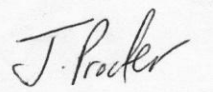


Computing Curriculum Policy

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|--|--|-----------------------------|
| Review cycle | 1 / 2 / 3 years | Date: September 2024 |
| Approved by | Executive Headteacher | |
| Changes made in this review cycle | Updates highlighted. | |
| Linked policies | Online Safety Book and marking Acceptable use of ICT Early years Teaching and learning Subject leadership | |
| Signed |  | Date: September 2024 |
| Position | Executive Headteacher | |
| Date of next Review | September 2025 | |

Introduction

The use of computers and computer systems is an integral part of the National Curriculum and knowing how they work is a key life skill. In an increasingly digital world there now exists a wealth of software, tools and technologies that can be used to communicate, collaborate, express ideas and create digital content.

At Pioneer Schools we recognise that pupils are entitled to a broad and balanced computing education with a structured, progressive, approach to the learning how computer systems work, the use of IT and the skills necessary to become digitally literate and participate fully in the modern world. The purpose of this policy is to state how the school intends to make this provision.

Aims

The school's aims are to:

- Provide a broad, balanced, challenging and enjoyable curriculum for all pupils.
- Develop pupil's computational thinking skills that will benefit them throughout their lives.
- Meet the requirements of the National Curriculum programmes of study for Computing at Key Stage 1, 2 and EYFS.
- In Early Years our aims are to introduce children to technology and prepare them to access the Key Stage 1 curriculum.
- To respond to new developments in technology.
- To equip pupils with the confidence and skills to use digital tools and technologies throughout their lives.
- To enhance and enrich learning in other areas of the curriculum using IT and computing.
- To develop the understanding of how to use computers and digital tools safely and responsibly.
- To ensure staff adhere to the filtering and monitoring standards.
- To ensure all staff feel confident teaching and using technology in lessons.

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
- are responsible, competent, confident and creative users of information and communication technology.

Rationale

The school believes that IT, computer science and digital literacy:

- are essential life skills necessary to fully participate in the modern digital world.
- allows children to become creators of digital content rather than simply consumers of it.
- provides access to a rich and varied source of information and content.
- communicates and presents information in new ways, which helps pupils understand, access and use it more readily.

- can motivate and enthuse pupils.
- offers opportunities for communication and collaboration through group working
- has the flexibility to meet the individual needs and abilities of each pupil.
- teaches children the importance and dangers of online safety in order to safely navigate and monitor their behaviour online understanding the impact this can have.

Objectives

At Pioneer we use the Purple Mash Schemes of Work. A more detailed breakdown of skills can be found on our curriculum cycles.

Key stage 1/ 2 curriculum maps.

<https://pioneerfederation.co.uk/chiddingly/curriculum-framework/>

EYFS curriculum map.

<https://pioneerfederation.co.uk/chiddingly/development-of-eyfs-curriculum/>

Early years

It is important in the foundation stage to give children a broad, play-based experience of IT and computing in a range of contexts and on a range of devices.

Computing is not just about computers. The early years learning environment should feature IT scenarios based on experience in the real world, such as phones and computers in role play. Children gain confidence, control and language skills through opportunities such as ‘programming’ each other using directional language to find toys/objects.

An important aspect of using technology in Early Years is using a range of familiar devices this could be recording devices such as tablets, cameras and microphones that can support children in evidencing their own work and developing communication skills. This is particularly beneficial for children who have English as an additional language. Using online games to support their learning to support other subjects. Creating artwork using digital drawing tools and controlling programmable toys. Children will also be exposed to games via the interactive whiteboard teaching a range of skills to prepare them for their ICT curriculum. Children are given opportunities to take their own photos, edit them and see the cross curricular links to ICT.

