

**Uplands Junior School**  
**Computing Policy – December 2018**



**UN Convention on the Rights of the Child**

This policy has been written with the UN Convention on the Rights of the child at the forefront. The articles that this policy covers are: 3, 12, 13, 17, 19, 28, 29.

**Introduction**

Computing is in the 2014 National Curriculum. It 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 Acceptable Use of ICT Policy and the E Safety Policy should also be read in conjunction with this policy.

**The Nature of Computing**

The National Curriculum 2014 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.

**Entitlement**

At each Key Stage, children are entitled to the opportunity to develop the use of ICT capability through activities that arise in all curriculum areas, undertaken individually or in groups, as well as being appropriate to both boys and girls.

**Computer Science.**

At Key Stage 2 children should be taught how 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
- Appreciate how [search] results are selected and ranked

### **Information Technology**

At Key Stage 2 children should be taught how to:

- Use search technologies effectively
- 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

### **Digital Literacy**

At Key Stage 2 children should be taught to:

- Understand the opportunities [networks] offer for communication and collaboration
- Be discerning in evaluating digital content
- Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

### **The role of the Computing co-ordinator**

The curriculum co-ordinator for Computing will be responsible for:

- Monitoring, planning and teaching of Computing in year groups to make sure National Curriculum objectives are covered and ensure that targets indicated are being implemented.
- Promote the integration of Information Technology within appropriate teaching and learning activities, develop and monitor the contributions of subjects to its cross-curricular use;
- Manage the provision and deployment of resources and give guidance on classroom organisation support
- Encourage colleagues
- Act as a contact point between the school and support agencies
- Co-ordinate the evaluation and review of the school's Computing, internet and e-mail policies.

### **Planning and Delivery of Content**

At Uplands Junior School, computing will be taught both as a discrete subject, and in a cross-curricular way when the opportunity presents itself.

Pupil entitlement to Computing will consist of two separate, though clearly interrelated and overlapping components.

#### **(a) As part of the Creative Curriculum (Learning Journeys)**

Teaching will cover Key Skills for Computing that are mapped out for each year group and link in with the National Curriculum objectives. The Key Skills show progression from one year group to the next. Depending on the teaching planned, reference in each year group may refer to schemes of work for Computing.

In order to ensure delivery of this entitlement, use of laptops and iPads will be timetabled across the school. Other forms of hardware, such as digital cameras, are also available for classroom use.

Medium term planning will be produced by the year group to include aspects of the Computing Key Skills that fit into their Learning Journey theme for that term. These plans will identify the key skills, learning objectives and assessment opportunities linked to specific activities. Planning should take

account of the need for all pupils to use Computing in appropriate contexts. A variety of learning strategies may be planned including: collaborative group work, investigative work, problem solving and enquiry-based learning. Learning objectives need to remain linked to the NC objectives.

The use of Computing skills and resources is a statutory requirement of all National Curriculum subjects. Computing, and Information Technology in particular, therefore should be a key factor in all areas of the curriculum, from researching on the Internet to the use of word processing to produce quality text. Staff should carefully consider opportunities to use technology to complement teaching and learning objectives in English, Mathematics, Science and other subjects they plan for accordingly.

### **(b) As a discrete subject (Teaching of ICT skills)**

The teaching of Computing skills to all children at an appropriate level is crucial if they are to become confident e-learners. Our school follows Wolverhampton LA's *E-Confident Learner Framework* and the accompanying planning formats for Computing. This is to ensure not only a progression of the teaching of skills across the Key Stage, but also even coverage of all the different strands of e-learning: Digital Thinker, Digital Presence, Digital Author, Digital Artist, Digital Communicator, Digitally Safe, Digital Explorer and Evaluator, Digital Mastery and Digital Monitor. The *E-Confident Learner Framework* contains links to relevant parts of the National Curriculum.

Teaching of Computing skills may happen as a discrete lesson, where the objectives are closely link to Units of Work, although not necessarily covering the same content. Likewise, the teaching and consolidation of Computing skills could also be covered at any appropriate opportunity in any lesson.

### **Timetabling**

Children working in small groups or pairs should be able to have regular technology experiences, including the use of computers, iPads, video, audio and recording equipment. In order to ensure the delivery of the Computing objectives, each class has access to the school laptops and other hardware. The school has three sets of laptops for use by children. These are timetabled to be used within set Year Groups. When not timetabled, laptops are available to be used whenever required. The school also has iPads for use by children. There is also a timetable for Teaching Staff to use to book the iPads out for the number required. The co-ordinator will be responsible for checking that all year groups have fair access to the laptops and iPads, in line with the school's Equal Opportunities Policy.

### **Assessment, Recording and Reporting**

Teacher assessments of Computing capability will be recorded throughout the year and reported to parents at the end of each academic year in reports. Judgements of attainment should be made against National Curriculum objectives in planning. Sufficiently detailed records should be accumulated to form and support a judgement on each pupil's level of attainment. Formative assessment is used to guide the progress of individual pupils in their use of technology. Teachers in the course of teaching mostly carry out formative assessments informally. Suitable tasks for assessment of Computing work include:

- Small group discussions, perhaps in the context of a practical task
- Specific assignments for individual pupils
- Individual discussions in which children are encourage to appraise their own work and progress.

Children save examples of their work in the Pupil files that are stored on the Uplands File server and available across the network.

Samples of work may be printed out and included in a Computing portfolio folder.

Example work from a range of ability levels to be uploaded onto the school Learning Platform for monitoring purposes.

Where Information Technology is used across the curriculum, class records will demonstrate individuals' use of technology and ensure equal access to resources in line with the school's equal opportunities policy.

At the end of each unit of Computing skills work, teachers complete an assessment. This assessment data is then collated and given to the Computing co-ordinator.

Child self-assessments are also to be regularly undertaken by individual pupils.

### **Progression and Differentiation**

Planning should ensure continuity and progression. The school recognises that progression in Computing involves four main aspects:

- The progressive development of pupils' skills, knowledge and understanding
- Breadth of Computing applications
- Increased complexity of contexts in which Information Technology is applied
- The growing autonomy of the pupil in their learning

Adherence to both Wolverhampton LA's *E-Confident Learner Framework* and the Creative Curriculum and its clearly defined Key Skills for Computing in each year group will establish an appropriately planned progression of skills and activities across the Key Stage. At each level, children are required to use progressively more complex IT skills and to make increasing uses of the features and capabilities of the software available. Children need experience of using a variety of software and hardware in different contexts.

Differentiation is achieved through differentiated activities, levels of support for pupils and through differentiation of intended outcomes. Children will have different aptitudes and abilities and will progress at differing rates. However, it is important that staff systematically give every pupil the opportunity to develop their Computing skills.

### **Access to the curriculum**

The strength of computing is that it can provide equality of access to the curriculum for all children which allows them to function at their optimum level, either as an aid to communication for or a means of controlling their environment, as well as an integrated aid to learning. The provision of resources should also take into account the needs, abilities and interests of individual children, especially:

- Younger children
- Youngsters who have a special skill or talent
- Youngsters who have no access to technology at home
- Children who speak a language other than English
- Children with physical or sensory difficulties
- Offering equality of opportunity for both girls and boys

### **Equal Opportunities and the use of ICT**

Computers are an everyday fact of life for boys and girls in our schools. Therefore, it is important that all children, irrespective of attainment, ethnicity and social background, all feel comfortable with them.

Computers can play an important role in language development, project work, problem solving and investigations. It is important that computers are a resource which is familiar to each and every child in the class. Familiarity gives confidence, and confidence breeds enjoyment and motivation, especially for children with Special Educational Needs and Disability (SEND). Careful planning is necessary to ensure that all children have sufficient time to develop and implement their Computing skills. To ensure all each child is catered for, the following points should be taken into consideration:

- Groups should be mixed of sex and/or ability wherever possible. Careful monitoring of those groups is necessary to ensure that no one child dominates and that individual skill development is recorded.
- All teachers are role models for children. Teachers should be aware of their influence on children and develop their own confidence and competence in the use of information technology.

### **Homework**

Where homework is required to be done online, provision will be made for those pupils without home access to the Internet so as not to discriminate against them. To identify those pupils, each year the school will send out an ICT@Home Survey based upon the model provided by Wolverhampton LA. In school provision will be provided by access to laptops and iPads during supervised sessions at lunchtime. 'Homework Hub' is available at least once weekly.

The school currently provides online homework via use of Mathletics, Times Table Rockstars and Spelling Shed.

### **Pupils with Special Educational Needs**

Pupils with SEND benefit from using information technology as it enhances access to the curriculum, and this in turn encourages motivation and the development of skills ensuring significantly higher achievements. Therefore, the opportunities to utilise technology should be maximised. In some instances, the Computing co-ordinator may work alongside the SEND co-ordinator to provide specific technology based support for specific learning objectives. Pupils with SEND have the same technology entitlement as all other pupils and are offered the same curriculum. iPads will be available for 1:1 SEND support sessions.

Children who are Gifted & Talented (G & T) in Computing will be recognised on the Gifted & Talented Register in the school to ensure staff are aware of pupils who need extending in their learning. The G & T register is to be reviewed annually.

### **Child Protection**

Computer networks that access the Internet are an important aspect of Computing education. However, they present potential risks to the spiritual, moral and social development of pupils, particularly in terms of the nature of some material on the Internet. Subsequently, it is essential that pupil use of the network and in particular the Internet is governed by the Uplands Internet Acceptable Use Policy.

E-Safety is covered in the separate E-Safety Policy, as is acceptable use of the school's Computing resources in the Acceptable Use Policy.

The rules of Internet use in school are sent home at the start of each year in Homework diaries for parents to read and sign, henceforth granting permission for children to use the Internet in school. The pupil must also sign the form too.

Pupils also sign to agree to protect their username and password for the school learning platform, especially as these details will remain the same throughout their schooling in Wolverhampton.

