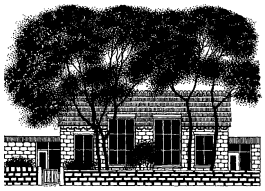

CHINLEY PRIMARY SCHOOL

COMPUTING POLICY

INTRODUCTION

This policy reflects the values and philosophy of Chinley Primary school in relation to the teaching and learning of Computing. It sets out a framework within which teaching and non-teaching staff can operate, and gives guidance on planning, teaching and assessment.

This policy should be read in conjunction with the National Curriculum Programme of Study for Computing. https://www.gov.uk/government/publications/national-curriculum-in-england-computing-programmes-of-study The National Curriculum sets out what skills and learning opportunities children in each Key Stage should be taught.

This policy is prepared in partnership with the Link Governor for this area, the Headteacher and through consultation with staff. The policy has been agreed by the Governing Body Curriculum Committee who have delegated responsibility to oversee this process.

A copy of the policy is available on the school website www.chinley.derbyshire.sch.uk or on request from the school office.

Introduction

This policy sets out our school's vision, aims, principles and strategies for the delivery of Computing and the use of technology to support the curriculum. It will form the basis for the development of Computing and the use of technology in the medium and long term.

Aims

The National Curriculum Purpose of Study states that: 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.

Whilst the Computing Curriculum has an increased focus on Computer Science including developing pupils' programming skills and their understanding of what happens 'behind the scenes', it is important that they also continue to develop their Digital Literacy and e-safety capability and our school curriculum us designed to reflect this.

Intent

As a school, we embrace the national vision for Computing and appreciate that, to achieve this, pupils must have access to a curriculum which is 'balanced and broadly based'. Our aim is to produce learners who are confident, discerning and effective users of technology and who also have a good understanding of computers and how

computer systems work, and how they are designed and programmed. In addition, children should be competent, confident and creative users of information and communication technology. This should be done by developing IT skills and increasing digital literacy when carrying out internet research.

Glossary to support the writing of intent

IT Skills: skills relating to software that link to word processing, presentation and spreadsheets

Computer Science: skills linked to coding and programming.

Digital Literacy: the ability to use technology to help in a wider working context.

Curriculum Implementation and Impact

Intent	Research link	Implementation	Impact
EYFS To give children a good understanding of what skills they will need in Year 1.	Education Endowment Fund research indicates that digital technology, where learners use programmes or applications designed for problem solving or open ended learning, is associated with moderate learning gains (4 months progress on average).	A range of activities will be undertaken that will allow children to develop skills required in Computing when they reach Year 1.	Children will have basic skills that should enable them to work effectively when they reach Year 1.
To develop pupil's knowledge and understanding of ICT skills.	Education Endowment Fund research indicates that digital technology, where learners use programmes or applications designed for problem solving or open ended learning, is associated with moderate learning gains	In Years 1 and 2, children will develop their word processing skills (using MS Word). In Years 3 and 4 children, children will develop their word processing and presentation skills (using MS Word and MS Powerpoint). In Years 5 and 6, children will	Children will become confident users of software ware packages which can be used in conjunction with topic based work and will benefit them in secondary school, further education and future workplaces.

	(4 months progress on average).	develop their word processing, presentation and spreadsheet skills (using MS Word, MS Powerpoint and MS Excel).	
To develop pupil's knowledge and understanding of computer science.	Education Endowment Fund research indicates that digital technology, where learners use programmes or applications designed for problem solving or open ended learning, is associated with moderate learning gains (4 months progress on average).	Children will use "Espresso Coding" by Discovery Education, which can be used on Ipads or Laptops. In KS1, 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. In KS2, pupils should be taught to: • Design and write programs to accomplish specific goals, including controlling or simulating physical systems. • Use sequence, selection, and repetition in programs; work with variables and various forms of input and output; generate inputs and predict	Using a range of hardware, children will be equipped programming skills which will benefit them in secondary school, further education and future workplaces.

		outputs to test programs. • Use logical reasoning to explain how a simple algorithm works and to detect and correct errors in algorithms and programs.	
To develop pupil's knowledge and understanding of digital literacy when carrying out internet research.		Children will be taught age appropriate internet research skills under the heading of "Finding Things Out". These skills will not be taught in subject specific lessons but rather when children undertake research.	Children will be digitally literate when it comes to researching the internet and be able to join the rest of the world on its digital platform.
E-Safety	Department for Education research outlines that education providers focus on the underpinning knowledge and behaviours that can help pupils navigate the online world safely and confidently, regardless of device, platform or application.	Children will be taught a number of stand-alone e-safety lessons prior to using the internet. School internet rules to be displayed on backgrounds of devices.	Children will be able to use the internet in school (and outside of school) in a safe and mature way.

