

Duke Street Primary School



Computing Policy

Provisional 2018

Written by Mrs N Worth March 2018

To be reviewed before March 2020.

Introduction

The 2014 national curriculum introduces a new subject, Computing, which replaces ICT. This represents continuity and change, challenge and opportunity. It gives schools the chance to review and enhance current approaches in order to provide an even more exciting and rigorous curriculum that addresses the challenges and opportunities offered by the technologically rich world in which we live.

Computing is concerned with how computers and computer systems work, and how they are designed and programmed. Pupils studying computing will gain an understanding of computational systems of all kinds, whether or not they include computers. Computational thinking provides insights into many areas of the curriculum, and influences work at the cutting edge of a wide range of disciplines.

The Online Safety Policy should also be read in conjunction with this policy.

The Nature of Computing

The new National Curriculum presents the subject as one lens through which pupils can understand the world. There is a focus on computational thinking and creativity, as well as opportunities for creative work in programming and digital media.

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

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.

Aims

- To enable children to become autonomous, independent users of computing technologies, gaining confidence and enjoyment from their activities.
- To develop a whole school approach to computing, ensuring continuity and progression in all strands of the Computing National Curriculum.
- To explore their attitudes towards Computing and its value to them and society in general. For example, to learn about issues of security, confidentiality and accuracy.
- To use computing technologies as a tool to support teaching, learning and management across the curriculum.
- To stimulate interest in new technologies.
- To maximise the use of computing technologies in developing and maintaining links between other schools, the local community including parents and other agencies.

Teaching and Learning

As the aims of Computing are to equip children with the skills necessary to use technology to become independent learners, the teaching style that we adopt needs to be as active and as practical as possible. We teach a balanced curriculum involving computing lessons, based on the Purple Mash Scheme of Work, and develop children's ICT skills to support cross curricular teaching across the curriculum. We also supplement the curriculum with extra Digital Literacy lessons from Common Sense Media. (<http://www.digital-literacy.org.uk/Home.aspx>). These lessons are generally divided into 2 each term.

We recognise that all classes have children with widely differing abilities. This is especially true when some children have access to computers at home, while others do not.

Computing is taught in the EYFS as an integral part of the curriculum covered throughout the year. The children have the opportunity to use the class computer, an iPad, a digital camera, a floor robot and numerous interactive programmes with the interactive whiteboard.

In EYFS, the Information Communication Technology requirements stated in the Knowledge and Understanding of the World element of the Early Learning Goals Foundation Curriculum, are covered in continuous and blocked units. Additional equipment is available to use in EYFS including: recordable pegs, recordable magnifying glasses and rechargeable Mobile Phone Walkie Talkies.

The teaching of Computing is taught weekly. Pupils are timetabled for 1 visit per week to the ICT suite. The session is to develop their skills and experience of computing. Classes may visit the ICT suite for additional sessions during the week to carry out ICT based work in other subject areas.

Teacher's planning is differentiated to meet the needs of the children within the class or group. A range of styles are employed including:

- Children may be required to work individually or in pairs to complete the task.
- They may be expected to work at different paces.
- Different groupings of children can be taken to the suite based on ability, either same ability or mixed ability.
- Different levels of input and support can be given.
- Differentiation through expected outcomes.

There are Whiteboards/ LCD screens and an iPad in all classrooms. These are used throughout the day for whole class teaching. Whiteboards are also used in group activities by teachers or TAs or for collaborative activities by pupils. Whiteboards are also regularly used by pupils themselves to participate in the class or group lessons or demonstrate what they have learned or to display work they have done. The IWB is connected to a main classroom computer, which is on the school network with its shared work area. The iPads are used by the staff and the children for recording evidence and further research.

School also has a trolley containing 20 iPads to be used by all children. They can be used to help teach the Computing curriculum and to supplement and enhance other curricula areas. They are managed through Apple School software with guidance from our technician. KS2 children will have their own individual Apple ID to use when using the iPads so their work can easily be saved and

retrieved. The use of Apple classroom and Air server software allows the children and teachers to share, collaborate and distribute their work.

