Much Marcle CE PRIMARY SCHOOL

Policy
for
Computing

Reviewed and Updated: November 2022

Date for Review: November 2023

This policy should be read in conjunction with the following school policies:

- Assessment Policy
- Marking and Feedback Policy
- Equalities Policy
- SEND Policy
- Homework Policy

What Computing looks like at Much Marcle C of E Primary School.

As with all of our subjects, within the Computing curriculum our drivers are at the heart of everything we do. Through our Computing lessons we promote:

1. Perseverance

2. Confident Communicators

3. Healthy Body, Healthy Mind

4. World Citizens

At Much Marcle, we recognise the fact that the effectiveness of any resource is dependent upon how and why it is being used. We believe that the appropriate use of good quality resources will enhance good teaching. Children have access to a wide range of resources including a class set of iPads and Laptops. We follow the Purple Mash Scheme of Work to ensure there is a clear progression of skills fully embedded across both key stages. Computing is used to enhance other areas of the curriculum through cross-curricular topics. This could be the use of research as Historians in History, digital maps in Geography lessons, presenting data in Maths and Science or exploring images in Art through digital media.

Intent – What are we trying to achieve?

- Develop children's ability to articulate, discuss and explain their thinking using appropriate vocabulary
- Instil critical thinking, reflective learning and a 'can do' attitude for all our pupils, particularly when engaging with technology and its associated resources.
- Teach pupils to become responsible, respectful and competent users of data, information and communication technology.
- Equip pupils 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.

- Teach pupils to understand the importance of governance and legislation regarding how information is used, stored, created, retrieved, shared and manipulated.
- 'Mistake friendly' classrooms where children see mistakes as learning tools – there is an emphasis placed upon developing the power to 'think' rather than just the 'do'
- Children develop into resilient and inquisitive learners
- Deliver an inspiring and engaging computing curriculum, taught by highly-enthusiastic staff, which sparks curiosity and excitement and which nurtures confidence in Computing

Implementation – How is our vision translated into practice?

EYFS

Play underpins the delivery of all the EYFS. In playing, children behave in different ways: sometimes within their play, they may describe and discuss what they are doing and may be more reflective as they play. Within a secure and challenging environment with effective support, children can explore, develop and experiment as they play to help them make sense of the world. The EYFS curriculum is enhanced through the use of technology and leads to more formalised Computing learning in KS1 and then KS2.

Lesson Planning

As a school, we have chosen 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 to their full potential. We are confident that the scheme of work more than adequately meets the national vision for Computing. It provides immense flexibility, strong cross-curricular links and integrates perfectly with the 2Simple Computing Assessment Tool.

Classroom resources

All classrooms have access to a class set of iPads through which the Purple Mash curriculum is delivered.

Lesson Structure

Each lesson will follow a specific structure

- Elicitation task (Only at the beginning of a unit)
- Flashback 4

- Teacher input – (using Purple Mash)
- Independent application/ investigation
- Plenary

Teaching Strategies

- Ping Pong method
- My Turn Your Turn
- Reasoning embedded throughout
- All children work towards same learning objective with differing levels of support
- Learning partners
- Stem sentences

Elicitation tasks - This provides the teacher with evidence of each child's understanding at the start of a sequence, indicating gaps and misconceptions.

Ping Pong – The teacher orchestrates a continuous back and forth dialogue with the children using questions, shorts task, explanations, demonstrations and discussions. This enables the teacher to vary the pace and the direction of the lesson if necessary and to continuously monitor the progress of the class.

Differentiation – Children are taught as a whole class and each child is given access to the same lesson content. Appropriate support is available for any child who might need it and there are opportunities to deepen learning through the provision of more challenging activities. No assumptions are made before the lesson about which children might need more support nor which ones will likely move on to the more difficult tasks.

Conceptual variation - Children are presented with carefully chosen examples and non-examples. Children are given time to think and discuss with their classmates and the teacher supports the class to listen to each other's ideas, to agree and disagree and to improve until we reach a consensus.

