MARISH

Academy Trust

Computing Policy

April 2021

Gill Denham (Executive Headteacher) David Sinclair, Yesmin Imitiaz , George Mullins *Current changes in red.*

Introduction

Information and computing technology plays an integral part of learning for all children and stakeholders at Marish Academy Trust. We understand the importance of ensuring safe practice and correct guidance for our children who use technology everyday within the trust and in modern culture. We aspire to create a generation of students who become excited, confident and skilled practitioners of computing. It is our intention that students are able to see new avenues and opportunities for themselves within the ever developing world of technology. We aim to equip children with a range of skills prior to Key Stage 3, and support future opportunities which they will utilise within everyday life.

We believe that all members of our school community should have access to a range of computing resources, to develop their ability to process and communicate information. We aim to strengthen their position in a technology orientated world, operating safely while becoming aware of any risks which could arise. We want our computing curriculum to ensure that our children obtain the correct skills to further their digital literacy. We believe that digital literacy should not be developed in discrete computing sessions alone and encourage all students to begin embedding Information Technology practice into other curriculum areas where possible. We seek to remove barriers to access and experience of computing - recognising the essential role this subject plays in all areas of society.

Aims

We aim to ensure that children become effective computer scientists by becoming digitally literate, to develop the knowledge and skills necessary to fully participate in modern culture. This means having access to a broad range of software and technologies and experiencing them in different ways and contexts. We will provide this for all learners by:

- Implementing all strands of computing in the National Curriculum in a coordinated manner - This means having access to a broad range of software and technologies and providing experiences in a variety of ways and contexts.
- Offering all children the opportunity to reach the desired level of attainment in computing as specified in the National Curriculum. A scheme which will provide children with the opportunity to use a rich variety of digital tools and technologies to develop ideas, communicate, collaborate, create, present and evaluate.
- Maximising access to resources so that all users develop the necessary skills to exploit computing and become independent in its use.
- Supporting, enhancing and extending learning which is taking place throughout the curriculum through the application of computer science, digital literacy and information technology.
- Building confidence and competence in the use of the three strands of computing (computer science, digital literacy and information technology).
- Developing understanding of the applications of computing in everyday life.

Curriculum

Icompute curriculum - Subject to review (Summer 2021 with the ICT team)

Using iCompute schemes will provide children with the opportunity to use a rich variety of digital tools and technologies and learn how to develop ideas, communicate, collaborate, create, present and evaluate. We believe that digital literacy should not be developed in discrete computing sessions alone and encourage all schools to continue with their best practice of embedding Information Technology into other curriculum areas. This will give children further access to a

range of software, technologies and tools and allow them to apply their knowledge and skills in different areas.

We want children to have as much exposure to learning, about and with, digital technologies as possible.

A core element of all computing lessons and units of work will be e-safety. All children, from reception to Year 6, will cover a range of e-safety elements- appropriate to their age. These lessons will form part of every computing unit studied, link to our PSHE curriculum and look to embed prior learning as well as introduce new concepts**.**

In KS1 each term children are able to learn a range of skills within computing in a creative and comprehensive way for example building algorithms, basic word processing, entering and retrieving text and much more. All of which will support children in using these valuable life skills throughout their lives.

This will give children further access to a range of software, technologies and tools and allow them to apply their knowledge and skills in different areas. We want children to have as much exposure to learning, about and with, digital technologies as possible. Our cross-curricular pack – iCompute Across the Curriculum - provides lesson plans and associated resources for enhancing and enriching other subjects with computing and information technology.

ICT comes under the area of Knowledge and Understanding of the World. Children find out about and identify the uses of everyday technology (e.g computers, cameras), use information technology and programmable toys to support his/her learning. We teach the children basic computer skills - mouse skills, dragging, paint programmes and deploy Beebot toys to support an emergent understanding of computational language (through pre-programming of directions).

KS1
At the end of KS1 children should:

- understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.
- create and debug simple programs.
- use logical reasoning to predict the behaviour of simple programs.
- use technology purposefully to create, organise, store, manipulate and retrieve digital content.
- recognise common uses of information technology beyond school.
- use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

KS2
At the end of KS2 children should:

- 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.

Teaching and Learning Strategies
During the weekly Computing lessons, teachers use a variety of teaching styles and methods to introduce given skills or use of hardware. They will have flexible access

to portable, mini laptops (or tablets) with wireless connection along with a range of digital equipment. They often have the opportunity to work independently, with a partner or in small group activities dependent on the individual needs of the children.

The opportunities for the children to extend their knowledge and understanding of Computing skills, comes from planned sessions across the rest of the curriculum. For example, Computing skills are often supported during our Creative Curriculum lessons, as the children choose to complete a piece of work with the supporting use of ICT for research, presentation of work or data collation.

At Marish Academy Trust, we recognise the need for children to understand the purpose of their work and therefore we take every opportunity to share their ICT work in school.

Organisation

All classes have a one hour weekly *Computing Skills* lesson in which children are taught ICT-linked skills for a particular topic area, with access to hardware and software. Learning outcomes of these sessions are to ensure skills are embedded before these skills are then assessed. Lessons may take place within the Computing Room, or within the classroom (aided by the deployment of our 'floating' computing classroom).

Within Computing lessons, teachers not only provide activities to support pupils who find Computing difficult but also activities that provide appropriate challenges for pupils who are high achievers in Computing.

Pupils with English as an Additional Language (EAL)

We recognise that children with English as an additional language may be able users of ICT but may need support with gaining the English necessary to access the Computing curriculum. This will not prevent them from working with class members of their own ability. Appropriate support is provided to facilitate this.

All pupils with EAL are provided with opportunities to achieve in this subject area. When appropriate, activities are differentiated so that all learners can access the curriculum. At specific times, the EAL support team work alongside pupils to help develop their learning.

We incorporate Computing into a wide range of cross-curricular subjects and seek to take advantage of multi-cultural aspects of ICT.

In ICT lessons, we support pupils with English as an additional language in a variety of ways e.g. repeating instructions, speaking clearly, emphasising key words, using picture cues, demonstrations using the interactive whiteboards, partner work etc.

Disability Statement

Marish Academy Trust is committed to ensuring equal treatment of all pupils with any form of disability and will ensure that disabled people are treated favourably in any procedures and practices. When a pupil's disability has been disclosed, the school will ensure reasonable adjustments are put in place so that they can have full access to the curriculum. For further details, please refer to the school's Disability Equality Scheme.

Gender Equality

Staff at Marish Academy Trust, ensure that current and future policies and practices in this subject do not discriminate against either sex, or maintain or lead to gender inequality.

Special Educational Needs

We believe that all children have the right to access Computing in support of their learning.

In order to ensure that children with special educational needs achieve to the best of their ability, outcomes are adapted and the delivery of the Computing curriculum is differentiated for these pupils.

Where appropriate, Computing can be used to support SEN children on a one to one basis where children receive additional support, in particular some software systems are used to support language, spelling or reading development.

Assessment and Record Keeping

Teachers assess the children's work in Computing both by making informal judgements as they observe them during lessons and by doing formal assessments of their work, measured against the specific learning objectives set out in the National Curriculum and the 'End of Key Stage Statements' set out by QCA. We have clear expectations of what the pupils will know, understand and be able to do at the end of each key stage. Teachers record the achievements of pupils in Computing within Annual Reports.

The computing subject team supports the development, assessment and progression of Computing within the school through (but not limited to) lessons observations, planning checks, pupil voice surveys and exploring portfolios of work.

Home Learning

Although there is no formal Computing homework, the children are encouraged to use their Computing skills to complete homework tasks in other areas of the curriculum. The children are also encouraged to use a range of digital technology, such as digital cameras, to enhance their work at home. The children also complete homework on Virtual Learning Platforms, such as MyMaths, TimesTable Rockstars and SPAG.com.

Resources (Please refer to the computing Ignite plan regarding hardware commitments)

Access to high quality IT hardware and software is essential in providing opportunities for learning about Computing and as a tool for learning across the curriculum. As such, the Governing Body, advised by the Computing subject team, will ensure that funding is made available in order to ensure that:

- The core Computing curriculum can be delivered (as stated in the National Curriculum Orders).
- Computing resources can be used as a flexible tool for learning in all other curriculum areas.
- Computing resources offer opportunities for students to reduce disadvantaged barriers to exposure of technology
- Computing infrastructure, including Internet connections, cabling and wi-fi is maintained to a high operational standard.

Parent Partnership

See E-Safety appendix and section in the Home School Agreement.

The Role of the Subject Leader

The main responsibility of the subject leader is to support teachers, so that the quality of teaching and levels of attainment by pupils are continuously improving.

The Computing Subject Leader is responsible for:

- Supporting curricular target setting
- Identifying ways forward for the teaching of Computing
- Implementing the Computing Action Plan
- Supporting and working with colleagues

- Monitoring the teaching of Computing within the school
- Keeping an up-to-date portfolio of pupils' work
- Providing advice
- Providing workshops and information for parents
- Managing the budget
- Maintaining links with sources of expertise outside the school
- Identifying training needs

Date of the policy

This policy was approved by the governing body of Marish Academy Trust on

..... 2021

It will be reviewed in April 2022