



CURRICULUM PROVISION AT CALMORE INFANT SCHOOL



CURRICULUM AREA : COMPUTING

Purpose of Study:

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.

At Calmore Infant School, we teach Computing through our Integrated Curriculum projects, or as separate units. Our vision is to provide numerous opportunities for all children to apply their understanding of computer science in other areas of the curriculum. Developing pupils independence in using learn pads and other technology available to them will enable children to apply their computing knowledge to each integrated curriculum project and each learning journey in literacy and mathematics.

At Calmore Infant School, we believe that internet safety is of paramount importance, particularly due to the increase in children's access to online technologies. Our vision is to ensure that all children become safe, responsible, confident and competent users of information and communication technology.

We have a whole school computing day each year where the school is set a challenge and solve it through using a range of ICT resources.

In the Foundation Stage (Year R), the children learn about the world around them and use technology to record, search and navigate their way around software programs. The children are encouraged to be e-safe and use the internet to search for information. They learn how to create simple algorithms when using the Bee-Bots and software. The children also become very familiar with using the interactive whiteboard to support their learning, as well as using Ipads to take photographs. The children learn how to login and access our secure on line learning Purple Mash.

As the children enter Year 1 they continue to learn about the importance of staying safe, use Bee-Bots to learn more about algorithms. Children learn how to create, debug and predict the behaviour of simple programs. They develop their paint and word skills e.g. change font size and colour.

In Year 2, the children learn all about the importance of staying safe online. The children use 'Smartie the Penguin' as well as the story 'Chicken Clicking' to learn where to go for help and support should they have any concerns about content or contact on the



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internet or other online technologies. Children also have opportunities to create, organise, store, manipulate and retrieve digital content. They have experience using the green screen and making animations, leaflets and power point presentations.

National Curriculum Provision

Aims: The national curriculum for Science 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

Subject Content KS1:

Pupils will be taught about:

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

Programmes of Study Year 1. Pupils will be taught about

- Children will be taught to use technology safely and respectfully, keeping personal information private.

Taught through units of work on:

Smartie the Penguin – ongoing , in class all year, assemblies , Internet keep safe day , computing day



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<ul style="list-style-type: none">• Children will continue to use Bee-Bots to learn about algorithms and to create and debug simple programs and to use logical reasoning to predict the behaviour of simple programs• Children will learn to use technology purposefully to create, organise, store, manipulate and retrieve digital content	Up the Beanstalk Pictures- paint. Purple Mash
Programmes of Study Year 2. Pupils will be taught about:	Taught through units of work on:
<ul style="list-style-type: none">• Children will be taught to use technology safely and respectfully, keeping personal information private.• Children will learn where to go for help and support should they have any concerns about content or contact on the internet or other online technologies. Children will also learn to recognise common uses of information technology beyond school.• Children will learn to debug and create algorithms for a range of functions• Children will continue to practise using technology purposefully to create, organise, store, manipulate and retrieve digital content• Use I pads / cameras to capture digital media e.g. green screen video reports	Smartie the Penguin – ongoing , in class all year, assemblies , Internet keep safe day , computing day New Forest Great Fire of London To Infinity and Beyond Uganda