

Computing Policy



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At Highfield Community Primary School, we strive to deliver a high-quality computing curriculum which allows our pupils to recognise the significance of digital technology in their everyday lives. We explicitly teach pupils the skills and knowledge they need to become creative, digitally literate, computational thinkers. A high quality computing education equips pupils to use computational thinking and creativity to understand and change the world. This policy sets out a framework within which teaching and non-teaching staff can work and gives guidance on planning, teaching and assessments.

Philosophy/Rationale

At Highfield, we believe that Computing:

- gives pupils immediate access to a rich source of materials;
- can present information in new ways which help pupils understand, access and use it more readily;
- can motivate and enthuse pupils;
- can help pupils focus and concentrate;
- offers potential for effective group working;
- has the flexibility to meet the individual needs and abilities of each pupil.

Link to Teaching and Learning Policy

Aims

The School's aims are to:

- provide a relevant, challenging and enjoyable curriculum for Computing for all pupils;
- meet the requirements of the National Curriculum Programmes of Study for Computing;
- use Computing as a tool to enhance learning throughout the curriculum;
- respond to new developments in technology;

- equip pupils with the confidence and capability to use Computing throughout their later life;
- enhance learning in other areas of the curriculum using Computing;
- develop the understanding of how to use 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.

Organisation

Early Years Foundation Stage:

- It is important in the Early Years Foundation Stage to give children a broad, play-based experience of ICT in a range of contexts, including outdoor play. Computing is not just about computers.
- Early Years learning environments should feature Computing scenarios based on experience in the real world, such as in role play.
- Children gain confidence, control and language skills through opportunities to 'paint' on the whiteboard or drive a remote-controlled toy.
- Recording devices can support children to develop their communication skills. This is especially useful for children who have English as an additional language.
- Children are beginning to use the laptops in the ICT suite

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 a sequence of instructions;
- write and test simple programs;
- use logical reasoning to predict the behaviour of simple programs in computing;
- 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.

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

- 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.

Cross-curricular links

Computing contributes to teaching and learning in all curriculum areas. It has deep links with mathematics, science and design and technology, and provides insights into both natural and artificial systems. For example, graphics work links in closely with work in art, and work using databases supports work in mathematics, while the Internet proves very useful for research in humanities subjects. Information technology enables children to present their information and conclusions in the most appropriate way.

English

Computing is a major contributor to the teaching of English. Through the development of keyboard skills and the use of computers, children learn how to edit and revise text. They have the opportunity to develop their writing skills by communicating with people over the Internet. They learn how to improve the presentation of their work by using presentational or publishing software such as Word or PowerPoint.

Maths

Many Information technology activities build upon the mathematical skills of the children. Children use information technology in mathematics to collect data, make predictions, analyse results, and present information graphically. They also acquire measuring techniques involving positive and negative numbers, and including decimal places.

Personal, social and health education (PSHE) and citizenship

Information technology makes a contribution to the teaching of PSHE and citizenship as children learn to work together in a collaborative manner. They develop a sense of global citizenship by using the Internet and e-mail. Through the discussion of moral issues related to electronic communication, children develop a view about the use and misuse of technology, and they also gain a knowledge and understanding of the interdependence of people around the world.

The role of the Subject Leader

The Subject Leader is responsible for monitoring the standard of the children's work and the quality of teaching. This may be through lesson drop ins, Purple Mash work scrutiny, book creator scrutiny or pupil voice. The Subject Leader is also responsible for supporting colleagues in the teaching of computing, for being informed about current developments in the subject, and for providing a strategic lead and direction for the subject in the school. We allocate time each year for the vital task of reviewing samples of children's work and for visiting classes to observe teaching in the subject.

The subject leader presents their findings on the attainment and achievements of Computing to the *Governors* of the school in the form of an annual Subject Leader Report.

Staff training

- The Computing Subject Leader will assess and address all staff training needs as part of the subject action plan or in response to individual needs and requests throughout the year.
- Individual teachers should attempt to continually develop their own skills and knowledge, identify their own needs and notify the Subject Leader.
- Teachers will be encouraged to use computing to produce plans, reports, and communications and teaching resources.

Assessment, recording and reporting

Our Assessment procedures provide an all-round picture of individual children's attainment and achievement and a review of how the curriculum is implemented. The outcomes of our assessment procedures are effectively recorded and determine future planning.

Children are assessed on the Key Learning statements which are organised into the different areas of the computing curriculum including Information Technology, Computer Science and Digital Literacy. The class teachers will use these statements as the learning objective for the lesson and make a note of the children who are working towards, expected or at greater depth.

At the end of each unit of work, the class teacher will assess the children on the particular part of computing they have been focusing on for example Computer Science, Information Technology or Digital Literacy. The teacher will make judgements based on their final piece of work and assess accordingly. Judgements will be completed based on the child being assessed by either 'Below', 'On Track' or 'Deeper Learning'. This information is reported to governors in a Subject Leader Report; to parents on the end of year report. Parents will be reported by children being assessed by 'Below, Just Below, On track and Deeper Learning'. The class information will be passed on to the next teacher.

Monitoring and evaluation

The subject leader will monitor teachers long term plans to ensure that all of the computing skills are being covered. Computing folders on Purple Mash and the server will also be scrutinised to see evidence of computing that is practical and challenging for children. