



# WOOLGROVE SCHOOL

## Computing Policy



*“Equal opportunities lie at the heart of all that we do at Woolgrove. We are committed to ensuring that every member of the school community, whatever their position, race, gender, disability or religion, is given the same chance as any other to access the services and support of the school.”*

Simon Fawcett  
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## **1 Intent**

Computing is changing the lives of everyone. Through teaching Computing we equip children to participate in a rapidly-changing world where work and leisure activities are increasingly transformed by technology. We enable them to find, explore, analyse, exchange and present information. We also focus on developing the skills necessary for children to be able to use information in a discriminating and effective way. Children will develop their programming knowledge and understanding through a range of activities. Computing skills are a major factor in enabling children to be confident, creative and independent learners.

The intent of Computing is to enable children:

- to develop Computing capability in finding, selecting and using information;
- to use Computing for effective and appropriate communication;
- to monitor and control events both real and imaginary;
- to apply hardware and software to creative and appropriate uses of information;
- to apply their Computing skills and knowledge to their learning in other areas;
- to use their Computing skills to develop their language and communication skills;
- to explore their attitudes towards Computing and its value to them and society in general. For example, to learn about issues of security, confidentiality and accuracy;
- to understand, design and implement a range of computer programs, and
- to use technology, including the internet safely.

## **2 Implementation**

As the aims of Computing are to equip children with the skills necessary to use technology to become independent 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 computers to help them in whatever they are trying to study.

- 2.1** We recognise that all classes have children with widely differing Computing abilities. This is especially true when some children have access to Computing equipment at home, while others do not. We provide suitable learning opportunities for all children by matching the challenge of the task to the ability and experience of the child. We achieve this in a variety of ways, by:
- setting common tasks which are open-ended and can have a variety of responses;
  - setting tasks of increasing difficulty (not all children complete all tasks);
  - grouping children by ability in the room and setting different tasks for each ability group;
  - providing resources of different complexity that are matched to the ability of the child;
  - using staff to support the work of individual children or groups of children.

Computing as a subject can be split down into three different strands:

1. Computer Science
2. Information Technology
3. Digital Literacy

Differentiated learning and outcomes are planned for the different pathways at Woolgrove School as set out in the table below:

Computing Subject Coverage			
	EYFS / Pre-formal	Semi – Formal 1 & 2	Formal
<p>1. understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</p> <p>2. create and debug simple programs</p> <p>3. use logical reasoning to predict the behaviour of simple programs</p>	<p>Experience controlling a device or program using cause and effect e.g. in simple switch activities.</p> <p>Predict and anticipate the outcome of simple cause and effect activities.</p>	<p>Experience simple algorithms to control a person or device. E.g. coactively sequencing instruction cards for an adult to make a sandwich.</p>	<p>Create simple algorithms to control a person or device. E.g. using bluebots or beebots.</p> <p>Begin to understand that algorithms are instructions that a computer follows to give a desired result.</p> <p>Predict the outcome of a simple algorithm.</p>
<p>4. use technology purposefully to create, organise, store, manipulate and retrieve digital content</p> <p>5. recognise common uses of information technology beyond school</p>	<p>Experience technological programs, devices, toys and resources. Opportunities to explore things with interest and press parts/switches/touch screen/break sound beam to create an effect.</p>	<p>Intentionally use technology in order to produce a predictable result.</p> <p>Understand that information can be stored and retrieved</p> <p>Use control devices to select and manipulate images on screen.</p> <p>They respond to simple instructions to control a device.</p>	<p>Use technology to communicate/present their ideas.</p> <p>Select appropriate device/software for a task.</p> <p>Find similar information in different formats (photo in paper, in book, on website, from TV programme)</p> <p>Communicate about their use of ICT</p>
<p>6. use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</p>	<p>Link with PHSE – ‘Safety’</p> <p>Online safety/Cyberbullying Be aware of appropriate behaviours, know not to give out personal information to strangers, know who to ask for help if worried.</p>		

Computing Subject Strands
Computer Science – CS
Information Technology – IT
Digital Literacy – DL

**2.2** The school uses Early Years Foundation Stage (EYFS) and some aspects of the Key Stage 1 (KS1) curriculum for Computing as the basis for its curriculum planning. We have adapted these to the local circumstances of the school, the needs of the children, and to fit with cross curricular work.

