Computing Curriculum Policy

Reviewed and Updated:

February 2018

Vision and Mission

Our vision is that every single member of our community will love, learn and grow together. This is achieved by:

- Celebrating what we are good at
- Challenging ourselves and doing our very best in our work
- Loving and respecting ourselves and each other
- Knowing that we are loved for being just how God made us
- Accepting that everyone is special
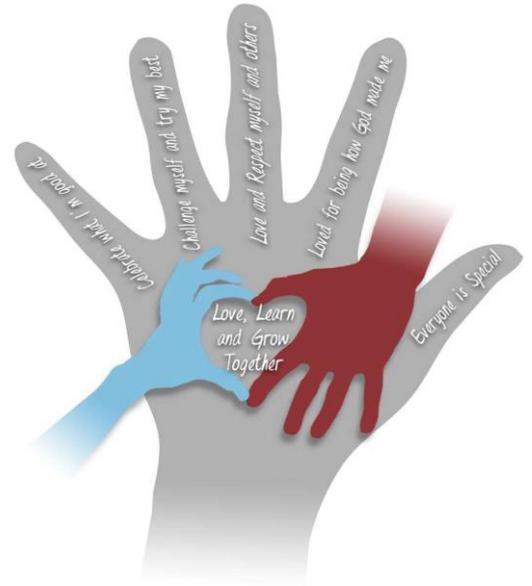
To achieve these aims all learners, staff, parents and governors will work together.

Introduction

School Aims
* To provide an exciting curriculum with learning activities that enthuse, engage and motivate children to learn and foster their curiosity, enquiring mind and enthusiasm for learning, allowing each child to achieve their full potential.
* To provide a secure and safe environment, for children to work and play, in which they are encouraged to develop moral values and respect for others
* To provide multicultural links representative of our children's family cultures and backgrounds.
* To provide a learning environment that is ordered, in an atmosphere that is purposeful and where children feel safe
* To foster strong links between home and school, recognising the importance of parental involvement in their children's learning ensuring they are valued
* To give children an education for life, where they are able to learn how to become effective and reliable members of the wider community and foster ambition and expectation to carry through to adult life

Expectations and Standards
Computers are now part of everyday life. For most of us, technology is essential to our lives, at home and at work. 'Computational thinking' is a skill children must be taught if they are to be ready for the workplace and able to participate effectively in this digital world. The new national curriculum for computing has been developed to equip young people in England with the foundational skills, knowledge and understanding of computing they will need for the rest of their lives.

Aims and Objectives *(National Curriculum 2014)*
A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science and design and technology, and provides insights into both natural and artificial systems. 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:
- 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

Planning, Progression and Continuity
Planning will follow the National Curriculum 2014, which is divided in to 3 sections
- Computer science
- Information technology
- Digital literacy

For each of these sections, there are separate objectives for KS1 and KS2. Teaching staff from each Key Stage have discussed which of these objectives are most appropriate for each year group and these have been divided up. By dividing these in to year groups, full coverage of the curriculum is ensured. Our curriculum planning is based on a 1- year cycle (see Appendix 1). Staff then plan medium and short term plans from the long term plan.
We plan on a 1-year cycle to ensure each year group covers the required objectives. A 1 -year cycle ensures children are taught knowledge and skills that are progressive and can be built upon each year. Our long-term overview maps the computing topics studied in each term during each key stage. In some cases, we combine the geographical study with work in other subject areas, especially history. At other times we arrange for the children to carry out a geographical study independently. British values and multicultural links are made throughout.

Each class teacher creates a plan for each lesson, including specific learning objectives. Children of all abilities have the opportunity to develop their skills and knowledge in each unit

and, through planned progression built into the scheme of work, we offer them an increasing challenge as they move up the school.

Throughout, teachers ensure English and maths skills are incorporated into computing study, allowing core subjects to be built upon through a range of topics. Where appropriate ICT is used, for example: child led research, map work and photographs for analysing. Where possible teachers plan to include field work, especially so when studying the local area.

