Computing Policy

Freemantle C.E. Community Academy Trust

Reviewed by: Kevin Barnett	**Date:** January 2023
Approved by:	
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1. Introduction

Computing and ICT (Information and Communications Technology) play a vital role in our lives, particularly in current times where technologies are constantly changing and evolving. A sound knowledge and understanding of ICT and Computing enables and prepares pupils to be active participants in a world where work, and other activities, are increasingly transformed by access to varied and developing technology. It is our duty as educators to ensure all children have access to an education in which such technologies are available and skills taught and practiced to a high standard in a variety of ways.

The Computing curriculum reflects the developments that have taken place over recent years; in September 2013 the Department for Education published the new National Curriculum for Computing, shifting focus from children learning how to **use** computers, to becoming competent and confident analytical thinkers, computer programmers and understanding **how** technology works. The new curriculum encompasses three main strands of Computing (C), Information and Communication Technology (ICT), and Digital Literacy (DL) which will be outlined in this policy.

2. Purpose

This policy aims to reflect the school values and philosophy in relation to the teaching and learning of C, ICT and DL. It is intended as an outline to establish what we will do, and as a guide for teachers, non-teaching staff, parents and directors.

The purpose of the C and ICT policy at Freemantle is:

- To establish a framework for teaching and learning which meets the requirements of the Computing Curriculum;
- To promote a good understanding of what C, ICT and DL are and how they will look at Freemantle;
- To establish clear expectations for staff and pupils;
- To promote continuity and coherence throughout the academy;
- To establish clear procedures and guidelines for staff to operate within.

3. Aims and Objectives

We aim for our curriculum to:

- Provide a whole academy approach to C and ICT, ensuring continuity and progression;
- Provide children with opportunities to develop their computing capabilities in all areas specified by the National Curriculum Computing Programme of Study;
- Provide challenge and excitement for our pupils, both in C / ICT and through their use across the curriculum;
- Inspire children to be creative and innovative with new and emerging technologies.

We aim for members of staff to:

- Be confident users of new technologies to be able to use them effectively as powerful tools to support and enhance teaching and learning opportunities across the curriculum;
- Develop good subject knowledge in relation to C, ICT and DL so that they are able to deliver high quality lessons to enable pupils to be challenged and achieve highly;
- Use computing technologies, when appropriate, to improve access to learning for pupils with a diverse range of individual needs, including those with SEN and disabilities.
- Provide pupils with challenging, engaging and motivating lessons;

We aim for our children to:

- Become autonomous, independent users of computing technologies;
- Be confident users of new technologies and be able to experiment with them in different ways to communicate learning;
- Be able to use logical thinking and reasoning to solve problems;
- Gain and apply new skills and knowledge in the areas set out in the POS;
- Understand how their C and ICT learning in school impacts on their future lives;

4. The Computing Curriculum – C, ICT and DL

The Computing Curriculum focuses on three main areas:

- Computer Science / Computing (C) – *The ability to understand how technologies work and **how to be an effective author** of them. The ability to apply logical reasoning and computational thinking to solve problems.*
- Information and Communication Technologies (ICT) – *The ability **to be an effective and thoughtful user** of technologies to store, present and communicate information.*
- Digital Literacy (DL) - *The ability to locate, organise, understand, evaluate, and analyse information using digital technology. It involves a working knowledge of current 'high-technology', and an understanding of how it can be used.*

As described above, C and ICT are different, but complimentary subjects. It is also important to note that much of our C curriculum will be non-computer based. The focus in this area is computational thinking and logical reasoning to equip our children with the thinking skills they will need to solve computer-based problems. As described by Edsger Dijkstra - "We need to do away with the myth that computer science is about computers. Computer science is no more about computers than astronomy is about telescopes, biology is about microscopes or chemistry is about beakers and test tubes. Science is not about tools, it is about how we use them and what we find out when we do."

At Freemantle, the curriculum will be planned and taught based on these three key areas, each of which will be featured on medium- and short-term planning. We will look to cover all of the Computing and ICT statements across the year.

The academy uses the Teach computing platform to support learning and teaching for pupils and staff: https://teachcomputing.org

5. Teaching and Learning

The time allocated to the teaching of the C aspects is flexible and arranged by the class teacher to best suit the needs of the children, it can be taught in discrete session or 'blocks' where topic learning allows. The guidelines below are followed by each teacher:

- The teaching of new ICT / DL skills should be discrete (E.g. basic skills in using new software and/or equipment);
- Children should be given as many opportunities as possible to apply their C, ICT and DL skills across the curriculum and in creative ways (E.g. as an option to present work);
- There are no minimum or maximum requirements in relation to time spent on the teaching and learning of C, ICT and DL per week. However, the academy expects between 30 and 45 minutes per week; the class teacher must ensure through careful planning and reviewing, that each learning objective from the C and ICT / DL curriculum is covered thoroughly and that C and ICT / DL are an integral part of the whole curriculum.
- Planning must be centred around the needs of the pupils and designed to meet a range of differing needs, including those needing additional support and /or scaffolding
- Planning must show appropriate scaffolding by highlighting key questions that may be asked of pupils to challenge or support them further.
- Where appropriate, planning must be linked to topics being studied.