### **Health and safety**

The following issues have been considered and included in the school policy, as appropriate. Health and Safety issues in Computing include taking care with:

- Setting up and moving equipment
- Establishing appropriate working conditions
- Annual Electrical Safety Check

It is imperative that all electrical equipment is kept in good working order. To ensure the health and safety of pupils and staff, the following guidelines must be adhered to:

- Pupils should not be allowed to switch on the power at the mains.
- Equipment should be situated away from water.
- Pupils should always be supervised when using electrical equipment.
- All plugs, leads and equipment should be checked regularly and tested for electrical safety in accordance with Council guidelines.
- Pupils should not be allowed to carry equipment.
- Internet and E-mail- shielded systems and signed agreements in Homework diaries. All users to follow school's Acceptable Use Policy.
- Computer systems will not be placed near magnets, radiators or have trailing wires, which can be tripped over.

Pupils will not normally work in front of a computer screen for more than half an hour at a time.

### **Anti-virus policy**

All computers connected to the school network are protected by Kaspersky anti-virus, which is updated on a regular basis. Computers are regularly scanned to ensure the network remains virus free.

In order to reduce the risk of a virus infiltrating a school computer or laptop, the following protocols should be observed by all staff.

- Any files being transferred from home machines to school machines via USB memory sticks or hard drives will automatically be scanned.
- Any pupil data or photographs must primarily be stored on the school Learning Platform to ensure it is secure. Where USB memory sticks or hard drives are used, they must be password encrypted for security (*Refer to Digital Safeguarding Policy and Acceptable Use Policy*)
- Children should not introduce files from home into school systems without specific permission from a staff member who can run anti-virus checks on such files prior to their use.
- E-mail attachments present a particular danger of virus infection and should not be opened when the identity of the sender is unknown. Any e-mail that is received without the identity of the sender being known should be deleted immediately. If in doubt either the Computing co-ordinator or ICT technician should be consulted prior to opening files.

## **Social networking/ social forum websites**

Personal use of personal social networking websites in school, via a school laptop or iPad, is prohibited. Teaching Staff have access to the school's Twitter and Facebook page to inform parents/guardians of events or achievements (Administrators of the school Facebook page (teaching staff) need to log onto their own Facebook page to access the school's page). The use of sites such as Facebook, My Space and Twitter by staff outside of school is a matter for personal discretion. However, as part of regular Digital Safeguarding training, staff are asked to consider the following guidelines (as suggested by Schools' Human Resources at Wolverhampton Council):

- References to places of work, school, telephone numbers or addresses, should not be given on websites
- No reference should be made to roles at work, job titles nor confidential information given out
- Colleagues should not be subjected to inappropriate or unwanted reference either in writing or photographs

Also, staff are personally responsible for checking their own security settings on such sites and also thinking carefully about which adults are able to view their site. Staff should never reply to messages nor accept invitations or requests from pupils.

Breach of these guidelines will be a disciplinary offence.

## **Professional Development**

Uplands Junior School places a high priority upon staff professional development and recognises the importance of its teaching staff remaining abreast of developments in Computing. Technical support is offered externally by the LTT technician. Opportunities are also provided for staff to take advantage of Computing related courses. Uplands Junior School has access to 'Bronze' service level agreement with the authority Learning Technologies Team (LTT) which provides opportunities for staff development and in class support.

The Computing co-ordinator will offer advice when necessary to support learning. Each teacher is equipped with a staff laptop. The use of laptops is to allow staff to extend their usage of information technology to the home, allowing them to be more flexible in their use. A Microsoft Office package is installed on the laptops, which allows word processing and desktop publishing to be carried out. Staff will be allocated a personal e-mail address for their own professional use within the Wolverhampton school system. The computers are covered by the school's insurance, only if the member of staff who is taking the machine has signed the laptop out. All staff with laptops are to read and sign both the Acceptable Use Policy and the Staff Laptop agreement (*See the separate policies*).

The computers are the responsibility of the individual who uses them.

The software is licensed to the school, not the individual user.

Copying of any software from the system is ILLEGAL and could lead to prosecution. Staff need to be aware of copyright law regarding their use of technology.

Also, NO software should be installed or used on the computer that has not been installed by the technician.

The above guidelines are in place to protect the hardware and the user. If these are followed then the system will work without problems. If however you come across a problem with an application then please note the problem and refer it to the technician.

### **Resources**

All hardware and where possible software should be security marked. The technician will hold a list of computers and peripherals together with location, serial numbers and appropriate purchase/acquisition dates. Additionally, the co-ordinator will hold a list of items purchased out of the Computing budget and hold software licenses where applicable.

Subject co-ordinators are to hold CD-ROMs of software purchased out of their budgets. All software purchased and installed on the school equipment to be notified to the Computing co-ordinator with a copy of the software license where applicable.

Expendables such as ink cartridges are to be replaced from within year budgets.

Resources should be made accessible to children as soon as possible. Teach the children how to use software and hardware appropriately, trying to reduce reliance on the teacher.

The school's technical support providers (LTT) are solely responsible for the secure and safe backing-up of all data stored on the school server.