Fiddlers Lane
Community Primary School

Computing and ICT Policy

Approved by	
Name: Jayne Tighe Chair of Governors Signature:	Date: 04 July 2018
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Introduction

The 2014 national curriculum introduced a new subject, computing, which replaced ICT. This represents continuity and change, challenge and opportunity. 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.

Ethos

At Fiddlers Lane we aim to provide an exciting and rigorous curriculum that addresses the challenges and opportunities offered by the technologically rich world in which we live.

Aims

The school's aims are to:
- provide a relevant, challenging and enjoyable computing curriculum for all pupils.
- meet the requirements of the national curriculum programmes of study for computing
- use computing and ICT as a tool to enhance learning throughout the curriculum.
- to respond to new developments in technology by providing devices .
- to equip pupils with the confidence and capability to use ICT and computing throughout their later life.
- to enhance learning in other areas of the curriculum using ICT and computing.
- to develop the understanding of how to use ICT and computing safely and responsibly.

The National Curriculum for computing aims to ensure that all pupils:
- can understand and apply the fundamental principles of computer science, including logic, algorithms, data representation, and communication
- 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.

See also 1: National curriculum, Long term plans and Medium term plans – creative curriculum

Rationale

The school believes that ICT and computing:
- Gives pupils immediate access to a rich source of materials.
- Can present information in new ways which help pupils understand access and use it more readily.
- Can motivate and enthuse pupils.
- Can help pupils focus and concentrate.
- Offers potential for effective group working.
- Has the flexibility to meet the individual needs and abilities of each pupil.

Objectives

In early years (see also early year's policy) it is important to give children a broad, play-based experience of ICT in a range of contexts, including outdoor play. ICT is not just about computers. Early years' learning environments should feature ICT scenarios based on experience in the real world, such as in role play. Children gain confidence, control and language skills through opportunities to 'paint' on the whiteboard or drive a remote-controlled toy. Outdoor exploration is an important aspect, supported by ICT toys such as metal detectors, controllable traffic lights and walkie-talkie sets. Recording devices can support children to develop their communication skills.

Key Stage 1

By the end of 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 a sequence of instructions
- write and test simple programs
- use logical reasoning to predict and computing the behaviour of simple programs
- organise, store, manipulate and retrieve data in a range of digital formats
- Communicate safely and respectfully online, keeping personal information private, and recognise common uses of information technology beyond school.

Keys Stage 2

By the end of key stage 2 pupils should be taught to:
- design and write 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; generate appropriate inputs and predicted outputs to test programs use logical reasoning to explain how a simple algorithm works 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
- describe how internet search engines find and store data; use search engines effectively; be discerning in evaluating digital content; respect individuals and intellectual property; use technology responsibly, securely and safely
- Select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.

See also: Long term Computing plan.

Teaching and Learning

- Foundation stage 'computing' learning has a strong emphasis on developing skills and understanding
- In KS1 and KS2 teachers deliver cross curricular teaching through the creative curriculum, following the areas of learning in the national curriculum. See appendix 1: Long term topic plan.
- There has been an attempt to include some computing links into each topic as

well as teaching skills in discrete computing lessons.
- Computing activities are organised using a variety of grouping strategies that are most effective to deliver the learning objectives for all abilities.
- Coding is taught through Espresso coding program, which has tasks and app development for each year group. Pupils can also access this resource at home.

- Pupils are encouraged to read and use vocabulary related to computing. A glossary of computing terms is included in planning files.
- There are frequent opportunities for pupils to make choices and take decisions both collaboratively and independently when planning and carrying out computing tasks.

Resources and access
At Fiddlers Lane we acknowledge the need to continually maintain, update and develop our resources and to make progress towards a consistent, compatible computer system by investing in resources that will effectively deliver the strands of the national curriculum and support the use of ICT and computing across the school.

Resources are located in the classrooms, trolley stores and in ICT storeroom.

ICT and computing network infrastructure and equipment:
- Every classroom from nursery to y6 has a personal computer connected to the school network and an interactive whiteboard with sound, DVD and video facilities, a visualiser and an i-pad.
- There are laptop trolleys in school containing sets of laptops and net books with internet access available to use in classrooms.
- Tablet devices including i-pads and kindles are available for classes and groups to use.
- each class from y1 – y6 has an allocated slot in an afternoon for teaching of specific ICT and computing skills
- The laptops and net books and tablets are available for use throughout the school day as part of ICT and computing lessons and for cross curricular use.
- Pupils use ICT and computing independently, in pairs, alongside a TA or in a group with a teacher.
- The school has an RM ICT and computing technician who is in school one afternoon every other week.

Technical Support and maintenance
A service level agreement with RM is currently in place to help support us in hardware, software and audio visual.
- Any issues with classroom equipment are logged by the class teacher with RM.
- If any pupil equipment is damaged or develops a fault during a lesson the class teacher should log that issue with RM managed service.
- Teachers are required to log any faults with RM Support as soon as they are noticed.(If an issue is particularly serious or urgent staff should inform the ICT technician or computing co-ordinator)
- Whole school issues will be logged by the ICT technician or ICT co-ordinator.

How to log an issue
Fiddlers Lane School number is 17091.
Support queries can be logged by:
1.Telephone: 0845 074 5724.
2. Email: SalfordPrimary@RM.com
3. Support website: www.rmeducation.com\support

Staff should to register them-selves, so they can log calls directly on the RM support home page.
This can be done by following this link
https://www.rm.com/Security/Login/FormsLogin.asp?URL=/support/member/listcalls.asp&inpOriginalProtocol=http://
The progress of logged calls can also be monitored on this site.

Planning
Staff follow medium term plans with objectives set out from the National Curriculum and using the same format as their topic planning sheet.
Cross curricular ICT links should be highlighted in line with the Creative curriculum booklets – Computing links in blue.

Cross curricular links
Where appropriate, ICT and computing should be used to support learning in other subjects as well as develop ICT and computing skills. Digital literacy is encouraged through apps and programs which support and complement the English curriculum. Kindles provide the facility for guided reading using e-texts.   Apps such as 'Mathletics' and times table programmes and devices such as DS and i-pads support learning in maths. Data loggers, digital microscopes and visualise are used to support the science curriculum. Links with ICT are incorporated into the creative curriculum topics for all subjects and identified in planning.

Assessment and record keeping (also see assessment policy)
Teachers regularly assess capability through observations and looking at completed work. Key objectives to be assessed are taken from the national curriculum to assess key ICT and computing skills each term.
 EYFS –Teacher assessment is used, mainly through observation and discussions with learners. Assessments are recorded against the Understanding the World criteria on the Early Years Foundation Stage Profile Assessment.
KS1 and KS2- Science progress is tracked against national curriculum objectives using 'I can' statements.
- Records of achievements against National Curriculum objectives are kept on Creative Curriculum spread sheets. Pupil's achievement is recorded as below, achieving and above and national expectations.
- Feedback to pupils is related to lesson objectives. Comments identify strengths and areas for improvement and provide targets for future work.
- Where possible children are encouraged to review their own progress.

Monitoring and evaluation
The subject leader is responsible for monitoring the standard of the children's work and the quality of teaching in line with the schools monitoring cycle. This may be through lesson observations, book scrutiny of looking at other data for the subject.

The subject leader is also responsible for supporting colleagues in the teaching of computing, for being informed about current developments in the subject, and for providing a strategic lead and direction for the subject in the school.

Inclusion (see inclusion policy)

At Fiddlers Lane we aim to set high expectations for out pupils and provide opportunities for all pupils to achieve, including girls and boys, pupils with educational special needs, pupils with disabilities pupils from all social and cultural backgrounds, and those from diverse linguistic backgrounds.

Pupils with special educational needs (see also SEND policy)

All children have the right to access ICT and computing. In order to ensure that children with special educational needs achieve to the best of their ability, it may be necessary to adapt the delivery of the ICT and computing curriculum for some pupils.

Where appropriate ICT and computing can be used to support SEN children on a one to one basis where children receive additional support, where relevant, across all learning. Additionally as part of our dyslexia friendly approach to teaching and learning we will use adapted resources wherever possible such as visual timetables, different coloured backgrounds and screen printouts.
Programs such as Clicker 6 enable extensive support it offers to emergent, developing and struggling readers and writers

More able

Provision is made when necessary for pupils to extend their experiences beyond that of the majority of the class by strategies such as:

- Planning activities with a greater amount of challenge or using a different program which requires a greater level of skill.
- Asking more challenging, open ended questions
- reducing the level of support provided and thereby increasing the need for independent thinking
- increasing the level of knowledge to be gained and communicated
- applying knowledge to an unfamiliar context
- setting more challenging criteria for presenting information

Equal opportunities (see also equal opportunities policy)

 Fiddlers Primary School will ensure that all children are provided with the same learning opportunities regardless of social class, gender, culture, race, disability or learning difficulties. As a result we hope to enable all children to develop positive attitudes towards others. All pupils have equal access to ICT and computing and all staff members follow the equal opportunities policy. Resources for SEN children and gifted & talented will be made available to support and challenge appropriately.