Development of Cultural Capital

The framework states:

"Cultural capital is the essential knowledge that children need to prepare them for their future success. It is about giving children the best possible start to their early education." Therefore, the aim should be along with a good understanding of computer science, it is important to have a good grounding in terms of IT skills and internet research skills to allow them to progress in their educational life and wider society as they get older.

Curriculum Organisation

KS1 and KS2 will have subject specific lessons on ICT Skills and Computer Science as follows:

Year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
1	Programming	Programming	Programming	IT – Word Processing	IT – Word Processing	IT – Word Processing
2	IT – Word Processing	IT – Word Processing	IT – Word Processing	Programming	Programming	Programming
3	Programming	Programming	Programming	IT – Word Processing & Presentations	IT – Word Processing & Presentations	IT – Word Processing & Presentations
4	IT – Word Processing & Presentations	IT – Word Processing & Presentations	IT – Word Processing & Presentations	Programming	Programming	Programming
5	Programming	Programming	Programming	IT – Word Processing, Presentations & Data	IT – Word Processing, Presentations & Data	IT – Word Processing, Presentations & Data
6	IT – Word Processing, Presentations & Data	IT – Word Processing, Presentations & Data	IT – Word Processing, Presentations & Data	Programming	Programming	Programming

Lessons should be taught once every two weeks.

The software to be used is as follows: Word Processing – MS Word, Presentation – MS Power Point, Data – MS Excel, Programming – Espresso Coding.

The search technologies available to students on the internet will be in line with school general guidance.

Curriculum delivery

In Computing, like all other subjects, we recognise the importance of the methods and practice of teaching (the pedagogy) we choose to use in enabling pupils to know more, understand more and remember more. In Computing, the following approaches will be used, and be evident in pupil discussion, observations and work, in order to ensure that the computing learning opportunities are as effective as possible and that pupils progress throughout the year and across year groups during their computing experiences in school:

Teaching Sequence
• The teaching of computer science (coding) and ICT skills will follow a sequence of learning where students are constantly building on their prior knowledge. • Children should be able to articulate their learning through key vocabulary but more important demonstrate their understanding through their ability to carry out procedures. • ICT skills should link to the topic being studied at that time and should enable independent learning; encouraging research, and allowing for the creative use of ICT in all subjects. • Coding will be taught in blocks where each block allows students to build on their prior knowledge and demonstrate their learning through the outcomes of their work.

Curriculum Planning

In order to prepare pupils for using technology in the wider world, we actively encourage them to make use of computing to aid their wider learning. This allows children to apply their computing knowledge and skills to new contexts, reinforcing said knowledge and skills. This should focus on using word processing, presentation or data skills in topic work. In addition, internet research skills can be utilised when finding things out on the World Wide Web. It is the role of class teachers to find these opportunities when they are appropriate in their planning.

Marking and Feedback

Feedback should be given to children within each lesson on an individual basis and at the start of each lesson to the class as a whole (based on the outcomes of the previous lesson).

Learning Environment

Teachers promote a stimulating and enriched learning environment that enriches, promotes and celebrates learning within the strands of Information and Communication Technology and Computer Science. Computing within the curriculum should evident on a display showcasing children's work.

Assessment

As in all other areas of the curriculum, assessment is an integral part of the teaching process. Class teachers will make judgements on the work carried out by pupils, using the knowledge and skills statements, which break down National Curriculum statements into smaller year group specific objectives.

Subject leaders will collate work evidence from teachers to evidence pupils' achievements. Progress against key objectives tracked at the end of each year. Informal assessment is used to guide the progress of individual pupils in individual lessons. It involves identifying each child's progress in each aspect of the curriculum, determining what each child has learned and what should therefore be the next step in their learning.

Reasonable Adjustments / Differentiation

We recognise the importance to ensure that children with identified Special Educational Needs and/or Disabilities have access to an ambitious Computing curriculum. Within the curriculum area of Computing, SEND children will be provided with reasonable adjustments through their tasks and level of challenge provided. Advice can be sought from the school's SENDCO where applicable.

Access for all

Responding to pupils' diverse learning needs:

Computing can be seen as an opportunity to include (rather than exclude) children with SEND and/or EAL needs. Therefore, the areas of study should be set up to facilitate access for all children from the outset.

General Points

- Computer monitors are positioned to reduce glare.
- Make sure pupils with motor impairments have appropriate assistive technology and software to support them and enough space to use it.
- Seating should allow all pupils in the class to communicate, respond and interact with each other and the teacher in discussions.
- Ideally use a wireless keyboard and mouse to facilitate teacher-pupil interaction with minimal disruption.
- Use an alternative mouse or keyboard for pupils with reduced motor skills.
- Consider adjusting the screen resolution, or using a bigger screen, for pupils with a visual impairment.
- Make sure additional adults are trained so they are comfortable with any software and hardware being used, and understand how it can support independent learning.