Assessment, Feedback and Marking
It is expected that work will be assessed in keeping with the school's assessment policy. We assess the children's work in computing by making informal judgements as we observe the children during lessons. Assessments will be recorded on a subject and Key stage specific assessment spread sheet. Work will be differentiated by ability where necessary and once children have completed a piece of work it will be marked according to the school marking policy. Where appropriate, children should be provided with feedback (verbal or written) which allows them to focus on the next steps in their learning. After receiving feedback children should have the opportunity to respond to it (orally or in writing as appropriate)

Inclusion
We teach computing to all children, whatever their ability. Computing forms part of the broad and balanced education that all children are entitled to. Through our computing teaching we provide learning opportunities that match the needs of children with learning difficulties and we take into individual's needs and abilities.

Resources
We have a range of atlases in school as well as topic books in the library. Staff utilise the Internet where possible for up to date resources from both educational sites as well as news, images, maps etc. During the next academic year, a review of resources will be undertaken and staff will be able to request additional resources (amount linked to budget constraints).

Role of Subject Leader
The expectation of subject leaders is outlined in Subject Leader Policy.

Role of Teacher Teachers
Class teachers are responsible for the learning and progress in computing for all the children in their class, as well as planning and resourcing appropriately differentiated learning opportunities.

Appendix i

SWITCHED ON Computing KS1 and KS2 Units

Unit	Title	Unit summary	Computing Programme of Study focus	Suggested software/hardware
1.1	We are treasure hunters	Using programmable toys	Programming	Programmable toys
1.2	We are TV chefs	Filming a recipe	Computational thinking	Word/Movie Maker/iMovie/Adobe Premier Elements
1.3	We are painters	Illustrating an eBook	Creativity	Tux Paint/Paint/2Paint/Word
1.4	We are collectors	Finding images using the web	Computer networks	Internet browser/PowerPoint or IWB software
1.5	We are storytellers	Producing a talking book	Communication/Collaboration	PowerPoint/Photostory/Clicker 5
1.6	We are celebrating	Creating a card electronically	Productivity	PowerPoint/Word/Clicker 5
2.1	We are astronauts	Programming on screen	Programming	Scratch
2.2	We are games testers	Exploring how computer games work	Computational thinking	Selection of free online games
2.3	We are photographers	Taking, selecting and editing digital images	Creativity	Picasa/Pixelr/Picasa Web/Photoshop Elements
2.4	We are researchers	Researching a topic	Computer networks	FreeMind/Linkbunch/PowerPoint
2.5	We are detectives	Communicating clues	Communication/Collaboration	Email software/Word
2.6	We are zoologists	Recording bug hunt data	Productivity	PowerPoint/Excel/2Count
3.1	We are programmers	Programming an animation	Programming	Scratch/Snap!/PowerPoint
3.2	We are bug fixers	Finding and correcting bugs in programs	Computational thinking	Scratch/Snap!
3.3	We are presenters	Videoing performance	Creativity	Movie Maker/Adobe Premier Elements/iMovie
3.4	We are network engineers	Exploring computer networks, including the internet	Computer networks	Access to school network and command prompt
3.5	We are communicators	Communicating safely on the internet	Communication/Collaboration	Email software/Video conferencing software/webcam
3.6	We are opinion pollsters	Collecting and analysing data	Productivity	Excel/InspireData/Google Drive
4.1	We are software developers	Developing a simple educational game	Programming	Scratch/2DIY/Snap!
4.2	We are toy makers	Prototyping an interactive toy	Computational thinking	Arduino/Lego WeDo/Scratch
4.3	We are musicians	Producing digital music	Creativity	JamStudio/GarageBand/Audacity/LMMS
4.4	We are HTML editors	Editing and writing HTML	Computer networks	Brackets/Notepad/Kompozer
4.5	We are co-authors	Producing a wiki	Communication/Collaboration	MediaWiki/PBWorks/Google Sites
4.6	We are meteorologists	Presenting the weather	Productivity	Excel/Google Drive/PowerPoint/IWB Software
5.1	We are game developers	Developing an interactive game	Programming	Scratch/2DIY/Snap!/Kodu
5.2	We are cryptographers	Cracking codes	Computational thinking	Scratch/Snap!/Excel
5.3	We are artists	Fusing geometry and art	Creativity	Scratch/Inkscape/Illustrator
5.4	We are web developers	Creating a web page about cyber safety	Computer networks	Google Sites/PBWorks/MediaWiki
5.5	We are bloggers	Sharing experiences and opinions	Communication/Collaboration	Wordpress/Blogger
5.6	We are architects	Creating a virtual space	Productivity	SketchUp/Picasa Web
6.1	We are app planners	Planning the creation of a mobile app	Computer networks	App Inventor/App Shed/Codea/PhoneGap
6.2	We are project managers	Developing project management skills	Computational thinking	MS Project/Basecamp
6.3	We are market researchers	Researching the app market	Productivity	Open Office Calc/Google Docs/InspireData
6.4	We are interface designers	Designing an interface for an app	Communication/Collaboration	Balsamiq/Justinmind
6.5	We are app developers	Developing a simple mobile phone app	Programming	App Inventor/App Shed/Codea/PhoneGap
6.6	We are marketers	Creating video and web copy for a mobile phone app	Creativity	Movie Maker/Adobe Premier Elements/iMovie/WeVideo

