CARBEILE JUNIOR SCHOOL
COMPUTING POLICY
Updated by K Hepplewhite – Sep 2020

1. INTRODUCTION

The use of Computing is an integral part of the National Curriculum and is a key skill for everyday life. Computers, programmable robots, digital cameras, iPads, tablets and electronic recorders can be used to acquire, organise, store, manipulate, interpret, communicate and present information.

2. INTENT

Through teaching Computing we equip children to participate in a world of rapidly changing technology. We enable them to find, explore, analyse, exchange and present information. We also help them develop the necessary skills for using information in a discriminating and effective way. This is a major part of enabling children to be confident, creative and independent learners.

The National Curriculum for Computing aims to ensure that all pupils:

- 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.

3. TEACHING & LEARNING

In order to equip children with the technological skill to become independent learners, the teaching style that we adopt is as active and practical as possible. We use direct instruction on how to use hardware or software to ensure acquisition of skills; and combine this with cross-curricular opportunities to allow individuals or groups of children to use Computing to help them progress in whatever they are studying.

Each unit, taken from the Rising Stars curriculum, is aimed to support learning in a range of topics and subjects. Where possible, Computing units will link to the current Inspire unit, however this is not always possible. Children will use a range of software within the units spread over each year. Each unit has a key focus and a set of skills to develop. There is clear progression throughout each year, as well as within the key stage.

Alongside Rising Stars units, from September 2019 children will develop their typing skills through approved websites and games. There will also be a focus on basic computer skills, from how to use the laptops to general word processing skills.

We recognise that all classes have children with a wide range of Computing abilities. We provide suitable learning opportunities for all children by matching the challenge of the task to the ability and experience of the child, through the Bronze, Silver, Gold system. The opportunity to stretch those children deemed as “gifted and talented” in Computing comes through the appointment of Digital Leaders, who are able to have extra training and experiences. Furthermore, iPupils are identified and offered suitable opportunities to extend and challenge their skillset.

4. COMPUTING CURRICULUM CONTENT & PLANNING

Computing is taught within the school with reference to the National Curriculum, which states that by the end of Key Stage 2, children will be able 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; and the opportunities they offer for communication and collaboration
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- 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
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

5. THE CONTRIBUTION OF COMPUTING TO TEACHING IN OTHER CURRICULUM AREAS

The teaching of Computing contributes to teaching and learning in all curriculum areas. It also offers ways of impacting on learning which are not possible with conventional methods. Teachers use interactive smart boards and software to present information visually, dynamically and interactively, so that children understand concepts more quickly. For example, graphics work links in closely with work in art, and work using databases supports work in mathematics, while the software and internet resources proved very useful in humanities and science. Computing often enables children to present their information and conclusions in the most appropriate way.

a) Literacy

Computing is a major contributor to the teaching of literacy. The teachers make directed use of the interactive whiteboard to model reading and handwriting. As the children develop mouse and keyboard skills, they learn how to edit and revise text on a computer, either through Microsoft Word and Powerpoint. They also learn how to improve the presentation of their work by using this desktop publishing software. There is in addition a variety of software and online resources which target specific reading, grammar and spelling skills.

b) Mathematics

Children use Computing in mathematics to collect data, make predictions, analyse results, and present information graphically. Screen robots allow pupils to give exact instructions for a particular route, or to use their knowledge of angles to draw a range of polygons. The SmartBoard software supports mathematics across the school and the ITPs (Interactive Teaching Programmes) and interactive software such as primary games are used frequently in classrooms. Children also have access to Mathematics Home Learning, via the internet, which further supports the development of particular skills.

c) Science

Software is used to animate and model scientific concepts, and to allow children to investigate processes which it would be impracticable to do directly in the classroom. Data loggers are used to assist in the collection of data and in producing tables and graphs. Interactive white boards, iPads and digital cameras are used in science investigation work, to increase observational skills and for assessment.

d) Development of Social, Moral, Spiritual and Cultural (SMSC)

Computing makes a contribution to the teaching of PSHE and citizenship in that children in Computing classes learn to work together in a collaborative manner. They also develop a sense of global citizenship by using the internet and email. Through discussion of safety and other issues related to electronic communication, the children develop their own view about the use and misuse of Computing. This is taught through a series of E-Safety lessons, which are taught by every year group at least three times per year and feature heavily in computing lessons. These are also engrained in the schools general ethos. E-safety encourages children to think about the choices they make online, alongside considering the impact of their choices.