We carry out the curriculum planning in Computing in three phases (long-term, medium-term and short-term). The long-term plan maps the Computing topics that the children study in each term during each learning pathway. The Computing subject leader works this out in conjunction with teaching colleagues in each learning pathway, and the children often study Computing as part of their work in other subject areas. Our long-term Computing plan shows how teaching units are distributed across the learning pathways, and how these fit together to ensure progression within the curriculum plan.

Our medium-term plans, which we have adopted from the national curriculum, give details of each unit of work for each term. Staff are able to follow the Woolgrove Curriculum Skills and Knowledge Overview (SKOs) for Computing to inform their differentiated planning according to the pathway they are teaching. Staff are required to complete each strand within the SKO by the end of the academic year. The Computing subject leader is responsible for reviewing these plans.

The class teacher is responsible for writing the short-term plans with the Computing component of each lesson. These weekly plans list the specific learning objectives of each lesson.

The topics studied in Computing are planned to build upon prior learning. While we offer opportunities for children of all abilities to develop their skills and knowledge in each unit, we also build planned progression into the scheme of work, so that the children are increasingly challenged as they move up through the school.

All staff will follow the above computing subject coverage information and use the Woolgrove Curriculum SKO for Computing to inform their differentiated planning according to the pathway they are teaching. Progression through the different strands of computing and pathways is as follows:

	<b>Computer Science (Programming)</b>	<b>Information Technology (Creating documents)</b>	<b>Digital Literacy (Keeping Safe)</b>
EYFS & Pre - formal	Independent exploration. Cause and effect.	Independent exploration. Cause and effect. Pressing letters.	Getting adults if it is not going right.
Semi – Formal 1	Beginning to explore simple programming – making a bee bot move.	Beginning to type out their name.	Say how content makes them feel. Happy or sad. Getting adults if it is not going right.
Semi – Formal 2	Beginning to understand simple programming – making a bee bot move along a simple set route.	Beginning to type short simple sentences and pressing save – not necessarily knowing where it is saved though.	Beginning to understanding different types of content and knowing who they need to alert.
Formal	Programming and debugging – making a bee bot move along a more complex set route and working out where they have gone wrong.	Typing sentences, saving, opening and editing documents.	Understanding different types of content and knowing who they need to alert.

- 2.3** Cross-curricular learning offers a creative way to develop children's knowledge, skills and understanding while motivating them to learn through stimulating, interconnected topics. As a school all teachers plan termly cross-curricular topics. Where possible computing will be delivered through cross-curricular opportunities as well as stand-alone lessons to focus on specific computing skills.
- 2.4** Computing as a subject is assessed and recorded using a range of different Woolgrove School strategies:
- Knowledge and Skills Overview used for planning,
  - PTS and differentiated learning objectives planned for all children,
  - Formal, informal observations and directed learning against LOs recorded,
  - PTS inform future planning to ensure children are ready to progress or consolidate skills.

Computing subject leader team conduct a deep dive of the subject to highlight strengths and areas for development for the subject and provide personal and whole school feedback to all members of staff.

The monitoring of the standards of the children's work and of the quality of teaching in Computing is the responsibility of the Computing subject leader. The Computing subject leader is also responsible for supporting colleagues in the teaching of Computing, for keeping them informed about current developments in the subject and for providing a strategic lead and direction for the subject in the school.

- 2.5** All classrooms within Woolgrove have access to an interactive whiteboard that is accessed to deliver whole school and focussed teaching additionally there is at least one children focussed computer in each classroom. In addition to the computers each class has a specific classroom iPad and a central bank of iPads that are shared between classes using timetabled slots. The school has Internet access for computers, with high levels of security to ensure all pupils and staff are safe when using the computers. We keep resources for Computing, including software, in a central store.

### **3 Implementation**

The impact of the curriculum is that:

1. The children will become successful pupils who enjoy learning, make progress and achieve their full potential.
2. All children within Pre-Formal, Semi-Formal 1 and Semi-Formal pathways will build on and develop the confidence and abilities to move up to the next pathway, if possible. Alternatively they will revisit aspects of the Computing curriculum to build upon current knowledge.
3. All children will be effective safe technology users that have elements of the computing curriculum integrated in their lives seamlessly, at home, in the community and at school.