ACE Learning



Computing Policy

Date of Ratification	**Spring 2023**
Date for Review	**Spring 2026**

Intent

We want every child in ACE Learning to not just become confident users of computing and of technology but to have competently gained key knowledge and skills across the three main areas of the computing curriculum: computer science (programming and understanding how digital systems work), information technology (using computer systems to store, retrieve and send information) and digital literacy (evaluating digital content and using technology safely and respectfully). We want them to enjoy the benefits and recognise the role of this in the wider world. We want staff to be both confident and knowledgeable in delivering an ambitious curriculum, using the most up to date equipment we can manage, and for all pupils to achieve excellent levels of skills and knowledge by the end of each Key Stage.

Objectives

Through a structured body of knowledge and skills, differentiation (where appropriate) and ensuring highly trained staff, pupils will display positive attitudes towards computing and the use of technology, supporting children's developing resilience as they progress through a challenging curriculum. We aspire for all children to:

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

Curriculum Progression

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 skills ladder for computing clearly outlines how learning progresses within each of the **three component strands**. Within each strand, learning is separated into sub-strands which are carefully sequenced to ensure the main objectives within each Key Stage are met, including the EYFS.

Vocabulary development

Vocabulary has been deliberately structured so that each year group builds on previous learning. The skills vocabulary grid outlines progression between the EYFS and year six. Theme overviews contain vocabulary linked to subject knowledge.

Approaches to Teaching and Learning

A high-quality computing education ensures pupils are expected to use and develop computational thinking and creativity. As such, Computing has deep, cross curricular links with Mathematics, Science and Design and Technology, and provides insights into both natural and artificial systems. Teachers utilise the Mantle of the Expert approach to learning where appropriate to increase pupil engagement and provide stimulation through meaningful learning scenarios. Links are made to all subject areas where possible within each theme.

These links are tracked closely so that over the course of both cycles in each learning stage, children are acquiring the skills that are appropriate for their year group.

The following organisational and pedagogical strategies should also be adopted, where appropriate:

- Delivering effective teaching input (whole class, group or individual), with clear learning objectives, to allow completion of task without further teacher intervention;
- Encouraging children to use their initiative, imagination, reasoning and investigative skills;
- Planning short, time limited, skills focused activities for either individual, pair, or small group work, considering equality of access;
- Splitting larger projects into clearly defined pieces with different groups or individuals taking on responsibility for specific parts;
- Teaching clear instructions in the event of being "stuck" or equipment failure (e.g. use of class "experts"/ digital leaders), ensuring 'learned helplessness' is diminished;
- Allowing opportunities for work to be printed for display and/ or published on the school web site, digital information screens etc.

Resources

Schools within ACE Learning	
Staff tools	**Learning tools**
Remote desktop for staff to access files off site	Purple Mash (Computing resource)
One Drive to promote collaborative work between ACE Learning employees	Edmodo (learning platform)
Office 365 (emails, Microsoft programmes)	Interactive whiteboards/ touch screens
Class teacher iPads/laptops	Class desktops
	Support laptops
	A variety of software (catalogued- curriculum leaders are being encouraged to identify and purchase software to fill the gaps)
	Visualisers
	Roamers, BeeBots, ProBots
	Flip cameras
	Sensors & detectors
	Digital microscopes
	Apple ipads
	Sound buttons
	USB microphones
	Green screen equipment
To ensure that copyright laws are adhered to, all software is purchased with appropriate licenses and staff, pupils and parents are not permitted to run software brought in from outside school on school machines.	

Health and Safety

The following rules should be abided by around technology:

- Children should not be responsible for moving heavy ICT equipment around the school;
- Food and drink should not be consumed near ICT equipment;

- It is the responsibility of staff to ensure that classroom ICT equipment is stored securely and cleaned regularly;
- Staff should ensure that the children are seated at the computers comfortably and be aware of the dangers of continuous use (e.g. eye/wrist strain etc.). Pupils should not use a computer continuously for more than 50 minutes.
- There must be adult supervision around children when they are accessing information via the Internet. The service provider does filter information, but staff are ultimately responsible for information accessed by pupils (please refer to our Online Safety policy).

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. Questioning and verbal feedback are some examples of such assessment.

At least once a year, summative assessments will be made; teachers will report on how well children are working against their year group's objectives for Computing.

Monitoring Impact

Monitoring of teaching and learning is a process that is essential to gauge quality of teaching to ascertain progress children/groups are making and to identify areas for improvement for individual teachers, year groups, key stages or specific subjects. It is also an opportunity to celebrate the strengths and successes of teachers and their pupils.

Pupils: The Computing leader will monitor a sample of work at set points throughout the year. For example, by looking at evidence shared on the school network, digital learning portfolios and via pupil voice during lesson observation. Teacher judgements will also be analysed.

Staff: Clear verbal and written feedback will be provided to teaching staff that are observed and targets set accordingly to identify next steps in their continuing professional development.

The implementation and impact of Computing will be recorded by the subject leader and reviewed regularly.