Computing Policy

Adopted: Spring 2023
Review: Spring 2026

Intent

Meadgate Primary School believes computing to be an essential part of a curriculum, which equips children to use computational thinking and creativity to understand the world.

Computing plays a significant part of all our daily lives and should therefore be integral to children's learning both as a standalone subject and also woven into other curriculum areas. We want children to be enthused about computing and equipped with the capability to use technology throughout their lives.

We believe that technology can provide: collaborative learning opportunities; better engagement; easier access to rich content; develop conceptual understanding and can support the needs of all our pupils, throughout the curriculum. Computing lessons can provide a wealth of learning opportunities and transferrable skills explicitly within the Computing lesson and across other curriculum subjects.

It is our intention to provide an exciting, rich, relevant and challenging Computing curriculum for all pupils, which instils critical thinking, reflective learning and a 'can do' attitude for all our learners. We teach pupils to become responsible, respectful and competent users of data, information and communication technology and to equip them with skills, strategies and knowledge that will enable them to reap the benefits of the online world, whilst being able to minimise risk to themselves or others. We encourage opportunities to use technology imaginatively and creatively and to develop computational thinking beyond the Computing curriculum.

On leaving our school, children will have gained key knowledge and skills in the three main areas of the computing curriculum: computer science (programming and understanding how digital systems work), information technology (using computer systems to store, retrieve and send information) and digital literacy (evaluating digital content and using technology safely and respectfully). The objectives within each strand support the development of learning across the key stages, ensuring a solid grounding for future learning and beyond.

Implementation

The teaching style that we adopt is as active and practical as possible both during 'plugged' and 'unplugged' lessons. PROWISE technology is used throughout the school to promote and enhance teaching and learning in an interactive, visual way, appealing to all learning styles.

1. Teaching and Learning

Our curriculum is planned to demonstrate progression of skills. We want our learners to be able to apply these skills to situations they encounter both in and out of school, particularly relating to online safety.

Children will use computing as a tool to assist them in other areas of study and a cross curricular approach is taken.

We encourage the children to explore ways in which the use of computing can improve their results, for example, how a piece of writing can be edited or how the presentation of a piece of work can be improved by moving text etc.

2. Curriculum

The school currently uses the Purple Mash Computing Scheme of Work from Reception to Year 6. The scheme of work supports our teachers in delivering fun and engaging lessons which help to raise standards and allow all pupils to achieve their full potential. It provides immense flexibility, strong cross-curricular links, and gives excellent supporting material for less confident teachers.

Long-term plans map the Computing topics that the children study in each year, during each key stage. The children often study Computing as part of their work in other subject areas, with key skills being embedded into the lessons. The long-term Computing plan shows how teaching units are distributed across the year groups, and how these fit together to ensure progression of skills within the curriculum plan.

Our short-term plans mainly come from Purple Mash and may be modified or adapted by the class teacher to meet the needs or requirements of the class. The plans identify the key learning objectives, skills and suggest activities. Class teachers may adapt the content of these to reflect the topic or project being studied in the classroom. The class teacher is responsible for annotating them as they are addressed. This may be in consultation with the subject co-ordinator, if the class teacher requires additional support or training.

The topics studied in Computing are planned to build upon prior learning. While we offer opportunities for children of all abilities to develop their skills and knowledge in each unit, there is also planned progression in the scheme of work, so that the children are increasingly challenged as they move up through the school. This is also the case in discrete online safety sessions which take place termly throughout the key stages and EYFS.

Computing links and resources can be detailed in the teacher's plans in other subjects when outlining a resource that enhances the learning. With the introduction of the VLE, Internet access and special information storage resources, as well as the interactive PROWISE boards, Computing is used on a regular basis in all classes across all subjects.

3. EYFS

We aim to provide our pupils with a broad, play-based experience of Computing in a range of contexts and we relate the Computing aspects of the children's work to the objectives set out in the Early Learning Goals (ELGs)

- Early Years learning environments feature ICT scenarios based on experience in the real world, such as in roleplay.
- Pupils gain confidence, control and language skills through opportunities to 'paint' on the interactive board/devices or control remotely operated toys.
- Recording devices can support children to develop their communication skills. This is especially useful for children who have English as an additional language.

4. KS1 and KS2

Following the Purple Scheme of Work, children are introduced to a range of computing skills in KS1 as they:

- 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.

- 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.

In KS2, these skills are revisited and developed as they:

- 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.

5. Equal Opportunities

At Meadgate, we are committed to providing a teaching environment which ensures all children are provided with the same learning opportunities regardless of social class, gender, culture, race, disability or learning difficulties. As a result we want to enable all children to develop positive attitudes towards others. Resources for children with SEND and gifted & talented will support and challenge appropriately.

