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# Computing Curriculum Policy

September 2025

<b>Signed (Chair of Trustees):</b>	
<b>Date:</b>	September 2025
<b>Date of Review:</b>	September 2026

*Arbor Academy Trust reviews this policy annually. The Trustees may, however, review the policy earlier than this, if the Government introduces new regulations, or if the Trust receives recommendations on how the policy might be improved. This document is also available in other formats e.g. e-mail and enlarged print version, on request to the School Offices and is displayed on the schools' websites.*

## **Computing Curriculum Policy**

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## **Introduction**

A high-quality computing education equips pupils to use computational thinking 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**

The national curriculum for computing aims to ensure that all pupils:

- can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- 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.

## **Attainment targets**

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study.

### **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 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
- recognise common uses of information technology beyond school
- 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.

### **By the end of Key Stage 2 pupils should be taught to:**

- 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
- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that 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.

### **How we teach Computing**

The aim of Computing is 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, many aspects of the curriculum enables children to have child lead activities or projects based on certain criteria. We recognise that all classes have children with widely differing computing abilities. This is especially true when some children have access to technological 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 (variation) but all accessing the same learning objective;
- providing resources of different complexity that are matched to the ability of the child;
- using classroom assistants to support the work of individual children or groups of children.

## **Computing Curriculum Planning**

The school uses the 'Rising Stars' scheme of work for Computing as the basis for its curriculum planning. We have adapted the scheme to the local circumstances of the school.

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 key stage. The Computing subject leader works this out in conjunction with teaching colleagues in each year group, 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 year groups, and how these fit together to ensure progression within the curriculum plan.

Our medium-term plans, which we have adopted from 'Rising Stars' scheme of work, give details of each unit of work for each term. They identify the key learning objectives for each unit of work and stipulate the curriculum time that we devote to it. The Computing subject leader is responsible for keeping and reviewing these plans.

The class teacher is responsible for writing the short-term plans with the Computing component of each lesson. These daily plans list the specific learning objectives of each lesson. The class teacher keeps these individual plans and they and the Computing subject leader often discuss them on an informal basis.

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.

## **The Foundation Stage**

We teach Computing in Nursery and Reception classes as an integral part of the topic work covered during the year. As these classes are a part of the Foundation Stage of the National Curriculum, we relate the Computing aspects of the children's work to the objectives set out in the Early Learning Goals (ELGs) which underpin the curriculum planning for children aged three to five. The children have the opportunity to use the computer, iPads, kindles, digital cameras and a wide range of digital devices. Then during the year, they gain confidence and start using the computer to find information and use it to communicate in a variety of ways.

## **Teaching Computing to children with special educational needs**

At our school we teach Computing to all children, whatever their ability. Computing forms part of the school curriculum policy. It helps to provide a broad and balanced education to all children. Through our Computing teaching, we provide learning opportunities that enable all pupils to make progress. We do this by setting suitable learning challenges and responding to each child's different needs. Assessment against the National Curriculum 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, variation 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.

Intervention through SEN Support or EHC plans will lead to the creation of an Individual Education Plan (IEP) for children with special educational needs. The IEP may include, as appropriate, specific targets relating to Computing. In some instances, the use of technology such as switches or laptops has a considerable impact on the quality of work that children produce; it increases their confidence and motivation. We enable pupils to have access to the full range of activities involved in learning Computing. Where children are to participate in activities outside the classroom, for example, a visit to a computing exhibition, we carry out a risk assessment prior to the activity, to ensure that the activity is safe and appropriate for all pupils.

### **Assessment and recording**

Teachers assess children's work in computing by making informal judgements as they observe them during lessons. On completion of a piece of work, the teacher marks it and comments as necessary. At the end of a unit of work s/he makes a summary judgement about the work of each pupil in relation to the National Curriculum expected standards and records these attainment grades on Pupil Tracker. We use this as the basis for assessing the progress of the children and to pass information on to the next teacher at the end of the year.

The Computing subject leader keeps samples of the children's work in a portfolio. This demonstrates the expected level of achievement in ICT for each age group in the school.

### **Resources**

We invested in a chrome book per child from years 1-6 and iPads for each reception child and shared between nursery and 2-year-old children. We have a variety of devices such as: iPads, cameras, bee bots etc. available to be booked out. We keep these resources for Computing, including software, in a central storage area. The school has internet access for wired and wireless devices.

### **Monitoring and review**

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 informed about current developments in the subject and for providing a strategic lead and direction for the subject in the school. The computing subject leader gives the headteacher a termly report in which they evaluate the strengths and weaknesses in the subject and indicates areas for further improvement.

Term	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Autumn	Coding and Digital content	Coding	Coding	Coding	Coding	Coding
Spring	Illustrating and using the web	Photography and using the internet to research	Videoing and computer networks	Digital music and HTML	Using technology for Art and Web development	Multimedia and Computer networks
Summer	Using technology purposefully	Emails and data collection	Emails and data collection	The internet and data collection	The internet and data collection	Use of media and data collection