Computing in St Finbar's

Computing has been a subject that the majority of the pupils enjoy. Computers and technology are now an integral part of life in the 21st Century from social media to games to complex algorithms.

The three aspects of the computing curriculum are: computer science (CS), information technology (IT) and digital literacy (DL).

At St Finbars we aim to educate the pupils to understand how the use of technology can be useful in their education safely, respectfully and responsibly. For them to understand computer networks including the internet; how they can provide multiple services, such as the World Wide Web; the opportunities they offer for communication and collaboration. For pupils to be given an opportunity to design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.

Aims of our Music curriculum

The national curriculum for music 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.

How Music is organised in our school

Early Years Foundation Stage

By the end of EYFS children should be able to:
- 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.
- Knows how to operate simple equipment, e.g. turns on CD player and uses remote control.
- Shows an interest in technological toys with knobs or pulleys, or real objects such as cameras or mobile phones.
- Shows skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images.
- Knows that information can be retrieved from computers 40-60 months Completes a simple program on a computer.
- Uses ICT hardware to interact with age appropriate computer software.

<u>**KS1 and KS2**</u>

At St Finbar's Catholic Primary School, computing is taught using a blocked curriculum approach. This ensures that children are able to develop depth in their knowledge and skills over the duration of each of their computing topics.

Teachers use the 'Switched On: Computing' and 'Knowsley CLC computing' schemes to inform the planning of their computing lessons. The school has a computing suite and children also have access to a class sets of iPad, ensuring that children can use computers for a range of purposes and that it used across the wider curriculum, as well as in discreet computing lessons. At the core of computing is computer science, in which children are taught the principles of information and computation, how digital systems work and how to put this knowledge to use through programming.

In Key Stage 1 the children will learn to understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. They will be taught to create and debug simple programs and use logical reasoning to predict the behaviour of simple programs. They will be shown how to use a range of technology purposefully to create, organise, store, manipulate and retrieve digital content as well as recognise common uses of information technology beyond school. They will be taught to 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. Each of these skills will be taught through exciting half termly units.

In Key Stage 2 the children will design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. They will use sequence, selection, and repetition in programs, use logical reasoning to explain how some simple algorithms work and correct errors in algorithms and programs. Children will be taught to understand computer networks, including the internet, and the opportunities they offer for communication and collaboration. They will use search technologies effectively, learn to appreciate how results are selected and ranked, and be discerning in evaluating digital content. Children will be taught to select, use and combine a variety of software (including internet services) on a range of digital devices to create a range of programs, systems and content that accomplish given goals. They will use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

What we hope is achieved

After the implementation of this computing curriculum, children at St Finbar's Catholic Primary School will be digitally literate and able to join the rest of the world on its digital platform. They will be equipped, not only with the skills and knowledge to use technology effectively and for their own benefit, but more importantly – safely. The biggest impact we want on our children is that they understand the consequences of using the internet and that they are also aware of how to keep themselves safe online.

As children become more confident in their abilities in Computing, they will become more independent and key life skills such as problem-solving, logical thinking and self-evaluation become second nature.