Additional Information

Online Safety Procedures
1.0 Introduction
1.1 STJF is aware that the Internet contains a vast store of information from all over the world which is mainly aimed at an adult audience and may be unsuitable for children. As such this policy sets out guidelines for the acceptable use of the Internet that will ensure that the pupils of the school can benefit from its use and remain safe. In addition this policy provides all members of the STJF network community with guidance to achieve this by helping them to recognise the risks and take action to help children use the internet safely and responsibly.
2.0 Aims
2.1 It is STJF's aim that the educational and social benefits of the Internet should be promoted, but that this should be balanced against the need to safeguard children. To achieve this, we have developed an Online Safety strategy and will work in partnership with parents and carers to deliver it.
2.2 Pupils who access the Internet from the school site are required to make safe and responsible choices for actions that take place while using their computers. All children are made aware that all internet activity is logged. Those who access the Internet outside the school are also expected to fulfil all the contractual obligations of the school's Online Safety package.
2.3 STJF will allow pupils, teachers, other members of the
STJF network community access to its computers, network services, and the Internet. All pupil activity, when using the network and Internet in school, must be in support of education and/or research and must be appropriate to the educational objectives of the School.
3.0 Benefits
3.1 Use of digital technology is so universal that it is of huge benefit to children to learn these skills in order to prepare themselves for the working environment. Access to the
Internet will enable staff and pupils to:
• raise educational attainment, by engaging and motivating pupils to learn and so improve their confidence;

Continuation of Additional Information

• improve pupil's research and writing skills;

• overcome communications barriers, especially helping those with a disability;

• send and receive email;

• engage in projects that involve online reporting to parents;

• enable children to be taught "remotely", for example children who are unable to attend school;

• improve pupil's wellbeing through the social and communications opportunities offered;

• provide access to a wide range of online media for learning and teaching resources;

• exchange personal communication with other Internet users in the UK and across the world;

• publish and display work on the school's website

4.0 Effective Use

4.1 Internet access will be planned to enrich and extend learning activities as an integral aspect of the curriculum. Pupils will:

• be given clear objectives of Internet use;

• be educated in responsible and effective Internet use;

• be supervised appropriately;

• learn to search for and discriminate between valid and inappropriate material;

• learn to copy, save and use material found on the Internet without infringing copyright.