6. Roles and Responsibilities

The Computing Leader

The school has a designated Computing Leader to oversee the planning, teaching and organisation of C and ICT / DL. The Computing Leader will be responsible for:

- Raising standards in C and ICT / DL across academy by:
- Supporting others in planning, teaching and assessment;
- Facilitating the use of ICT across the curriculum, in collaboration with other subject coordinators;
- Ensuring staff are up to date with training to enable them to deliver the curriculum confidently and effectively.
- Providing advice to staff in terms of resourcing, planning, using software and equipment, effective resources;
- Managing school resources to ensure we have the technology to be able to deliver the new curriculum effectively;
- Monitoring the planning and delivery of the new C curriculum and reporting to the Head Teacher.

The Headteacher and Board of Directors

The Headteacher and Board of Directors provide support for the ICT Coordinator to fulfil their role, as outlined above. The will provide support by:

- Ensuring teachers are able to deliver the Teach computing curriculum by having access to the appropriate training and resources necessary;
- Providing opportunities for the Computing Leader to work with staff to plan and deliver lessons for the new curriculum;
- Reviewing policies relating to C, Online safety and Information Security.

The Class Teacher

The class teacher must:

- Follow the guidelines set out in the C, E-safety and Information Security policies.
- Plan effective C and ICT / DL lessons using the objectives from the long-term plan outlined in this policy;
- Ensure all objectives for their year group are planned for either through discrete or cross-curricular lessons;
- Provide many opportunities for C and ICT / DL skills to be applied by pupils in a variety of ways, using a wide range of technology and software;
- Plan lessons which will support and/or challenge pupils as appropriate;

- Ensure they have access to a range of necessary resources to be able to deliver the curriculum effectively. This includes liaising with the Computing Leader that resources are available, ensuring equipment is ready to be used, and returning equipment for others to use. Any breakages or faults must be reported by teaching staff to the Computing Leader.
- Support the Computing Leader in monitoring and assessment by completing the relevant planning and assessment grids at the end of each term.
- Ensure support staff have access to planning and have the knowledge and skills to be able to support and challenge them in completing tasks.

Support Staff
Support staff must:

- Ensure they have the relevant planning necessary to support and challenge pupils;
- Ask for support from the class teacher and/or Computing Leader to ensure their training requirements are met.

7. Monitoring and Evaluation

In order to ensure the curriculum is being planned for and delivered effectively, the Computing Leader will monitor the following:

- The training requirements of staff as new concepts and technologies are introduced to the curriculum;
- The impact of training already undertaken;
- Planning and assessment formats – taking on board any suggestions from staff on how they could be amended or used more effectively;
- Planning for each year group to ensure it is pitched appropriately, challenging, engaging, uses a wide range of resources and meets the requirements of the new curriculum;
- Children's work. This will be done in a variety of ways, including work scrutiny with commentary from the class teacher on how it was done; conversations with pupils; pupil skills audits;
- Computing teaching and learning by observing in the classroom, where possible.
- The impact of the Computing action plan and how this can be taken forward to further develop the subject;
- School resources to ensure staff and pupils have access to the appropriate and necessary equipment and software.

By monitoring the above areas, the Computing Leader, Headteacher and Board of Directors will be able to identify any areas of strength and development. These will be used to inform the next action plan to ensure clear direction.

8. Staff Development

At Freemantle, we have a wide range of staff with differing areas of skills and knowledge in terms of C and ICT / DL. There is an expectation that all staff with endeavour to keep up to date with new developments and requirements in this area. To support this, the Computing Leader, Head Teacher and Board of Directors will:

- Provide regular updates with regards to the new curriculum;
- Identify key areas to develop staff knowledge and skills;
- Provide opportunities for staff training in areas identified and/or requested. This may be delivered by the Computing Leader outside agencies;
- Identify areas of strength in knowledge and skills, and encourage these members of staff to assist in training and supporting others as well as leading by example and leading projects or specialism areas (E.g. programming, podcasting, blogging).
- Provide CPD in the use and adaptation of the Teach computing platform

9. Inclusion

It is our policy that all pupils regardless of race, class, gender, ability or needs have the opportunity to develop their Computing and ICT capabilities, in line with our Equal Opportunities policy.

10. Resources and Access

ICT resources are accessed and deployed in a number of ways throughout academy. This ensures the maximum amounts of resources are available and easily accessible to support delivery of an effective and powerful computing curriculum. At present we have:

- 200 Chromebooks – Each pupil in year 4, 5 and 6 will be issued with a device to use during the academic year. If parental permission is given these devices can be taken home to support home learning. (currently looking to expand this to Year 3)
- 70 pupil laptops with a variety of educational software installed
- 70 iPads, stored in the Computing cupboard, these are timetabled and for use in any year group. Class teachers must request any Apps they may need, which will be purchased by the Computing Leader;
- 1 staff desktop per classroom. This can be used by the teacher to display learning materials, or by children as directed by the teacher.
- 1 iPad per year class.
- 1 visualiser per classroom; (under review)
- 1 Interactive screen – to be used as a teaching tool by staff or to aid learning in group work by children;
- Other resources available from the ICT store room include: Bee-bots and mats, Log-Boxes.
- 60 VR headsets, stored in lockable trollies, these are to be used to support subject learning.

The academy network enables internet access to all devices in the buildings, including mobile devices via Wifi. The academy network is secure and can only be accessed by user name and password – monitored by the Computing Leader. The network also offers access to a shared area in which documents are stored and accessed. Please refer to the Data protection Policy and Internet Policy.

11. Online safety

Internet access is planned to enrich and extend learning activities. The academy has acknowledged the need to ensure that all pupils are responsible and safe users of the Internet and other communication technologies. We aim to provide a curriculum which includes education on how to stay safe online and when using other technology. We also offer a safe online environment through filtered internet access. Please refer to the Academy Internet Policy.