6. EQUAL OPPORTUNITIES

At our school we teach Computing to all children, whatever their ability and individual needs. Computing forms part of the school curriculum policy to provide a broad and balanced education to all children. Through our Computing teaching we provide learning opportunities that enable all pupils to make good progress. We strive hard to meet the needs of those pupils with special educational needs, those with disabilities, those with special gifts and talents, and those learning English as an additional language.

7. ASSESSMENT

Teachers will assess children's work in Computing by making informal judgements during lessons, based on their knowledge, understanding and skills. On completion of a piece of work, the teacher assesses the work using Bronze, Silver and Gold judgements, and uses this assessment to plan for future learning. Written or verbal feedback is given to the child to help guide progress. All children are encouraged to make judgements about how they can improve their own work, shown through a self-reflection comment on their assessment sheets. Because Computing can figure in lots of subjects and topics, it means that the work of pupils must be a part of a planned programme of activities. Assessment of Computing will best be undertaken as part of these planned curriculum activities. Specifically assessment includes:

- Children's self-assessment sheets are available for use at the end of each module. Self assessments are designed to give children more ownership of their learning. These are stuck into topic books, alongside the WALTS and photo-sheet from the day.

- Teachers are expected to complete a class assessment form at the end of each unit which will show Bronze, Silver or Gold understanding. There is the opportunity for any other comments and whether or not they are deemed an iPupil or not.

- Evidence will be kept in children's folders on the Carbeile school server [N:/]. Evidence is also presented in the form of a photo sheet at the end of a unit of work, displaying evidence of their learning and WALTs and WILFs where appropriate.

- At the end of every academic year a report of each child's Computing capability is included in the formal report to parents.

8. RESOURCES

Our school has the appropriate computer to pupil ratio, and Internet access. Most software is already installed on PCs. Some software is installed only on the class PC. Each year group has a set of laptops, with the appropriate software available. Each year

group shares the responsibility of ensuring that each class is allocated time for discrete Computing lessons.

We employ a technician to keep our equipment in good working order. Members of staff report faults in a document provided on the t:server. Any faults are reported to the technician who will also set up new equipment, and install software and peripherals.

Each teacher has their class computer, alongside a laptop and iPad, to use for planning and teaching. In order to keep our school computers virus free, no software from home will be installed on school computers. Any work brought on portable storage devices will be automatically scanned by our security and anti-virus software. The school acknowledges the need to continually maintain, update and develop Computing resources. Staff now have password protected access to the server through LogMein Client, a remote access server. This has reduced the need for external storage and therefore minimises the risk of data being lost or stolen.

9. RELATED DOCUMENTS

Curriculum Policy
Health & Safety Policy
SEND Policy
Assessment in the New National Curriculum
Teaching & Learning Policy
E-Safety Policy
English Policy
Science Policy
Mathematics Policy
AUP (Acceptable Use Policy)

10. MONITORING and REVIEW

The monitoring of the standards of the children's work and of the quality of teaching in Computing is the responsibility of the subject leader. The Computing subject leader is also responsible for supporting colleagues in their teaching of Computing, for keeping informed about current developments in the subject, and for providing a strategic lead and direction for Computing in the school. An annual summary report is discussed with the Headteacher and priorities acted upon in order to improve further attainment and Computing facilities.

Unless a specific need requires earlier revision, the Computing Policy will be reviewed every two years. Once approved by the Governing Body, documents will be made available both in a paper and electronic format.

Date of next review: Sept 2021

Signed Headteacher: Mr P Hamlyn

Signed Computing Coordinator: Mrs K Hepplewhite

Date: 1/09/20