Computing and Information & Communication Technology (CICT)

Teaching and Learning Policy

Introduction

This document is a statement of the aims, principles, strategies and procedures for the use of Information and Communications Technology and Computing throughout the school.

Computing and Information and Communication Technology (CICT) contributes to the school curriculum by preparing all young people to participate in a rapidly changing society in which work and social activities are increasingly enhanced by the use of CICT.

Increased capability in the use of digital technology promotes initiative and independent learning across the curriculum with pupils being able to make informed judgements about when and where to use CICT to best effect.

Aims & Purpose (Intent)

At Grangetown we believe that by providing high-quality computing education and access to a progressive curriculum, we will be able to equip our pupils with the knowledge and skills that they need in order to prepare them for their future in an ever changing digital world. We cover all 3 strands of computing: computer science, digital literacy and information technology, as well as online safety, ensuring that our pupils understand and are competent users of technology, as well as knowing how to do this safely.

Knowledge and skills covered in each strand are revisited and built upon across the Key Stages, ensuring that learning is embedded and skills can be developed too. Computational thinking is also a skill that we aim to develop in order to understand, not only how computers work, but also to effectively program and it is also a key life skill.

There are many links to other curriculum areas and subjects, including English, science, mathematics and design and technology.

The national curriculum for computing aims to ensure that all pupils:

- can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems

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

Curriculum Implementation

Our school follows a progressive programme of study that was adapted and put together to suit the needs and abilities of our children. The programme is based around materials from the website iLearn2.

The programme is broken down into units of work and all year groups teach an element of all three parts of computing: Computer Science, Digital Literacy and Research and Information Technology. Each unit covers approximately half a term.

Teachers have worked together to adapt our GPS curriculum to design a bespoke curriculum that enables and promotes progression of knowledge and skills between each year group and key stage.

Individual class teachers follow our Quest computing curriculum which includes a half termly overview of content for each year group. This is further broken down into concise medium term plans for each unit of work, which each teacher will use to inform their individual lesson planning.

Class teachers decide when each unit of computing is taught across the year. Classes have access to our well-equipped ICT Suite, to the PCs in each class, and to iPads (1:1 across years 2-6). There are lessons across all key stages where we teach 'unplugged', covering aspects of computing without a computer such as computational thinking or programming.

As the aims of Computing are to equip children with the skills necessary to use technology to become competent, confident and creative learners, the teaching style that we adopt is as active and practical as possible. While at times we do give children direct instruction on how to use hardware or software, the main emphasis of our teaching in Computing is for individuals or groups of children to use technology to help them in a cross curricular context.

We encourage the children to explore ways in which the use of computing can improve their learning, 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 about etc. We recognise that all classes have children with widely differing abilities in computing. We provide suitable learning opportunities for all children by matching the challenge of the task to the ability and experience of the child.

In all key stages, pupils are taught in mixed ability classes. Computing does not lend itself to one teaching approach, as it is, at the same time, both a teaching and learning tool. Where computing is best used, it is adapted to the need of the situation and the teaching style that is most appropriate is employed.

Impact

Our programme of study has been adapted and planned for the needs and abilities of our children and it is progressive in its design too. If children are able to competently cover the outcomes for their year group, then they will be making good progress. Many of the units

include printable challenge activities, which can be used to capture individual pupil understanding or as a group assessment activity.

Pupils will be equipped, not only with the skills and knowledge to use technology effectively and for their own benefit, but more importantly – safely. As our children become more confident in their computing abilities, they will become more independent and key life skills such as problem-solving, logical thinking and self-evaluation will become second nature.

In addition, as a school, we also measure the impact of Computing through;

- Children's understanding, knowledge and skills which are assessed through observation, discussion, questioning and written work.
- Discussions with the children about their learning.
- Monitoring by computing subject leader of work and content taught, observations during lessons.

Inclusion

It is an important principle that all pupils have full access to the curriculum. The ICT facilities are available for use by all pupils and staff. ICT will be used appropriately to enhance each pupil's access to the curriculum. All pupils make regular use of the school's ICT facilities. ICT will be used in a range of activities and in a variety of contexts. By its very nature Information Technology is accessible to children of a wide range of educational experience and attainment. In co-operation with the SENDCo we will provide, wherever and whenever possible, appropriate software and hardware to enable such access.

Organisation

- Each classroom is equipped with a teacher PC, which is connected to a Clevertouch interactive screen. Each classroom has several (3-4) computers that the pupils can access and each classroom has both wired and wireless internet access. Each member of staff has access to their own iPad, which is used for supporting children and for administrative tasks. Most staff also have a laptop provided by school for planning and administrative tasks in school and at home. There are visualisers in all classrooms, connected to the IWB. There are 28 computers in the ICT suite and a Clevertouch screen, which is used for whole class teaching.
- Each teacher has their own individual user name and password, with access to their own secure document space on our server network. Within the teacher accounts, all teachers have access to the children's accounts and a central staff server.
- All classes have an allocated username, which is linked to their yeargroup number. Then, each yeargroup, from years 1-6 has individual (Years 3-6) or class (Years 1-2) folders and a shared work area set up for the children to save their work within. This allows pupils' work to be saved for assessment within their own individual folder – the teacher has full access to all pupil folders.
- We also have access to iPads, for both staff and children. In Foundation Stage there is a set of iPads and there are iPad minis and iPads in Year One. From Year 2 to Year 6, each of the children have access to their own iPad for use in class.
- There are also other resources and toys available for classes to use to support their teaching and learning in Computing: remote control cats, beebots, codeapillars.

- We have numerous subscriptions to websites such as Numbots, TT Rockstars and children use these when directed by their teacher. We have a wide range of software available on the PC's, including the Sherston Software Suite and 2simple Infant Toolkit.

Roles and Responsibilities

Computing Co-ordinator

- Support purchasing of hardware and software
- Purchase of ICT consumables
- Monitoring throughout the school
- Share information following courses or update staff with new developments related to Computing
- Maintenance of policy
- Monitor new developments in computing and integrate these into action plan, scheme of work and policy, where appropriate
- Supports colleagues in their teaching, by keeping informed about current developments in computing and by providing a strategic lead and direction for this subject
- Feedback in which the strengths and weaknesses in computing are evaluated and indicates areas for further improvement.

Class Teachers

- Medium Term and weekly plans
- Planning use of computing within subject areas.
- Assessment of pupils
- Adherence to the policies.

Health and Safety

- An adult should always supervise children when they are accessing information via the Internet. Our system does filter content, and this is very effective, but staff are ultimately responsible for information accessed by pupils.
- Children should not be given the responsibility of plugging in and switching machines on without a member of staff present.
- Food and drink should not be consumed near ICT equipment.
- It is the responsibility of staff to ensure that classroom ICT equipment is stored securely, cleaned regularly and that their class or themselves leave the ICT suite clean and tidy after use.
- Staff should ensure that the children are seated at the computers comfortably and be aware of the dangers of continuous use.

Reviewed & Updated – February 2022 (Victoria Mitchell)

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