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Downview Primary School: Computing Policy

Introduction

Computing is the study of how we can utilise and understand the technology around us. Computing is an integral part of everyday life and it is vital that we equip our children with the skills and knowledge of these technologies to enable them to use them effectively and safely throughout their lives. At Downview we believe that Computing plays an important role in enhancing the teaching and learning experiences of our pupils. It promotes the learning of essential life skills within its subject and also enhances the teaching and learning in other curriculum areas.

Our Vision

At Downview we aim to equip children with the computing skills they will need to use technologies effectively. We aim to deliver a comprehensive Computing curriculum which meets the needs of all learners and provide the correct challenge and engagement. Our school aims to use Computing effectively in all curriculum areas to have a positive impact of the achievement and learning of all children.

Roles and Responsibility

The Computing subject leadership role is currently managed by one member of staff. They are responsible for monitoring the planning, teaching, assessment and learning that takes place in relation to Computing. At Downview we employ a part-time technician who is responsible for the maintenance of hardware and the school's network. Their role includes the installation of new software on to the server and also to solve technical problems that arise. They also source and supply hardware. Our school website is maintained by PrimarySite.

Time Allocation

From Year 1 to Year 6, each class spends approximately one hour per week teaching Computing skills and competencies to fulfil the National Curriculum requirements for Computing. All computers and laptops are networked throughout the school. There are also a number of Chromebooks throughout the school. From Year 2 to Year 6, children access the network through an individual network login. They then have an individual folder on line where their work can be saved and accessed. Chromebooks are accessed through their Google Account logins. In Year 1 they access Purple Mash software for their learning directly through the Chromebooks where tabs have been installed for them to open. The level of access for children differs to that of adults. Each member of staff has their own individual log in for the network which allows them to access their own individual files, email, and the shared teaching server. All classes have an interactive whiteboard.

The Computing curriculum is divided into three strands; Computer science, Information Technology and Digital Literacy. The different strands of Computing are covered consistently throughout both KS1 and KS2. Children have access to the internet from Year 1. From Year 2 to Year 6, children can access the internet through their individual logins. In KS1 they are automatically connected to the internet when they open up the Chromebooks. Internet access is teacher directed.

In the Foundation Stage children have access to a variety of Computing tools including iPads, interactive whiteboards, and stopwatches.

Cross Curricular Computing

At Downview we believe that Computing can enhance teaching and learning experiences in all curriculum areas. When planning, where appropriate, teachers incorporate opportunities to use Computing as a learning tool through a range of tasks e.g. iPads to film and images, video clips and programmes to reinforce or introduce learning, using Computing presentation software to record learning e.g. Power-Point presentation

demonstrating learning in a particular topic. Downview Staff also use online internet resources to assist planning and to use within lessons.

Teaching and Learning- Purple Mash

At Downview we aim to provide children with challenging and stimulating learning opportunities. We understand that children learn in a variety of ways and aim to incorporate teaching methods, which meet the requirements of the different learning styles. Learning is relevant, fun and varied to ensure progress. The learning environments we provide are secure and safe, which allows children to take risks both independently and when working collaboratively. At Downview, we subscribe to Purple Mash software and KS1 follow the Purple Mash scheme of learning designed by the software providers. Alongside this Year 1 and 2 also use the Programming A unit from the Teach Computing scheme using Beebots. In KS2 we follow the Teach Computing scheme for all years using recommended software and also Purple Mash software where appropriate. We adapt and choose the units which are best suited to the children but also ensure coverage of the National Curriculum computing strands. Activities are planned carefully to meet the learning needs of all children and to provide the right level of challenge to ensure progression through the Computing curriculum. Reception use a selection of activities from Barefoot computing designed to encourage children to start using some of the computational skills needed for computing learning.

Resources

There are a range of resources through which the children can access the Computing curriculum. In KS2 there are 4 laptop trolleys each containing 15 laptops assigned to each year group. In Year 5 and 6 there is also 10 standard Chromebooks. Year 6 also have 10 rotating screen Chromebooks, which can be used as tablets. Year 3 and 4 share a set of 15 Chromebooks. In KS1 there are 2 Chromebook trolleys in Year 1 containing 15 Chromebooks each. In Year 2 there are 30 laptops which have touchpads. All year groups from Year 2-6 have 15 or 16 iPads. Each iPad is assigned to certain children to enable monitoring of use to take place. Reception have 6 iPads which they use to access Tapestry. Each member of staff now has their own laptop, which can be connected to the

network remotely as well as in school. Also, there is a computer or laptop attached to each interactive whiteboard in each classroom. There is also a bank of admin computers which are based in the offices, front desk and meeting room.

The school also has 6 Beebots for KS1 programming units and 30 micro:bit computers. Other hardware required for teaching different areas of computing is borrowed through the local computing hub including data loggers and crumble kits.

The school accesses the internet through an external provider and this can be accessed on all computers and laptops throughout the school. There is a strong monitoring and filtering system in place (Smoothwall), which prevents access to all restricted sites for both adults and pupils. It will also identify any misuse by pupils or staff. Staff and pupils all sign an internet user agreement which commits them to using the internet appropriately. Any misuse is dealt with by senior members of staff and parents are contacted where necessary.

At Downview each class has either digital cameras or iPads for taking images and film. There are View finders in all classrooms to assist teaching and learning across the curriculum. There are also headphones throughout the school to enable children to work with programmes requiring audio including Lexia.

Staff Development

The subject leader currently provides staff training during allocated staff meetings. Staff members are aware of different resources that are available and are gradually being trained to use them effectively and confidently. We also have training and development from external providers when needed.

Safety

When using Computing equipment children are trained to use hardware sensibly and safely. Children are taught how to switch on, log in, access applications and to shut down laptops independently. Online safety is taught alongside through the computing

curriculum using selected lessons from the Project Evolve scheme and the schools PSHE scheme Kapow. These schemes cover the eight areas of online safety; self-image and identity, online relationships, online reputation, online bullying, managing online behaviour, health, wellbeing and lifestyle, privacy and security and copyright and ownership. Online safety lessons help children to learn ways to stay safe and secure when online and to know what to do if something happens they are uncomfortable with. It also encourages them to develop a healthy relationship with technology and to always behave in an appropriate way. At Downview we also take part in Safer Internet Day every year to further support the teaching of online safety strand.

Support Staff

Each year group decides how to use their support staff to effectively support children's learning in Computing.

SEN

Pupils with special educational needs have equal access to Computing resources and curriculum. When planning teachers ensure they differentiate their lessons to include pupils of all learning abilities. They may receive the support of another adult, work with a partner or complete a different version of the whole class activity to ensure achievement and success. Laptops can be used by children to support writing where fine motor is challenging for them. This enables them to fully access the curriculum and work at the expected level. The SENCO also uses special educational needs software, like Lexia, to help SEN pupils' progress. Teachers also plan to further the progress of more able children through differentiating the activities set, which can be seen in the exploratory tasks within the Teach Computing scheme.

Equal Opportunities

All pupils at Downview have equal access to the facilities available, regardless of gender or nationality. When working in groups the teacher ensures that children take turns and share the equipment fairly. Teachers also give pupils opportunities to work individually to complete tasks by themselves.

Assessment and Recording

Teachers regularly assess children's progress in relation to the learning objectives. Learning activities are planned throughout units which enable teachers to ascertain the level at which their children are working. At the end of the year, teachers complete an overall assessment judgement which determines whether each child is working towards the expected level, working at the expected level or working at a greater depth than the expected level.

Each child has their own online folders within Purple Mash, Google Classroom and the school network, where all their work is stored. This can be accessed at any time by the class teacher to mark and assess their achievements. These folders provide evidence of their achievement and will show how each child has progressed. Work can also be printed and stuck into children's learning journals as evidence of their achievements.

Administration

The computers used by the administration team are currently linked by a separate network. It is not accessible to other members of staff.

Use of facilities by the wider community

The Downview school website is kept up to date through our web designer and staff within school can upload information to the website. This will enable the wider community to access and find out information about Downview. The hardware situated in school is currently not available for use by the wider community. Within Downview the children have access to a variety of online resources for which they have their own usernames and passwords. From Year 1, children have access to Purple Mash and Numbots (KS1) and Times Tables Rockstars (KS2). As well as being used for learning activities within school, Google Classroom can be used for setting homework and remote learning activities. From Year 2 onwards, children receive a login for Star Assessment which is used for assessment in writing and maths within school. This software is also used for accelerated reader and the children complete their quizzes within school using this. In KS2 the children also receive a username and password for learning platforms

including Scratch and MyMaths. The children can access the majority of these learning platforms (excluding Star Assessment) both at home and within school.

Teaching a Broad and Balanced Curriculum.

Adjusting the curriculum should focus on any missed knowledge that is crucial for pupils' next steps. This will be particularly important on hierarchical aspects such as programming, algorithms, understand computers and data. Priority should also be given to using computing devices safely and responsibly, although this will depend on pupils' previous exposure to and experience of technology.

At key stages 1 and 2:

- teachers should give priority to developing pupils' knowledge of algorithms, notable sequencing in key stage 1. At Dowview we will be focussing on teaching and learning activities which will introduce and further develop these skills using the programming units from Purple Mash. In year 1 that will be Unit 1:4 Lego Builders, 1:5 Maze Explorers and Unit 1:7 Coding. In Year 2 it will be Unit 2:1 Coding. We also use the Programming A unit from Teach Computing which involves physical programming using Beebots.

At key stage 2:

- teachers should focus on sequencing, selection and repetition. At Downview pupils will complete two programming units each year from the Teach Computing scheme. In Year 3 this will be Programming A: Sequencing Sounds and Programming : Events and Actions in Programming . In Year 4 this will be Programming A: Repetition in Shapes and Programming B: Repetition in Games. In Year 5 this will be Programming A: Selection in Physical Computing and Programming B: Selection in Scratch. In Year 6 this will Programming A: Variables in games and Programming B: Sensing using micro:bits.
- Pupils should be given enough time to practise programming to secure knowledge of key programming concepts. At Downview this will be covered all programming units

- Gaps in knowledge of how to use digital devices should be identified and addressed. It is important that pupils use devices confidently and competently, so that they can focus on complex tasks without also having to learn how to use a device, which may otherwise get in the way of processing information. At Downview we have weekly computing lessons from Year 1-6 which will help to increase pupil knowledge of how to use digital devices such as laptops, Chromebooks and iPads. They also have access to digital cameras and tablets to record their learning through photographs or film.

At Downview we have identified staff professional development needs with regards to teaching coding and programming and using the Teach Computing Curriculum. We have organised external training to help increase staff knowledge and confidence. We have also purchased a range of fiction and non-fiction books relating to different aspects of internet safety to be shared throughout the year with classes. This will further support the online safety units taught and Safer Internet Day focus.

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