



St Luke's CE Primary

## Characteristics of a Technician



# At St Luke's CE Primary, we are technicians...

At St Luke's CE Primary School, we want our children to love computing and technology. 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 St Luke's children

- 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.

The EYFS framework is structured very differently to the national curriculum as it is organised across seven areas of learning rather than subject areas. The aim of this document is to help subject leaders to understand how the skills taught across EYFS feed into national curriculum subjects.

This document demonstrates which statements from the 2020 Development Matters are prerequisite skills for computing within the national curriculum. The table below outlines the most relevant statements taken from the Early Learning Goals in the EYFS statutory framework and the Development Matters age ranges for Three and Four-Year-Olds and Reception to match the programme of study for computing.

The most relevant statements for computing are taken from the following areas of learning:

- Personal, Social and Emotional Development
  - Physical Development
  - Understanding the World
  - Expressive Arts and Design

EYFS		Key Stage 1	Key Stage 1
Personal, Social and Emotional Development	<p>Show resilience and perseverance in the face of a challenge.</p> <p>Know and talk about the different factors that support their overall health and wellbeing: -sensible amounts of 'screen time'.</p>	<ul style="list-style-type: none"> <li>• understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.</li> <li>• create and debug simple programs</li> <li>• use logical reasoning to predict the behaviour of simple programs.</li> <li>• use technology purposefully to create, organise, store, manipulate and retrieve digital content.</li> <li>• recognise common uses of information technology beyond school.</li> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.</li> <li>• use sequence, selection, and repetition in programs; work with variables and various forms of input and output.</li> <li>• use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.</li> <li>• 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.</li> <li>• use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.</li> <li>• 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.</li> <li>• use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</li> </ul>
Physical Development	<p>Develop their small motor skills so that they can use a range of tools competently, safely and confidently.</p>		
Expressive Arts and Design	<p>Explore, use and refine a variety of artistic effects to express their ideas and feelings.</p>		