5.0 Safety Internet access at STJF is filtered by our Internet Service Provider (ISP) a BECTA approved provider. The school prides itself on developing safe and responsible behaviours in all pupils so that each pupil is equipped to make suitable and correct choices when using the internet. However the school will be responsible for any incidents that occur during school time in school. The safe use of the internet at home will remain the parents' responsibility. There will be some provision to ensure that all sections of the school community are kept up to date with current Online Safety practices.

This will include:

• The re distribution of the safety pack to all children;

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• The signing and returning of the Internet permission contract by parent and child;
• The school following the 'Think u know' training safety programme to ensure that training provided is relevant and effective to all sections of its community.

6.0 Personal Security Guidelines

6.1 Pupils should:

• never reveal personal information, either their own or others, such as home addresses, telephone numbers and personal email addresses;
• not use photographs of themselves on their Web pages unless the parent or guardian has given permission to do so;
• never meet people in person that they have contacted on the Internet without parent/guardian permission;
• notify their teacher whenever they come across information or messages that are dangerous, inappropriate, or make them feel uncomfortable;
• be aware that the author of an Email or Web page may not be the person they claim to be.

7.0 Managing Email

7.1 Children may receive email directly from known addresses and they may also use their personal email address when replying to known recipients. School will host an email system that allows pupils to send emails to others within the school or to approved email addresses externally. Each child receiving Email is encouraged to reply promptly.

8.0 School and Personal Web Pages

8.1 Pupils are encouraged to take an active role in writing Web pages through the use of Google Sites. This often inspires pupils to publish work to a high standard for a wide and varied audience.

Web pages can be used to:

• document curricular research;
• be part of an online project;
• promote the school and community;
• publish resources for projects and homework;
• create personal pages detailing interests and displays of work.

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9.0 Pupil Responsibility

9.1 Pupils are responsible for appropriate behaviour on the school's network just as they are in the classroom or school playground. It must be remembered that communications on the network are often public in nature.

9.2 General school rules and the Behaviour Policy and Anti- bullying policies apply and it is expected that users will comply with the guidelines of this policy.

9.3 Any incidents of cyber bullying should be reported to the Online Safety contact officer who will record the incident on the incident report form and ensure that the incident is dealt with in line with the school's anti-bullying policy. Incidents should be monitored and the information used to inform the development of anti-bullying policies.

9.4 Pupils are personally responsible for their actions when using school equipment to access computer resources outside the school network.

10.0 Parental Support

10.1 Pupils could potentially have unfiltered, unsupervised Internet access at home. All parents should be aware of the concerns and benefits of Internet use. Parents are therefore encouraged to come in to school to work alongside the teacher to experience the Internet first hand. Arrangements for this can be made with the class teacher directly. Active use of the school's safety package is also encouraged.

11.0 Usage Rules and Guidelines

11.1 Privacy

• Each pupil and their parents or carers are to sign a contract contained in the safety package which sets out guidelines for the use of the internet at school and at home.

Safety packs are given out to all children at the beginning of each academic year which includes a poster of the kidsmart SMART rules.

• Each teacher will ensure that the SMART rules are taught at the beginning of each academic year and revisited again to encourage pupils to make safe and responsible choices when using the internet at all times.

Continuation of Additional Information

• Photographs of pupils that will appear from time to time on the school's website will not be labelled.
• Teachers and staff may review documents and log files to ensure that pupils are using the system responsibly.

11.2 Software

• Pupils should never download, load or install any software, shareware, or freeware, or load any such software from floppy disks, unless they have permission from their teacher.
• Pupils may not copy other people's work or intrude into other people's files without permission.
• Inappropriate materials or profane, abusive and impolite language should not be used to communicate nor should materials be accessed which are not in line with the rules of school behaviour.
• A good rule to follow is never view, send, or access materials that you would not want your teachers or parents to see. Should pupil encounter such material, they should immediately report it to their teacher.
• Children are only allowed in chat rooms with teacher permission.
• No Internet games may be played during school hours

