



Computing Policy

January 2025

Aims and Objectives

Purpose of study

Gravenhurst Academy believes that every child should have the right to a curriculum that champions excellence; supporting pupils in achieving to the very best of their abilities. We understand the immense value technology plays not only in supporting the Computing and whole school curriculum but overall in the day-to-day life of our school. We believe that technology can provide: enhanced collaborative learning opportunities; better engagement of pupils; easier access to rich content; support conceptual understanding of new concepts and can support the needs of all our pupils. We offer a high-quality computing education; equipping pupils to use skills, strategies 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.

Aims

Our objectives in the teaching of Computing are for all our children:

- To provide an exciting, rich, relevant and challenging Computing curriculum for all pupils.
- To understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- To analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- To evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- To be responsible, competent, confident and creative users of information and communication technology.

Safeguarding: Online safety

Online safety has a high profile at Gravenhurst Academy for all stakeholders. We ensure this profile is maintained and that pupil needs are met by the following:

- A relevant up-to-date online safety curriculum which is progressive from Year One to the end of Year 4.
- In Year 3/4, as part of the Computing Curriculum, a dedicated themed lesson on online safety is taught every half term. A strand which is central to our curriculum. Online Safety is also revisited in each lesson dependent on the strand of Computing being taught.
- A curriculum that is threaded throughout other curriculums (such as PSHE) and embedded in the day-to-day lives of our pupils.
- Training for staff and governors which is relevant to their needs and ultimately positively impacts on the pupils.
- Scheduled pupil voice sessions and learning walks steer changes and inform training needs.
- Through our home/school links and communication channels, parents are kept up to date with relevant online safety matters, policies and agreements. They know who to contact at school if they have concerns.
- Our online safety policy (part of our safeguarding policy) clearly states how monitoring of online safety is undertaken and any incidents/infringements to it are dealt with.
- Filtering and monitoring systems for all our online access.
- Data policies which stipulate how we keep confidential information secure.

Teaching and learning style

As the aims of Computing are to equip children with the skills necessary to become independent learners, the teaching style that we adopt is as active and practical as possible. At times we do give children direct instruction on how to use hardware or software in 'skills' lessons but we often use Computing capabilities to support teaching across the curriculum. So, for example, children might research or investigate a history topic or a particular issue on the Internet. Children who are learning science might use the computer to model a problem or to analyse data. We encourage the children to explore ways in which the use of Computing can improve their results, 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 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 teaching assistants to support the work of individual children or groups of children

Computing Curriculum Planning

Our computing curriculum comprises of 3 strands:

- Digital Literacy (Online Safety)
- Information Technology (Communication and presentation & Data retrieving and organising)
- Computer Science (Algorithms and programs)

Early Years

- We aim to provide our pupils with a broad, play-based experience of Computing in a range of contexts. We believe the following:
- Early Years learning environments should feature ICT scenarios based on experience in the real world, such as in roleplay. Children learn how to take photographs using class tablets.
- Pupils gain confidence, control and language skills through opportunities to play phonics and maths games on the interactive board/devices and control remotely-operated toys and Beebots.
- Recording devices can support children to develop their communication skills. This is especially useful for children who have English as an additional language.

Key Stage 1 outcomes

- 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.

Key Stage 2 outcomes

- 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.
- Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Assessment

- Pupil attainment is assessed using the 2Simple Computing Assessment Tool for Years 1 to 4. 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.
- Children are encouraged to self, peer and group assess work in a positive way using online collaborative tools such as 2Blog in Purple Mash.
- 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 (See Assessment Policy). Using electronic work samples from children's portfolios on Purple Mash, teachers enter judgements about the samples into the 2Simple Computing Assessment Tool.

Equal Opportunities and Inclusion

It is the responsibility of all staff to ensure that there is equal opportunity for all children regardless of colour, culture, background, gender or religious belief. The school will not tolerate exclusion from any activity that is rooted in the above to the detriment of the child.

It is also the responsibility of member of staff to ensure that barriers to learning are reduced as far as practicable and can reasonably be expected. The inclusive nature of education is a highly valued element of Gravenhurst Academy's ethic.

Implementation and Review

This policy will be made known to all staff, parents/carers and governors, and published on the academy's website. Copies are also available upon request from the academy office. This policy will be reviewed every year.

Written by: Alex Diggins

Date: January 2025

Agreed by Principal: Debbie Randall

Date: January 2025

Ratified by Governors: Ann Gilbert

Date: January 2025