



Computing and ICT Policy

Aims

The National Curriculum 2014 states that the computing curriculum equips pupils to develop computational thinking and creative problem solving to understand and change the world around them. Pupils at Worth Primary School are taught the principles of computer science- information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding our pupils will be equipped to use information technology to create programs, systems and a range of content. The computing curriculum will ensure that our 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.

Pupils will:

- Develop an understanding of the fundamental principles and concepts of computer science;
- Use computational thinking to analyse problems and develop a logical and creative approach to problem solving;
- Understand how digital technologies utilise hardware and software and be able to analyse problems and create original digital content;
- Be responsible, safe, literate, competent and confident users of IT who understand the value of technology both inside and outside of learning.

These objectives are derived from the aims and guide our decisions in planning a suitable scheme of work.

The Foundation Stage (Reception)

- Know how to operate simple equipment.
- Show an interest in technological toys or real objects such as cameras.
- Demonstrate ability to make toys work through manipulation of moving parts or pressing of buttons to activate.
- Know that computers can store and retrieve useful information.
- Use technology to access a simple program on a computer to achieve a task.
- Recognise that technology is used in a range of places such as homes and schools.
- Select and use technology for a purpose.

Key Stage 1

In Year 1 and 2 pupils will:

- Develop an understanding of algorithms, as defined as precise and unambiguous instructions and commands and how they are used by digital devices.

- 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.
- Be a safe and respectful user of digital technology who knows why it is important to keep personal information private. Know who/where to go for help if they have any concerns when using online technologies including the internet.

Key Stage 2

In year 3, 4, 5 and 6 pupils will:

- Identify problems in the abstract and decompose into smaller parts in order to design, write and debug programs that are purposeful. Including control of, or simulation of physical systems.
- Understand that computers require an input and produce an output. To be able to develop complex programs using sequences, repetition and variables.
- Use logical reasoning to explain how simple algorithms work and to detect and correct errors in algorithms and programs.
- Understand how computer networks have enabled new opportunities for communication and collaboration, and how the world wide web and the internet have created new services.
- Understand how search technologies use algorithms to filter results and appreciate how results pages are selected and ranked. Be a discerning and evaluative user of digital content.
- Select, use and combine information in a variety of software products on a range of digital devices to create systems and content that accomplish a purpose. This may include creating a range of programs, searching the world wide web effectively, collecting, analysing, evaluating and presenting data and information.
- Use technology safely, respectfully and responsibly and recognise acceptable / unacceptable behaviour and be able to decide to take the appropriate actions. Be able to identify a range of ways to disclose and report concerns about online content or inappropriate contact.

Differentiation and SEND

Pupils with special educational needs and disabilities will be entitled to the same access of computing as their peers. In planning lessons teachers will identify the learning goals for the majority of the pupils as well as extension activities to deepen and widen knowledge. Consideration will be given to modifying tasks, or providing peer or adult support, for pupils with special needs. It is important to note that pupils with learning difficulties may achieve well in computing and should be given every opportunity to provide support for others. Teachers will liaise with the SENCo on the use of computing and digital devices to improve involvement in the curriculum.

Cross curricular links

Computing is rooted in mathematics, science and design technology and provides insights into systems, both natural and artificial. E-safety is also an essential component of PSHE. Safeguarding issues arising from concerns related to e-safety will be referred to the Designated Safeguarding Lead.

Equal opportunities

All pupils are entitled to equal access to the wide variety of digital computing technologies and ICT equipment within school in order to develop their personal capability. However, to tackle the digital divide and to provide opportunities for pupils from less privileged backgrounds, additional support can be provided to identified pupils. When pupils work in groups care will be taken to ensure that all pupils are active and have equal access to the digital device. Pupils with computing and digital communications devices at home are encouraged to use them for educational benefit and parents will be offered advice about what is appropriate. For pupils who do not have access to digital technologies at home there will be opportunities within KS2 homework club to access the resources within school.

Health & safety

Pupils are encouraged to use digital technologies safely and appropriately. When using the range of mobile digital devices available throughout the school they are encouraged to sit comfortably using both hands on the keyboard where appropriate. All electronic devices will be checked regularly to ensure they are safe to use.

Assessment, recording and reporting

Pupils are informally assessed in Computing and ICT by teachers through regular observation of progress against stated objectives to meet age group expectations. Progress is reported to parents in their child's end of year report.

Management and administration

The curriculum will be planned to allow pupils a wide range of activities to cover and teach the programmes of study for computing. Teachers will use the key stage plans to ensure that pupils have sufficient access to experiences and equipment in order to receive a balanced experience of computing.

The role of the subject leader

The subject leader will work with the school leadership and teaching staff to ensure implementation of the school's computing policy. The subject leader will be responsible for monitoring curriculum coverage and the quality of teaching and learning. The leader will plan and lead the development of all school staff in computing and provide regular reports on the level of resources.

Review

This policy will be reviewed by the Subject Leader as part of the school's two-year review cycle to evaluate the school's progress towards its computing targets. Progress will be discussed with the leadership team and this evaluation will form the basis of a yearly computing action plan.

Written and agreed March 2019

To be reviewed March 2021