Computer Science (Programming)

"Espresso Coding", which is the scheme of work that is used for programming is:

- Broken down into small steps, which allows children to progress at their own pace.
- Models (through videos) each small step.
- Videos can be replayed (by the children) as many times as required, which not only re-models the process but also repeats the key words.
- Headphones can be used to reduce background noise.

- "Espresso Coding" can be accessed on Ipads, which alleviates the need for a mouse.
- Mixed-ability or pairing as appropriate.

ICT Skills (Word Processing, Presentations, Spreadsheets)

The following things should be considered when using "MS Word", "MS Powerpoint" and "MS Excel":

- Increased font sizes should be used when necessary.
- Dual language text can be used to enhance vocabulary.
- Use of images / pictures can be beneficial.
- A clear font type (normally, Sans Serif, such as Arial or Comic Sans) should be used.
- Screen resolution or a bigger laptop can be used for children with visual impairments.

Finding Things Out / Internet Research

The following things should be considered when researching on the internet:

- Manageable mixed-ability groups or parings should be used.
- Guidance should be given on how to search with clear modelling of words and actions.
- Children should be guided to websites that are appropriate for their needs and understanding.
- Open ended research questions should prepared in different styles/levels for different pupils

Other Points

If there are children with individual complex needs then special equipment should be used in conjunction with direction from the SEND Lead.

Responsibilities

The Computing subject leader is responsible for:

- Ensuring the subject of computing meets statutory requirements of the national curriculum
- Allocating and monitoring the effective use of resources within a delegated budget
- Monitoring the implementation of the computing medium term plans
- Monitoring the teaching and learning of computing to ensure that children know more, remember more and understand more about computer science and ICT skills
- Overseeing and implementing the policy
- Keeping all staff informed of changes or best practice that effect the teaching of computing in school
- Attending courses to keep knowledge up to date and feedback to staff upon return

- Monitor and evaluate the quality of computing resources in school, and bring in new resources as appropriate.

Over the course of the academic year monitor and evaluate:

- The attainment and progress of pupils in computing
- The pupils response and attitude to computing
- The quality of computing teaching in school
- The quality of children's work in computing

This is achieved through:

- Classroom observation, including learning walks, with written feed back
- Questioning of children during these observations
- Discussions with children
- Work scrutiny, which is fed back to teachers
- Monitoring and reviewing planning as appropriate, and providing written feedback.

The class teacher is responsible for:

- Delivering the computing curriculum to their class
- Following the computing teaching sequence
- Identifying and making reasonable adjustments to ensure all individuals and groups of learners are appropriately supported and challenged
- Looking after resources used to implement the curriculum
- Reviewing the curriculum alongside the subject leader.

Connections to other subjects

The application of all basic skills (including Reading, Writing and Mathematics) within the Science Curriculum.

- The use of internet research linked to topic work.
- The use of IT Skills (MS Word and MS Powerpoint) for topic work.
- The use of IT Skills (MS Excel) linked to data in Maths and Science.

Resources

A variety of Computing resources are available in school. At Chinley Primary School we aim to give children access to the most up-to-date hardware as possible and where possible access enrichment activities to ensure that the children are working with Computing experts and extending their knowledge.

Every computer is networked with each class having their own log-in which is personalised to them. The school website has information about the school, year group topic plans, policy and provision. The school also uses Parenthub to communicate with parents and children.

All computers are linked to printers and all have internet access through wired or wireless technology. The school has invested heavily in Computing provision to ensure there is full, high speed connectivity throughout the school.

The allocation and purchases of hardware and software is reviewed annually.

Equal Opportunities

See Policy on Equal Opportunities, Race and Gender

Health and Safety

All equipment is checked annually under the Electricity at Work Regulation 1989. A detailed inventory is kept up to date by the finance officer and ensures all equipment is checked. New equipment is added to the inventory on arrival.

Internet

The school takes every precaution to ensure that the children and staff are safe when working on-line and accessing materials on the Internet. The school runs cyber-safety workshops for children led by staff and the local police with further workshops held for parents. Every child in school is educated about keeping passwords safe, the reasons why and how to report anything which worries them. Workshops are extended to parents.

All adult users have their own password to allow them to log on; this should not be made available to anyone else.

All network system and administration passwords are recorded and kept in a secure place.

Other curriculum detail is covered in our RSE/PSHE and E-safety curriculum progression maps.

Policy Reviewed Peter Lambert

Agreed by Governing Body: Minute number: CC09/210926b Review Date: Sept 2029