

The Pochin Primary School Computing and ICT Policy

Introduction

The use of information and communication technology is an integral part of the national curriculum and is a key skill for everyday life. Computers, tablets, programmable robots, digital and video cameras are a few of the tools that can be used to acquire, organise, store, manipulate, interpret, communicate and present information. At The Pochin School we recognise that pupils are entitled to quality hardware and software and a structured and progressive approach to the learning of the skills needed to enable them to use it effectively. The purpose of this policy is to state how the school intends to make this provision.

Aims

- Provide a relevant, challenging and enjoyable curriculum for ICT and computing for all pupils.
- Meet the requirements of the national curriculum programmes of study for ICT and computing.
- Use ICT and computing as a tool to enhance learning throughout the curriculum.
- To respond to new developments in technology.
- To equip pupils with the confidence and capability to use ICT and computing throughout their later life.
- To enhance learning in other areas of the curriculum using ICT and computing.
- To develop the understanding of how to use ICT and computing safely and responsibly.
- The national curriculum for computing aims to ensure that all pupils:
 - Can understand and apply the fundamental principles of computer science, including logic, algorithms, data representation, and communication
 - 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.

Rationale

The school believes that ICT and computing:

- Gives pupils immediate access to a rich source of materials.
- Can present information in new ways which help pupils understand access and use it more readily.
- Can motivate and enthuse pupils.
- Can help pupils focus and concentrate.
- Offers potential for effective group working.
- Has the flexibility to meet the individual needs and abilities of each pupil.

Objectives

Early Years

It is important in the foundation stage to give children a broad, play-based experience of ICT in a range of contexts, including outdoor play. ICT is not just about computers. Early years learning environments should feature ICT scenarios based on experience in the real world, such as in role play. Children gain confidence, control and language skills through opportunities to 'paint' on the whiteboard or programme a toy. Recording devices can support children to develop their communication skills. This is particular useful with children who have English as an additional language.

Key Stage 1

By the end of key stage 1 pupils should be taught to:

- 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
- Use logical reasoning to predict and computing the behaviour of 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.

Key Stage 2

By the end of key stage 2 pupils should be taught to:

- 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
- Describe how internet search engines find and store data; use search engines effectively; be discerning in evaluating digital content; respect individuals and intellectual property; use technology responsibly, securely and safely
- Select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.

Resources and access

The school acknowledges the need to continually maintain, update and develop its resources and to make progress towards a consistent, compatible pc system by investing in resources that will effectively deliver the strands of the national curriculum and support the use of ICT and computing across the school. Teachers are required to inform the ICT and computing leader of any faults as soon as they are noticed.

Inclusion

At The Pochin School we plan to provide for all pupils to achieve, including boys and girls, higher achieving pupils, gifted and talented pupils, those with SEN, pupils with disabilities, pupils from all social and cultural backgrounds, children who are in care and those subject to safeguarding, pupils from different ethnic groups and those from diverse linguistic backgrounds.

Health and safety

The school is aware of the health and safety issues involved in children's use of ICT and computing. All electrical appliances in school are tested accordingly. It is advised that staff should not bring their own electrical equipment in to school. All staff should visually check electrical equipment before they use it and take any damaged equipment out of use. Damaged equipment should then be reported to the head teacher who will arrange for repair or disposal.

Security

- The ICT and computing technician will be responsible for regularly updating anti-virus software.
- Use of ICT and computing will be in line with the school's 'acceptable use policy'.
- All pupils will be aware of the school rules for responsible use of ICT and computing and the internet and will understand the consequence of any misuse.

Policy Date: March 2015

Year	Computer science	Information Technology	Digital Literacy
1	<p>understand what algorithms are</p> <p>create simple programs</p>	<p>use technology purposefully to create digital content</p> <p>use technology purposefully to store digital content</p> <p>use technology purposefully to retrieve digital content</p>	<p>use technology safely</p> <p>keeping personal information private</p> <p>recognise common uses of information technology beyond school</p>
2	<p>understand that algorithms are implemented as programs on digital devices</p> <p>understand that programs execute by following precise and unambiguous instructions</p> <p>debug simple programs</p> <p>use logical reasoning to predict the behaviour of simple programs</p>	<p>use technology purposefully to organise digital content</p> <p>use technology purposefully to manipulate digital content</p>	<p>use technology respectfully</p> <p>understand where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</p>
3	<p>write programs that accomplish specific goals</p> <p>use sequence in programs</p>	<p>use search technologies effectively</p> <p>use a variety of software to accomplish given goals</p> <p>collect information</p> <p>present information</p>	<p>use technology safely and responsibly</p> <p>identify a range of ways to report concerns about contact</p>
4	<p>work with various forms of input</p> <p>work with various forms of output</p> <p>design programs that accomplish specific goals</p> <p>debug programs that accomplish specific goals</p> <p>use repetition in programs</p>	<p>use search technologies effectively</p> <p>use a variety of software to accomplish given goals</p> <p>design and create content</p> <p>select and use internet services</p>	<p>understand the opportunities computer networks offer for communication</p> <p>identify a range of ways to report concerns about content and contact</p> <p>use technology respectfully</p> <p>recognise acceptable/unacceptable behaviour</p>
5	<p>design and create programs control or simulate physical systems</p> <p>use logical reasoning to detect and correct errors in algorithms and programs</p> <p>understand how computer networks can provide multiple services, such as the world wide web</p>	<p>select a variety of software to accomplish given goals</p> <p>select, use and combine internet services</p> <p>analyse information</p> <p>evaluate information</p> <p>collect data</p> <p>present data</p>	<p>understand the opportunities computer networks offer for communication</p> <p>identify a range of ways to report concerns about content and contact</p> <p>recognise acceptable/unacceptable behaviour</p>

	appreciate how results are selected and ranked		
6	<p>solve problems by decomposing them into smaller parts</p> <p>use selection in programs</p> <p>work with variables</p> <p>use logical reasoning to explain how some simple algorithms work</p> <p>use logical reasoning to detect and correct errors in algorithms</p> <p>understand computer networks including the internet</p> <p>appreciate how results are ranked</p>	<p>combine a variety of software to accomplish given goals</p> <p>select, use and combine software on a range of digital devices</p> <p>analyse data</p> <p>evaluate data</p> <p>design and create systems</p>	<p>understand the opportunities computer networks offer for collaboration</p> <p>be discerning in evaluating digital content</p>

Key stage 1

- 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
- use technology safely and respectfully, keeping personal information private; know where to go for help and support when they have concerns about material on the internet.
- recognise common uses of information technology beyond school

Key stage 2

- 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
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.
- select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information