



# The Computing Curriculum

At Corbets Tey School



# National Curriculum 2014 - Computing

At Corbets Tey School, we have taken the Computing National Curriculum and divided expectations at each key stage into three themes:

- **Computer Science**
- **Digital Literacy**
- **Information Technology**

## Key stage 1

Pupils should be taught to:

- 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.

## Key stage 2

Pupils should be taught to:

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- 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
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- 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
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

# Early Years Foundation Stage - Technology

We have also taken the Early Years National Curriculum and divided these expectations into the same three themes:

- **Computer Science**
- **Digital Literacy**
- **Information Technology**

**0-20 Mths:** The beginnings of understanding technology lie in babies exploring and making sense of objects and how they behave.  
See Characteristics of Effective Learning - Playing and Exploring and Creating and Thinking Critically

**16-26 Mths:** Anticipates repeated sounds, sights and actions, e.g. when an adult demonstrates an action toy several times.  
Shows interest in toys with buttons, flaps and simple mechanisms and beginning to learn to operate them.

**22-36 Mths:** Seeks to acquire basic skills in turning on and operating some ICT equipment.  
Operates mechanical toys, e.g. turns the knob on a wind-up toy or pulls back on a friction car.  
Seeks to acquire basic skills in turning on and operating some ICT equipment.

**30-50 Mths:** Shows skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images. Shows an interest in technological toys with knobs or pulleys. Shows an interest in real objects such as cameras or mobile phones. Knows how to operate simple equipment, e.g. turns on CD player and uses remote control.  
Knows that information can be retrieved from computers

**40-60 Mths:** Completes a simple program on a computer. Uses ICT hardware to interact with age-appropriate computer software

**ELG:** Children recognise that a range of technology is used in places such as homes and schools.  
They select and use technology for particular purposes.

# These three themes make up the three strands of the Corbets Tey School Computing Curriculum

## Computer Science

Computational thinking, solving problems, sequences and writing programs

**The Computer Science Strand** is about using computational thinking to solve problems and make things for a purpose. It generally, but not always, involves writing programs. The programming language used will be appropriate for its domain, for example programming for a website will involve HTML. You can also use computational thinking to solve many worthwhile problems by creating a sequence of instructions for the context of the problem, which are not programming instructions. For example, a branching story in episodes can be thought of in this way, where one episode is a single instance in a sequence of episodes, and providing a choice of routes allows a user to make a selection.

## Digital Literacy

Online safety, solving problems by using technology

**The Digital Literacy Strand** is in two parts. One of these is about the safe and responsible use of technology. The other is about solving problems and making useful things by the use of digital tools, such as spreadsheets, video editing applications and so on. Computational thinking is essential to working in this strand as well as in the Computer Science strand, because it is a powerful problem solving process.

## Information Technology

Understanding how information is used and shaped

**The Information Technology Strand** is to develop students' understanding of things work; how information of all kinds become accessible to and manipulable by technology. This is about creating a deep understanding of information. Students need to understand how texts, sounds and images become accessible to technology so that they can be shaped.

Our school has three curriculum pathways, which ensures that the curriculum approach is appropriate for each learner's needs.

Within each curriculum pathway we have created a framework of three levels of skills within each three stands and resources to support each strand.

## CTS Computing Curriculum Framework







