



LONG TERM PLANNING

Key Stage 1 Computing

The 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 technology and provides insights into both natural and artificial systems. At the core of computing is computing science, in which pupils are taught the principals of information and computation, how design systems work, and how to put this knowledge to use through programming. Building on all of this, children are equipped to use IT to create programs, systems and a range of content. Computing also ensures that children become digitally literate – able to use and express themselves and develop their ideas through computing – at a level suitable for the future workplace and as active participants in a digital world.

Aims of study

That all children:

- 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 IT, including new or unfamiliar technologies, analytically to solve problems.
- Are responsible, competent, confident and creative users of ICT.



Based on the *Rising Stars for Computing Scheme* the following coverage occurs across the year:

	Autumn	Spring	Summer
Year 1	<p>We are Treasure Hunters – mapping skills and use of Beebots.</p> <p>We are TV Chefs – following algorithms to create an end product.</p>	<p>We are Digital Artists – creating work inspired by great artists.</p> <p>We are Publishers – creating an eBook about our achievements.</p>	<p>We are Rhythmic – creating sound patterns using ScratchJr and Garageband</p> <p>We are Detectives – using data to solve clues.</p>
Year 2	<p>We are Astronauts – programming on screen with ScratchJr.</p> <p>We are Game Testers – working out different rules for different online games.</p>	<p>We are Photographers – Taking, selecting and editing images.</p> <p>We are Safe Researchers – researching a topic.</p>	<p>We are Animators – creating a stop motion animation.</p> <p>We are Zoologists – collecting data about bugs.</p>



Coverage

Key Stage 1 Computing

Year 1

We are Treasure Hunters:

- To understand what algorithms are.
- To understand how they are implemented as programs on digital devices.
- To create and debug simple programs.
- To use logical reasoning to predict the behaviour of simple programs.

We are TV Chefs:

- To understand what algorithms are.
- To understand how they are implemented as programs on digital devices.
- To know that programs execute by following precise and unambiguous instructions.
- To use technology purposefully to organise, store and retrieve digital content.
- To recognise common uses of information technology beyond school.

We are Digital Artists:

- To use technology purposefully to organise, store and retrieve digital content.
- To recognise common uses of information technology beyond school.

We are Publishers:

- To use technology purposefully to organise, store and retrieve digital content.
- To use technology safely and respectfully by keeping personal information private.

We are Rhythmic:

- To use technology purposefully to organise, store and retrieve digital content.

Year 2

We are Astronauts:

- To understand what algorithms are.
- To know how they are implemented as programs on digital devices.
- To know that programs execute by following precise and unambiguous instructions.
- To create and debug simple programs.
- To use technology safely and respectfully, keeping personal information private.
- To identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

We are Game Testers:

- To use logical reasoning to predict the behaviour of simple programs.
- To use technology safely and respectfully, keeping personal information private.

We are Photographers:

- To use technology purposefully to organise, store and retrieve digital content.

We are Safe Researchers:

- To use technology purposefully to organise, store and retrieve digital content.
- To recognise common uses of information technology beyond school.
- To use technology safely and respectfully, keeping personal information private.
- To identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.



We are Detectives:

- To use technology purposefully to organise, store and retrieve digital content.
- To recognise common uses of information technology beyond school.
- To use technology safely and respectfully.
- To identify where to go for help and support when they have concerns about content or contact on the Internet or other online technologies.

We are Animators:

- To use technology purposefully to organise, store and retrieve digital content.

We are Zoologists:

- To use technology purposefully to organise, store and retrieve digital content.
- To recognise common uses of information technology beyond school.
- To use technology safely and respectfully, keeping personal information private.
- To identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.