By the end of Key Stage 1 pupils are taught:

- | | |
|---------------------------------|--------------------|
| ● Online safety | ● Coding |
| ● Effective searching | ● Maze explorers |
| ● Technology outside of school. | ● Making music |
| ● Grouping and sorting | ● Presenting ideas |
| ● Creating pictures | ● Questioning |
| ● Spreadsheets | ● Pictograms |

By the end of Key Stage 2 pupils are taught:

- Coding
- Online safety
- Spreadsheets
- Touch typing
- Email
- Branching database
- Simulations
- Graphing
- Writing for different audiences
- Lego
- Animation
- Effective search
- Hardware investigations
- Databases
- Game creation
- Concept maps
- Blogging
- Text adventures
- Networks
- Quizzing

Resources and Access

The school acknowledges the need to continually maintain, update and develop its resources and to make progress towards consistent, compatible computer systems by investing in resources that will effectively deliver the objectives of the National Curriculum and support the use of IT, computer science and digital literacy across the school. Teachers are required to inform the computing subject leader of any faults as soon as they are noticed. Resources if not classroom based are located in the laptop trolley. Computing network infrastructure and equipment has been sited so that:

- There are laptops for curriculum learning and for SEND and PPG learning.
- Internet access is available in all classrooms.
- Each class has an allocated slot one session per week for teaching computing as a discrete subject or one week during the term where they have unlimited access to the computers.
- The laptops are available for use throughout the school day as part of computing lessons and for cross-curricular use.
- Pupils may use IT and computing independently, in pairs, alongside a Teacher Assistant or in a group with a teacher.
- Each class has a class ipad which children can use for photos or games.
- The school has a computing technician.
- A governor has been selected to take particular interest in computing in the school.

Planning

Lessons are planned to use the National Curriculum document in conjunction with long, medium and long term planning on Purple Mash. Lesson plans for main sections of the curriculum (e.g coding) are also available for teachers to use and adapt as necessary for their class. The cycles have been developed using the purple mash mixed planning which focuses on the skills being taught in each year to create consistency and cohesion. A minority of children will have particular teaching and learning requirements which go beyond the provision for that age range and if not addressed, could create barriers to learning. Teachers

must take account of these requirements and plan, where necessary, to support individuals or groups of pupils to enable them to participate effectively in the curriculum and assessment activities. Teachers should always remind children of the importance of online safety and use the set SMART rules or the classes own agreed as a reminder of this each lesson. During any teaching activities, teachers should bear in mind that special arrangements could be made available to support individual pupils. This is in accordance with the school inclusion policy. Teachers must be aware of their class and ensure they keep an open dialogue regarding technology, this allows any concerns of issues to be addressed and learning opportunities to be tailored to the individual trend and classes.

Assessment and record keeping

Teachers regularly assess progress through observations and evidence. Key objectives to be assessed are taken from the National Curriculum to assess computing each term these can be seen on the resources saved on purple mash for each piece of work. Each pupil's attainment is then record on Target Tracker at the end of the year. Assessing computing is an integral part of teaching and learning and key to good practice.

Assessment should be process orientated - reviewing the way that techniques and skills are applied purposefully by pupils to demonstrate their understanding of computing concepts. As assessment is part of the learning process, it is essential that pupils are closely involved. Assessment can be broken down into;

- Formative assessments are carried out during and following short focused tasks and activities. These tasks can be set and review online on Purple Mash. They provide pupils and teaching staff the opportunity to reflect on their learning in the context of the agreed success criteria. This feeds into planning for the next lesson or activity.
- Summative assessment should review pupils' ability and provide a best fit 'level'. Independent tasks provide a number of opportunities and scope for pupils to demonstrate their capability throughout the term. There should be an opportunity for pupil review and identification of next steps. Summative assessment should be recorded for all pupils – showing whether the pupils have met, exceeded or not achieved the learning objectives.

We assess the children's work in computing by making informal judgments as we observe the children during lessons. Once the children complete a unit of work, we make a summary judgment of the work for each pupil as to whether they have yet to obtain, obtained or exceeded the expectations of the unit.

The class teachers choose how to evidence work either on their Purple Mash account, as an online workbook or printed and put into topic books. Other work may be printed and stick into topic books with explanations and reflections of work. At least 3 pieces of work should be recorded every term.

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 is through planning, lesson observations, pupil discussion, evaluating pupil work and scrutiny of data.

We allocate time for the vital task of reviewing samples of children's work and for visiting classes to observe teaching in the subject. Subject monitoring will take place 2 times per year. The subject leader will also have meetings through the year with a link governor.

Computing Curriculum Road Map

