Computing Policy
2021

Adopted by the Local Advisory Board of

Highfields Academy

Approved by:	-	**Date:** June 2022
Last reviewed on:	n/a	
Next review due by:	June 2025	

Definition

For most of us, technology is an essential part of our daily lives. It is our goal at Highfields Academy to equip our children with the fundamental skills, knowledge and understanding of computing to enable them to participate effectively and safely in a digital world.

As such, we take great pride in our computing curriculum and the rich experiences it provides our children. We teach a balanced progressive coverage of the three strands of the National Curriculum from EYFS up to Year 6. Our teachers also actively seek opportunities for cross-curricular links to further the time the children have to practise and hone their skills and understanding of computing.

The three strands of the computing curriculum are:
- Digital literacy (which includes E-Safety)
- Information Technology
- Computer Science

Curriculum Intent

Aims

The school's aims are to:
- Meet the requirements of the National Curriculum programmes of study for computing.
- Provide a relevant, challenging and enjoyable curriculum for computing for all pupils.
- 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 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.

Special Educational Needs Disability (SEND) / Pupil Premium / Higher Attainers

At Highfields, we teach computing to all children, whatever their ability. Computing forms part of the school curriculum policy to provide a broad and balanced education to all children, regardless of their starting points. Through our computing teaching we provide learning opportunities that enable all pupils to make progress across a lesson and over time. We do this by setting suitable learning challenges and responding to each child's different needs. Assessment against National Expectations allows us to consider each child's attainment and progress against expected levels.

When progress falls significantly outside the expected range, the child may have special educational needs. Our assessment process looks at a range of factors – classroom organisation, teaching materials, teaching style, differentiation – so that we can take some additional or different action to enable the child to learn more effectively. This ensures that our teaching is matched to the child's needs.

We enable pupils to have access to the full range of activities involved in learning Computing. Where children are to participate in learning opportunities outside the classroom, for example, a field trip, we carry out a risk assessment prior to the activity, to ensure that the activity is safe and appropriate for all pupils and their learning needs.

Higher attaining pupils need to be challenged with open ended tasks which provide opportunities to tackle more complex issues and a wider range of resources. This will be done by differentiation for those pupils concerned.

Foundation Stage

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 role-play.
- 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 or SEN additional needs.

Key Stage 1

- 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.

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Key Stage 2

- 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.

Monitoring the impact of the Computing curriculum

At Highfields, the Computing leader will monitor the impact of the curriculum through:

- Lesson observations

- Learning walks, including display and environment.

- Scrutiny of planning and digital portfolios

- Discussions with pupils/pupil voice surveys

- Analysis of progress and attainment data

Resources

Each teacher is aware of where the Computing resources in school are held. Currently, our computing curriculum is taught solely through the use of ipads. An inventory of resources will be held and regularly updated by the subject coordinator. The resources used will provide a variety of information about the people and places being studied and be suitable for the ages and abilities of pupils.