discussing online safety topics and informing children of how to be safe when using technology.
- Delivering skill-based lessons to focus on typing skills and the use of the Google Suite, linking to other curriculum subjects.
- Using interactive whiteboards in the classroom to aid learning.
- Training staff in the use of technology in school and support in teaching the curriculum.
- Having weekly lessons in our computer suite and regular use of Chromebooks in the classroom to support and enhance cross curricular learning in Computing.
- The use of online computer programmes to support home learning: Mathletics and Times Tables Rock Stars .

## **IMPACT**

- Children will develop a wide range of fundamental skills, knowledge and understanding that will equip them for the rest of their life, both at home and in school.
- Children will use technology and digital systems confidently, safely and enthusiastically.
- Children will understand the consequences of using the internet and be aware of how to keep themselves safe online.

## St Dunstan's Computing School Overview

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>EYFS</b>	Throughout their time in Early Years, children are learning Computational Thinking skills. Computational Thinking is a set of problem solving skills initially learnt away from the computer. When children are older they will start to use their Computational Thinking skills to create computer systems that are part of solutions to problems - but not quite in Early Years. We might use online activities now and then to practise some aspects of Computational Thinking skills, but in EYFS we can learn Computational Thinking without computers. This is called an 'unplugged' approach.					
<b>Year 1</b>	ESafety	Technology Around Us	Digital Painting	Digital Writing	Moving A Robot	Intro to Animation
<b>Year 2</b>	ESafety / Understanding algorithms	Creating and editing algorithms	Creating digital artwork	Presenting information	Uses of ICT beyond school	Digital presentations
<b>Year 3</b>	ESafety / Algorithms	Programming with Scratch	Presenting information	Online research	Spreadsheets	Presentation software
<b>Year 4</b>	ESafety/Programming	Understanding the internet	Digital presentations	Databases and spreadsheets	Animation and programming	Multimedia presentations
<b>Year 5</b>	ESafety/ digital presentations	Programming (Logo)	Programming (Kodu)	Programming (Scratch)	Using the Web	Word Processing
<b>Year 6</b>	ESafety/ creating web pages	Presentation software / search technologies	Spreadsheets	3D modelling	Programming – variables in games	Programming - sensing