11.3 Safe teaching Practice

• Staff should take care regarding the content of and access to their own social networking sites and ensure that pupils and parents cannot gain access to these.
• Staff should be particularly careful regarding any comments to do with the school or specific pupils that are communicated over the Internet; remarks that are private may go to a wider audience and raise questions regarding confidentiality.
• Staff should not engage in any conversation with pupils via instant messaging or social networking sites as these may be misinterpreted or taken out of context.
• Where staff need to communicate with pupils regarding school work, this should be via Fronter and messages should be carefully written to ensure that they are clear,
unambiguous and not open to any negative interpretation.
• When making contact with parents or pupils by telephone, staff should only use school equipment. Pupil or parent numbers should not be stored on a staff member's personal mobile phone.

Continuation of Additional Information

12.0 Responding to Incidents

12.1 All incidents and complaints relating to Online Safety and unacceptable internet use will be reported to the Online Safety contact person (COMPUTING Leader of Learning).

12.2 All incidents, whether involving pupils or staff, must be recorded by the Online Safety contact officer on the Online Safety incident report form.

12.3 A copy of the incident record should be emailed to Sheffield's LEA designated Online Safety officer.

12.4 Where the incident or complaint relates to a member of staff, the matter must always be referred to the head teacher for action. Incidents involving the head teacher should be reported to the chair of the board of governors.

12.5 The school's Online Safety contact officer should keep a log of all Online Safety incidents and complaints and regularly review the information for evidence of emerging patterns of individual behaviour or weaknesses in the school's Online Safety system, and use these to update the Online Safety policy.

12.6 Online Safety incidents involving safeguarding issues, for example contact with inappropriate adults, should be reported to the designated child protection person, who will make a decision as to whether or not to refer the matter to the police and/or Safeguarding and Social Care in conjunction with the head teacher.

12.7 Although it is intended that Online Safety strategies and policy should reduce the risk to pupils whilst on-line, this cannot completely rule out the possibility that pupils may access unsuitable material on the internet. Neither the school nor the Sheffield LEA can accept liability for material accessed or any consequences of Internet access, but all reasonable precautions will be taken to ensure a safe e-learning environment.

Continuation of Additional Information

13.0 Breach of the Online Safety Policy

13.1 The head teacher will decide what sanctions will be applied for breach of the Online Safety policy. The sanctions applied will reflect the seriousness of the breach and will take into account all other relevant factors. Examples of a breach are:

• persistent and/or extreme cyber bullying;

• receipt or transmission of material that infringes the copyright of other people or is in breach of the Data Protection Act;

• bringing the schools name into disrepute.

Sanctions could include:

• referral to the head teacher;

• banned use of the internet for a defined period

• removal of device/equipment;

• contact with parents;

• possible exclusion;

• referral to Camden's Online Safety officer.

• referral to community police officer

14.0 Parent and Pupil Contract

14.1 All parents and pupils will sign the contract contained in the Online Safety pack. This is given out to all new children each September and copies of the safety pack will be provided for all casual application during the course of the academic year.

14.2 For a new form please go to appendix 1.

15.0 Online Safety incident form

15.1

• All incidents must be documented on the Online Safety incident form as soon as the incident occurs.

• All information pertaining to the incident must be logged in a timely manner as soon as it is reported and investigated with times and dates included.

• It is vital that details are not logged in retrospect as further investigation of an incident may involve external agencies.

15.2 Please see appendix 2 for the Online Safety incident form.

Continuation of Additional Information

16.0 Conclusion

16.1 This policy has been written in conjunction with the school's Anti-bullying policy and is linked to the school's Inclusion policy and Behaviour Policy.

16.2 This policy describes strategies and procedures that reduce the risks of Online Safety breaches and or data security incidents. STJF will update this policy to reflect new developments as and when needed.

DISSEMINATION OF THE POLICY
The policy will be given to all members of staff and copies will be available for parents.
PROCEDURES FOR MONITORING AND EVALUATION
The head teacher, members of the senior management team and members of the curriculum leadership team, will monitor the policy.