
Policy on **Computing**

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Pardes House Primary
School

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POLICY ON COMPUTING

Intent

At Pardes House Primary School, our intent for Computing is for pupils to be encouraged to develop a greater understanding and knowledge of the world, as well as their place in it. A practical subject, which develops an understanding of key concepts, knowledge and skills. Computing forms an important part of our broad and balanced curriculum and is a subject where we endeavour to ensure that children develop an enjoyment and enthusiasm for learning. Computing does not necessarily stay behind a screen, but affects the real world around us and the awe and wonder of this, including how far it has advanced.

Our aim is for pupils to develop knowledge and skills that enhance other curriculum areas and which can and are used to promote their social and cultural development beyond school. We aspire to promote the importance of computing and technology and encourage the children to understand the value that it has in their society, as well as their own lives physically, socially and emotionally.

We aim to develop fundamental computing skills, such as typing, to create opportunities for children to have an alternative to writing in certain cases. We aim to provide opportunities for children to be users/players of programs/files that their classmates have created and feedback. Developing skills in shared software will help explore a range of alternatives to talking in class and how these remain private. Computing vocabulary is used to verbalise what is happening as tasks are being completed.

The computing intent is using skills such as debugging which helps build confidence and also independence through skills, such as exploration of unfamiliar software and becoming more confident in how to use these and what tasks they are best suited to. Boys will respond to feedback from their peers regarding their finished software programs. All the prior mentioned skills are intended to build resilience.

We aim to deliver a meaningful, stimulating and memorable educational experience, with further enrichment and cross-curricular opportunities and are committed to ensuring all pupils reach their potential. It is also a curriculum where teachers understand that what they are delivering in Computing now is building on prior knowledge that will in turn be built upon in the following years.

Our Computing curriculum forms part of our broad and balanced curriculum and links to both cross-curricular and British values, and involves pupils in their own learning by encouraging them to be independent learners. Through careful planning, resourcing, delivery and assessment, we aim to ensure our Computing curriculum is inclusive and accessible to all pupils, including those with SEND, Pupil Premium and those at Greater Depth.

Introduction

A high quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming.

Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use and 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 National Curriculum in England 2013)

Aims

- To provide a challenging Computing curriculum for all pupils.
- To enthuse and equip children with the capability to use technology throughout their lives.
- To instill critical thinking, reflective learning and a ‘can do’ attitude for all our pupils, particularly when engaging with technology and its associated resources.
- To teach pupils to become responsible, respectful and competent users of data, information and communication technology.
- To 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.
- To use technology imaginatively and creatively to inspire and engage all pupils, as well as using it to be more efficient in the tasks associated with running an effective school.
- To provide technology solutions for forging better home and school links.
- To utilise computational thinking beyond the Computing curriculum.
- To meet the requirements of the National Curriculum Programmes of Study for Computing.

National Curriculum for Computing aims

- To ensure that pupils can understand and apply the fundamental principles of Computer Science, including logic, algorithms, data representation, and communication
- To ensure that pupils can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- To ensure that pupils can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems.
- To ensure that pupils are responsible, competent, confident and creative users of Information and Communication Technology.

Entitlement

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.

The Purple Mash scheme of work more than meets the national vision for Computing. It provides immense flexibility, strong cross-curricular links and integrates perfectly with the 2Simple Computing Assessment Tool. Furthermore, it gives excellent supporting material for less confident teachers, who receive their own training in the use of our computing software.

<p>Early Years</p>	<p>We aim to provide our pupils with a broad, play-based experience of Computing in a range of contexts. We believe the following:</p> <ul style="list-style-type: none"> ● Early Years learning environments should feature ICT scenarios based on experience in the real world, such as in roleplay. ● Pupils gain confidence, control and language skills through opportunities to ‘paint’ on the interactive board/devices or control remotely operated toys. ● Outdoor exploration is an important aspect, supported by ICT toys such as metal detectors, controllable traffic lights and walkie-talkie sets. ● Recording devices can support children to develop their communication skills. This is especially useful for children who have English as an additional language.
<p>Key Stage 1</p>	<ul style="list-style-type: none"> ● Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following a sequence of instructions. ● Write and test simple programs. ● Organise, store, manipulate and retrieve data in a range of digital formats. ● Communicate safely and respectfully online, keeping personal information private, and recognise common uses of information technology beyond school.
<p>Key Stage 2</p>	<ul style="list-style-type: none"> ● Design and write 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; generate appropriate inputs and predicted outputs to test programs. ● Use logical reasoning to explain how a simple algorithm works 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.

Curriculum Organisation:

To complement our timetable at Pardes House Primary School, computing will be taught as a discrete subject but also in a cross-curricular where the opportunity presents itself.

At present all classes have allocated time within their timetable for the study of computing. Planning and coverage expectations are currently being developed, including the incorporation of computing within Key Stage 1.

Resource provision

The school has invested significant funds into its IT provision in the last few years. Every teacher has a laptop. There are 30 pupil Chromebooks, for class and group work, stored in a secure centrally-located trolley.

Each class is equipped with an interactive whiteboard (IWB) to further the use of computing technology in lessons across the curriculum. Each teacher's laptop that connects with the (IWB) has internet access in order that they may utilise a range of online teaching tools to further the enhance teaching and learning.

The school acknowledges the need to continually maintain, update and develop its resources and to make progress towards a consistent, compatible system by investing in resources that will effectively deliver the strands of the National Curriculum.

Assessment

- On-going formative assessment is an integral part of good practice. Its main purpose is to enable the teacher to match work to the abilities and needs of the children and ensure progression in learning.
- Computing skills capability should be monitored regularly in relation to the Computing curriculum as outlined in the 'The National Curriculum' for England. Teachers should assess module requirements with reference to children's knowledge, understanding and skills.
- Samples of work should be kept for groups of children stored in classrooms within relevant class folders.
- For Reception it may not always be practical to keep samples of work, but observations and discussions could be recorded in Tapestry, using for monitoring children's progress towards achieving the Early Learning Goals.
- Achievement is reported to parents at the end of the academic year.
- 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.
- Teachers keep accurate records of pupil attainment by entering data using the 2Simple Computing Assessment Tool.
- Tracking of attainment by using the 2Simple Computing Assessment Tool is used to inform future planning.
- Formative assessment is undertaken each session/interaction in Computing and pupils are very much encouraged to be involved in that process. Through using the progression of skills documents and displays from 2Simple, both teachers and pupils can evaluate progress. Features such as preview and correct in Purple Mash are used to further support feedback and assessment.
- Summative assessment is undertaken in line with the assessment cycle. Using electronic work samples from children's portfolios on Purple Mash, teachers enter judgements about the samples into the 2Simple Computing Assessment Tool.
- Work from a range of classes and abilities is shared using the Noticeboard feature in Purple Mash.

Equal Opportunities

Pupils who are disadvantaged have equal rights of access to the computing curriculum and the technologies used; it needs to be recognised that computing technologies can enhance their achievement across the whole curriculum.

All adults in the classroom act as role models and as such need to ensure that the images they portray to pupils are positive. Care should be taken to counteract stereotypes in the selection, training and development of computing.

Special Educational Needs

At Pardes House Primary School, we aim to enable all children to achieve to their full potential. This includes children of all abilities, social and cultural backgrounds, those with disabilities, EAL speakers and SEN statement and non-statemented. We place emphasis on the flexibility technology brings to allowing pupils to access learning opportunities, particularly pupils with SEN and disabilities. With this in mind, we will ensure additional access to technology is provided throughout the school day.

Differentiation in computing can be addressed by the careful selection and use of software; a range of tasks, appropriate intervention and support.

Health and Safety

The school will operate all computing equipment in compliance with Health and Safety requirements:

- Staff and pupils should avoid standing directly in front of the whiteboard projector.
- The projector beam should not be looked at directly.
- Children should not put plugs into sockets or switch the sockets on.
- Children should not be responsible for moving heavy equipment around the school.
- Computing equipment must be brought to the classroom by a member of staff, supported by pupils, if appropriate.
- Computing Equipment must be put back when the lesson finishes.
- Trailing leads should be made safe behind the equipment.
- Liquids must not be taken near the computers.
- Staff should ensure that pupils are seated at the computers comfortably and be aware of the dangers of continuous use (eye/wrist strain etc).
- E-safety guidelines will be set out in the E-safety Policy.

Internet Safety

In line with the school's ethos, pupils will have limited internet access. There will be only a few selected websites that pupils can access on the Chromebooks. Teachers' use of the internet in classrooms is planned to enrich and extend learning activities. An 'acceptable use' policy has been drawn up to protect all parties and rules for responsible computer use and has been discussed with staff.

The school has acknowledged the need to ensure that all pupils are responsible and safe users of the Internet and other communication technologies. The Computing subject leader and Headteacher have developed the teaching of e-safety for pupils, but in a way that does not negatively impact on the religious ethos of the school.

* For further information please see the E-safety policy.