6. Inclusion

All children are entitled to access the computing curriculum at a level appropriate to their needs. Some children will require more adult support to allow them to make progress, whilst more able children will be extended through differentiated activities. By giving enhancing, challenging and enriching opportunities, more able children will be able to progress to a higher level of knowledge and understanding appropriate to their abilities.
We provide learning opportunities that are matched to the needs of the children. In some instances the use of Computing has a considerable impact on the quality of work that children produce; it increases their confidence and motivation. When planning work in Computing, we take into account the targets in the children's SEND documentation.

Computing can support SEND children with their ability to access the curriculum, for example, by recording their work through audio devices, using keyboard skills to support them if they find writing difficult, matching/spelling/maths games and artwork.

Open-ended tasks and challenges within the Computing curriculum are designed to stretch and develop the skills of those children working at a greater depth within the subject. For example, when writing code to achieve a desired outcome or devising a spreadsheet to solve mathematical problems.

We achieve this in a variety of ways, by:

- setting common tasks which are open-ended and can have a variety of responses;
- setting tasks of increasing difficulty ;
- grouping children by ability in the room and setting different tasks for each ability group.
- providing resources of differing complexity that are matched to the ability of the child;
- using classroom assistants to support the work of individual children or groups of children.
- using age and ability appropriate resources and websites.
- offering children the autonomy to make choices about the most appropriate software to complete a task. This may be based on school and home experiences

Impact

As children become more confident in their abilities in Computing, they will become more independent and key life skills such as problem-solving, logical thinking and self-evaluation become second nature.

Computing contributes to teaching and learning impacting all curriculum areas, enabling children to present their information and conclusions in the most appropriate format. The PROWISE boards and visualizers are used to present lessons in stimulating and interactive ways and allow children to display and share their work as it progresses. The boards enable whole class learning to be very hands on, literally for some of our SEND pupils.

Through the development of keyboard skills and the use of computers, children will edit and revise text. They learn how to improve the presentation of their work by using desk-top publishing software and presentation software. Blogging, email and messaging through our VLE offer opportunities for pupils to share their work with the wider school community.

Many Computing activities build upon the mathematical and scientific skills of the children e.g. when collecting data, making predictions, analysing results, and presenting Information graphically. They acquire measuring techniques involving positive and negative numbers, including decimal places. Spreadsheet software offers opportunities for pupils to sort and search data create graphs and use simple formula to solve calculations.

7. Assessment

Assessment for learning is continuous throughout the planning, teaching and learning cycle. Key computational skills are taught and the assessment of the acquisition these skills are assessed by:

a. Observing children at work, individually, in pairs, in a group and in class during whole class teaching.
b. Using differentiated, open-ended questions that require children to explain and unpick their understanding.
c. Setting appropriate tasks and work that teachers assess and use to inform future planning as well as to make informal and formal

judgements.

d. Use of effective feedback, to engage children with their learning and to provide opportunities for self-assessment.
e. Moderation of saved work, to evaluate the range and balance of work and ensure that tasks are differentiated and promote children's learning and progress.
f. Once a unit of work is completed, a summary judgement is made each pupil in relation to the National Curriculum levels of attainment. Attainment is recorded in subject tracking grids to provide the basis for assessing the progress of each child and to pass information on to the next teacher at the end of the year.

The reporting of children's progress in computing occurs annually, within a written report to parents at the end of the academic year.

8. Monitoring

The monitoring of the standards of the children's work and of the quality of teaching in Computing is the responsibility of the Computing subject leader. The Computing subject leader is also responsible for supporting colleagues in the teaching of Computing, for keeping informed about current developments in the subject and for providing a strategic lead and direction for the subject in the school. The subject leader should assist colleagues in the planning and delivering of lessons and monitor the planning through discussions with the class teacher, prior to the start of a unit of work. Monitoring of Computing also occurs through:
Work scrutiny,
Learning walks,
Observations.
Pupil voice.
Teacher
Reflective teacher feedback.
Learning environment monitoring.
Dedicated Computing Leader and Assessment Leader time.

All teachers are expected to keep an online portfolio or track children's work using Purple Mash. This portfolio must contain work samples from all areas of the curriculum taught for the year group.

9. Parents

At Meadgate Primary School we actively encourage the involvement of families in our Computing curriculum. The school has invested in several platforms which can be accessed from home and used to support learning both in computing and in other areas of the curriculum.
Purple Mash offers children the opportunity to practise and consolidate skills learnt in computing sessions, but also has a wealth of cross curricular apps which can help support with homework tasks, or just be used as an educational resource at home.

Espresso provides a huge number of video and audio clips alongside interactive quizzes and activities.

Bug Club gives children the opportunity to access reading materials digitally at a level which matches their in-school colour banding. There are 'read to me' options which can involve children in book even when adults at home might be unable to read with them.

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