

## Curriculum Statement for Computing

*“Humans are still the most extraordinary computers of all.”*

(John F. Kennedy)

### Aims and Objectives

At Cherry Tree, we strongly believe that our children need access to a broad Computing curriculum which will allow our children to build the computer skills needed for the future.

We define computing as “Computing is learning about computers and using technology safely to help understand the world and make positive changes.”

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. We teach internet safety alongside these lessons as we feel this is the most effective way of teaching internet safety.

### Vision and Values

Our children need the digital-literacy skills necessary to enable them to communicate, create and flourish in a rapidly changing digital world.

### Teaching & Learning

In EYFS, the curriculum is met by providing the opportunities for children to learn about Computing through play. EYFS children are exposed to information technology through the use of high-quality text, within role play and small world play. It is used as a tool to enhance learning in all subject areas. Staying safe online is taught discreetly on a regular basis, parents are supported to keep their children safe online.

In addition to this, coding lessons are taught through the use of the ‘codeapillar’ and ‘beebots’ to allow the children to experience algorithms and positional language from an early age. Children also access computing through roleplay such as computers, laptops, phones and ipads.

In our early years' provision, children are expected to learn computing, alongside other key skills, through "understanding the world". The key statement, when considering computing, is: "In addition, listening to a broad selection of stories, non-fiction, rhymes and poems will foster their understanding of our culturally, socially, technologically and ecologically diverse world. As well as building important knowledge, this extends their familiarity with words that support understanding across domains." (Statutory framework for the early years foundation stage, pg10, 2021). An example of this would be "Errol's Garden" which features a computer. The rest are as follows:

Errol's garden by Gillian Hibbs (computer)  
My Mum is a Superhero by Ruby Brown (computer/phone)  
Chicken Clicking by Jeanne Willis (Internet use/computer)  
Look Up! By Nathan Bryon (Mobile Phone)  
Clean Up! By Nathan Bryon (Mobile Phone)  
Rapping Princess by Hannah Lee ( Microphone, recording equipment & DJ Decks)

In Key Stage 1 and Key Stage 2, stand-alone computing sessions are taught weekly in an allocated slot on the timetable. During this time, teachers have access to laptops to deliver the computing curriculum. We use the "Teach Computing" scheme to ensure a consistency of approach across all classes. Tablets are available for teachers to use if these are more suitable than laptops to achieve a task. The theory of computer science is taught through a variety of teaching methods, so some lessons may be taught using no technology at all.

The whole school takes part in the annual Internet Safety Day. Activities are taught in line with the national themes and we use this as an opportunity to embed our learning from other times in the year. In addition to this, we use outside agencies to supplement our teaching such as the NSPCC throughout the school year.

### **Assessment**

In EYFS, all children will be assessed against the Early Learning Goal that links to Computing as part of the EYFS assessments. Learning is evidenced on Tapestry.

In KS1 and KS2, the expectation is that learning is evidenced. This can be recorded in a variety of ways depending on the type of learning taking place e.g. learning journals, electronic evidence of coded games, worksheets, mind maps etc.

Computing is formatively assessed, half termly, throughout the year to allow teachers to adapt their teaching to the needs of the children. Formal summative assessments are submitted termly to allow the impact to be assessed.

We are preparing our children for KS3. The key statements we focus on are:

- use two or more programming languages, at least one of which is textual, to solve a variety of computational problems; make appropriate use of data structures [for example, lists, tables or arrays]; design and develop modular programs that use procedures or functions

- understand a range of ways to use technology safely, respectfully, responsibly and securely, including protecting their online identity and privacy; recognise inappropriate content, contact and conduct and know how to report concerns.