The role of the co-ordinator

There is an ICT and computing coordinator who is responsible for producing an ICT and computing development plan and for the implementation of the ICT and computing policy across the school. Their role is to:

- to offer help and support to all members of staff (including teaching assistants) in their teaching, planning and assessment of computing.
- to maintain resources along-side the ICT technician and managed service.

- to advise staff on the use of hardware and software.
- to monitor classroom teaching or planning following the schools rolling programme of monitoring.
- to monitor the children's computer work, looking at samples of different abilities.
- to lead staff training on new initiatives.
- to attend appropriate in-service training and keep staff up to date with relevant information and developments.
- to have enthusiasm for computing and encourage staff to share this enthusiasm.
- to keep parents and governors informed on the implementation of computing in the school.
- to liaise with all members of staff on how to reach and improve on agreed targets
- to help staff to use assessment to inform future planning.

The role of the class teacher

Individual teachers will be responsible for ensuring that pupils in their classes have opportunities for learning ICT and computing skills and using ICT and computing across the curriculum
- To plan and deliver the requirements of the EYFS outcomes and early learning goals or primary framework for computing to the best of their ability.

Staff training

- the ICT and computing coordinator will assess and address staff training needs as part of the annual development plan process or in response to individual needs and requests throughout the year.
- Individual teachers should attempt to continually develop their own skills and knowledge, identify their own needs and notify the coordinator.
- teachers are expected to use ICT and computing to produce plans, reports, communications and teaching resources.

Health and safety and e-safety (see also e-safety policy and acceptable use policy)

The school is aware of the health and safety issues involved in children's use of ICT and computing. All fixed electrical appliances in school are tested by a LA contractor every five years and all portable electrical equipment in school is tested by an external contractor every twelve months. It is advised that staff should not bring their own electrical equipment in to school but if this is necessary, then the equipment must be pat tested before being used in school. This also applies to any equipment brought in to school by, for example, people running workshops, activities, etc. and it is the responsibility of the member of staff organising the workshop, etc. to advise those people.

All staff should visually check electrical equipment before they use it. Any damaged equipment should not be used and faults should be logged.

- Children should not put plugs into sockets or switch the sockets on.
- trailing leads should be made safe behind the equipment
- liquids must not be taken near the computers
- magnets must be kept away from all equipment
- e-safety guidelines will be set out in the e-safety policy.
- RM is responsible for regularly updating anti-virus software.

- Use of ICT and computing will be in line with the school's 'acceptable use policy'.
- All staff, volunteers and children must sign a copy of the schools AUP.
- Parents will be made aware of the 'acceptable use policy' at school entry and ks2.
- All pupils and parents will be aware of the school rules for responsible use of ICT and computing and the internet and will understand the consequence of any misuse.

Parental involvement

Parents are encouraged to support the implementation of ICT and computing where possible by encouraging use of ICT and computing skills at home during home-learning tasks. Parents and pupils are also directed to other resources such as 'Espresso' and 'Mathletics', with home use licences, through the school website. Through the web site and RM Unify parents are made aware of
e-safety and encouraged to promote this at home.

Storage and transfer of information

Staff documents are stored and accessed from the school server. Individual members of staff and pupils have home drives where personal documents are stored. There are pupil, staff and admin shared areas which can be accessed by different groups. Access to certain drives is restricted to designated personnel.
All information for children entering the school from another school is passed electronically to Fiddlers Lane Primary School.
In turn we forward electronically all information to receiving schools should a child leave Fiddlers Lane Primary School.

Monitoring

This policy and its impact will be monitored by the governing body, and will be reviewed every 3 years unless there is a change in statutory guidance.

Appendix 1 National Curriculum for Computing

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 a sequence of instructions
- write and test simple programs
- use logical reasoning to predict the behaviour of simple programs
- organise, store, manipulate and retrieve data in a range of digital formats
- communicate safely and respectfully online, keeping personal information private, and
- recognise common uses of information technology beyond school.