Entitlement

The new National Curriculum states that pupils should be taught to:

	KS1	KS2
Computer Science	<p>Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</p> <p>Create and debug simple programs</p> <p>Use logical reasoning to predict the behaviour of simple programs</p>	<p>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</p> <p>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output</p> <p>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p> <p>Understand computer networks including the internet; how they can provide multiple services, such as the World Wide Web</p> <p>Appreciate how [search] results are selected and ranked</p>
Information Technology	<p>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</p>	<p>Use search technologies effectively</p> <p>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</p>
Digital Literacy	<p>Recognise common uses of information technology beyond school</p> <p>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</p>	<p>Understand the opportunities [networks] offer for communication and collaboration</p> <p>Be discerning in evaluating digital content</p> <p>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</p>

Assessment

The teachers follow the Purple Mash scheme of work and each unit has assessment guidance. Assessment is continually happening, and lessons are adapted when needed. There are suggested outcomes for each lesson and then notes can be made at the end of each unit on those children working towards or above expectations. Through the use of Purple Mash the children can save their work and continue it at a later date. The teacher and subject leader can also view the work after the lesson for monitoring.

See example below taken from the year 5 guidance.

Lesson 1	<ul style="list-style-type: none"> • Children understand the different ways to search a database. • Children can search a database in order to answer questions correctly.
Lesson 2	<ul style="list-style-type: none"> • Children have designed an avatar for a class database. • Children have successfully entered information into a class database.
Lesson 3 + 4	<ul style="list-style-type: none"> • Children can create their own database on a chosen topic. • Children can add records to their database. • Children know what a database field is and can correctly add field information. • Children understand how to word questions so that they can be effectively answered using a search of their database.

All children are working at Year 5 expected outcomes except	
	who are working towards Year 5 expectations
	who are working above Year 5 expectations

Monitoring

The Computing Subject monitors the teaching and learning of the subject through pupil conferencing several times a year, regular discussions with members of staff that teach Computing and through checking work saved on Purple Mash. Support is then given when and where necessary.

Roles and Responsibilities

- All teaching staff will work together to ensure the implementation of the Computing policy.
- All staff are aware of how to respond to online safety incidents.
- The subject leader is responsible for monitoring curriculum coverage and the impact of learning and teaching.
- The subject leader is responsible for sharing developments in Computing with staff members and keeping herself informed through CPD.
- The Computing technician is responsible for maintenance of hardware and the network.

Maintenance

Any maintenance or network issues need to be reported to the Computing Subject Leader or Computing Technician using the reporting board in the ICT suite.

Equal Opportunities

The National Curriculum states that, "All pupils, regardless of race, class or gender, should have the opportunity to develop ICT capability." Within school we adhere to our Equal Opportunities Policy which ensures fair access to the curriculum and resources for all.

All classes and children have equal access to the ICT suite and to resources within the school. We are aware that access to computers and the internet varies greatly in the home and are sensitive to the fact that some pupils will be restricted in their ability to research from the internet at home and produce homework via a computer or tablet. Suggested homework activities can be set through Purple Mash which the children can access at home with their own log on.

E-Safety

Where the internet and other ICT resources are employed in teaching and learning please refer to the school's online safety policy for guidance regarding safe and appropriate use.

Internet access is vital to the computing curriculum at Duke Street. We recognise the need to ensure that all pupils are responsible and safe users of the internet and other communication technologies. Children's Golden Rules are displayed at school.

The school offers a safe online environment through a managed 'firewall' filtered internet access monitored and maintained by Lancashire ICT Services and school. We recognise the importance of teaching our children about online safety and their responsibilities. Online safety is part of the Computing and PSHE curriculum, plus the school celebrates 'Safer Internet Day' every February.

Disposal of old equipment

Old computers and other items of hardware are recycled through <http://www.prmgreentech.com/>

PRM Green technologies collect redundant IT equipment for recycling, ensuring all data is removed and adherence to the WEEE directive by offering industry leading environmental practices.

The serial numbers are recorded for items of value and then records are amended as necessary.