Questions - Teachers use questioning throughout every lesson to check understanding and to challenge thinking. A variety of questions are used such as:

Explain how you know? Why is that correct? Why is that incorrect? Can you prove it? Are you sure? What's the same/different about? Can you explain that? What does your partner think? What do you notice? Where have you seen this before? What do you already know about this?

Children are expected to listen to each other's responses and may be asked to explain someone else's ideas in their own words, or if they agree/disagree etc. All responses are collected by the teacher and recorded on the board. Children are then given time to self-correct, notice mistakes and prove that their response was correct, before the correct answer is agreed upon. Children are also encouraged to ask their own questions

Stem Sentences and Vocabulary- Stem sentences are displayed at the beginning of the lesson and are modelled by teachers and are used by the children.

Reasoning – Staff facilitate thinking through their careful planning of open-ended, low threshold/high ceiling activities. Children who require extra scaffolding are guided through the reasoning by a teacher or TA and specific questions are chosen for the children to focus on, to allow for them to really explore and understand the questions. Children use the language of reasoning (which is displayed in each classroom or in books) when talking about Computing, challenging each other and the adults in their class as well as justifying their thinking.

Marvellous Mistakes (MM) - The children are encouraged to experiment with Computing. As part of this, taking risks is encouraged and therefore mistakes are inevitable. MMs are celebrated and the children are encouraged to identify why the mistake was made, how they can learn from it and what they can do to overcome it. Some MMs are shared with groups or the whole class as a learning point for all children.

Marking – Marking in Computing follows the schools marking policy.

Assessment - Pupil attainment is assessed using the 2Simple Computing Assessment Tool for Years 1 to 6. The tool enables staff to accurately identify attainment of pupils through the detailed exemplification it has for each key learning intention. Tracking of attainment by using the 2Simple Computing Assessment Tool is used to inform future planning. Formative assessment is undertaken during each topic in Computing and pupils are very much encouraged to be involved in that process. Summative assessment is undertaken annually and reported to parents in the 'End of Year' reports.

SEND pupils – may be supported by additional adults, different resources or differentiated activities. They may also complete additional activities outside of the Computing lesson. NB: We do not label our children. We have high expectations of all children and strongly believe that all children are equally able to learn Computing. Some may take longer to grasp concepts and may need careful scaffolding or extra time/support (guided groups, same day catch-up, additional homework, pre-teaching, intervention groups etc), but when concepts are presented in the right way all children can learn.

Challenge – Within each mixed age class, the same objective and activity is taught to all children. Higher ability and higher age group children are challenged using effective questioning (this could be written or verbal), by providing support to their learning partner and through extension questions that deepen their understanding.

Impact – What is the impact of our curriculum?

A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. By the time they leave Much Marcle Primary 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). By becoming digitally literate – children become computational thinkers, using computing to 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. The objectives within each strand support the development of learning across the key stages, ensuring a solid grounding for future learning and beyond.

Role of the Subject Leader

1. Ensure teachers understand the requirements of the National Curriculum and support them with lesson planning ideas.

2. Lead by example by setting high standards in their own teaching.

3. Lead and signposts CPD opportunities.

4. Lead the whole school monitoring and evaluation of teaching and learning in computing by observing lessons, modelling lessons, analysing data, conducting book scrutiny and engaging in pupil conferencing.

 5. Take responsibility for managing own professional development by participating in external training, private study, engagement in educational research and reading.

6. Keep parents/carers informed about scientific issues.

7. Keep the school policy for Computing under regular review.

8. To work closely with the Headteacher / SLT to further develop and monitor the teaching Computing.

Monitoring and Evaluation Monitoring and evaluation will be carried out by:

• Headteacher

• Computing Subject Leader

• External advisors

• Colleagues from other schools

The monitoring of progress is against age related expectations so that pupils falling behind or exceeding targets are swiftly identified and intervention is then provided.

Classroom Observations

The Headteacher, Computing Subject Leader and colleagues are responsible for classroom observations and feedback to teachers, to provide professional development and develop further outstanding teaching and learning.

CPD and Staff Development

Professional discussion regularly takes place within staff meetings on the teaching of Computing.