Key Stage 2
Pupils should be taught to:
- design and write 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; generate appropriate inputs and predicted outputs to test programs
- use logical reasoning to explain how a simple algorithm works 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
- describe how internet search engines find and store data; use search engines effectively; be
  discerning in evaluating digital content; respect individuals and intellectual property; use technology responsibly, securely and safely
- select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals,

including collecting, analysing, evaluating and presenting data and information.

Appendix 2: Long term ICT plans KS1 & 2

	Autumn		Spring		Summer	
Year 1	**Data retrieving and organisation -** photos	**Algorithms and Programs** Espresso Coding	**Algorithms and Programs** Espresso Coding	**Algorithms and Programs** Espresso Coding	**Communicating** Presentation	**Data retrieving and organising** Make a digital postcard **E-safety**
Year 2	**Algorithms and Programs** Espresso Coding **E-safety**	**Algorithms and Programs** Espresso Coding	**Communication** Audio book sound recording **E-safety**	**Communication** Fact file	**Algorithms and Programs** Espresso Coding	**Communication + Digital postcards E-safety**
Year 3	**Algorithms and Programs** Espresso Coding	**E-safety** Photo story	**Algorithms and Programs** Espresso Coding	**E-safety Data bases -** plants	**Algorithms and Programs** Espresso Coding	**E-safety Data retrieving and Organising**
Year 4	**Algorithms and Programs** Espresso Coding	**E-safety**	**Algorithms and Programs** Espresso Coding	**E-safety** Make silent movie	**Algorithms and Programs** Espresso Coding	**E-safety**
Year 5	**Algorithms and Programs** Espresso Coding	**Film** moon landing E-safety	**Algorithms and Programs** Espresso Coding	Presentation **E-safety**	**Algorithms and Programs** Espresso Coding	**E-safety**
Year 6	**Presentation** Create a graphic	**Algorithms and Programs** Espresso Coding	**Data bases** Animals	**Communication** e-mail attachments	**Algorithms and Programs** Espresso Coding	**Algorithms and Programs** Espresso Coding

Appendix 3: Creative curriculum example planning questions

Knowledge, Skills and Understanding breakdown for Computing: Year 3

Algorithms and Programs	Data Retrieving and Organising	Communicating
Can they experiment with variables to control models? Can they use 90 degree and 45 degree turns? Can they give an on-screen robot directional instructions? Can they draw a square, rectangle and other regular shapes on screen, using commands? Can they write more complex programs?	Can they review images on a camera and delete unwanted images? Have they experienced downloading images from a camera into files on the computer? Can they use photo editing software to crop photos and add effects? Can they manipulate sound when using simple recording story boarding?	Can they use the email address book? Can they open and send an attachment?
Using the Internet	**Databases**	**Presentation**
Can they find relevant information by browsing a menu. Can they search for an image, then copy and paste it into a document? Can they use 'Save picture as' to save an image to the computer? Can they copy and paste text into a document? Do they begin to use note making skills to decide what text to copy?	Can they input data into a prepared database? Can they sort and search a database to answer simple questions? Can they use a branching database?	Can they create a presentation that moves from slide to slide and is aimed at a specific audience? Can they combine text, images and sounds and show awareness of audience? Do they know how to manipulate text, underline text, centre text, change font and size and save text to a folder?

Appendix 4: e-safety resources.

Useful e–Safety resources include:

- Think U Know: www.thinkuknow.co.uk
- Childnet: www.childnet.com
- Kidsmart: www.kidsmart.org.uk
- Orange Education: www.orange.co.uk/education
- Safe: www.safesocialnetworking.org

Appendix 5 Glossary of Terms

Abstraction

Only focussing on the details relevant to the task, in computing this may be by using a database to handle data. In doing this the data can be looked at in specific groups. An example is using Target Tracker to show the progress of pupils on Pupil Premium.

Logic

The non-arithmetic operations performed by a computer, such as sorting, comparing, and matching, that involve yes-no decisions. This might be completed using programs such as Excel or Flowol.

Algorithms

The step-by-step procedure for a machine to complete a task, for example the instructions given to a robot to guide it round a track, or the instructions put into a bee-bot to guide it through a maze.

Data Representation

The way in which information is presented. In its simplest form this could be representing a data set as a graph. However it is also using the appropriate software for the task. Not everything has to be done in Word or PowerPoint.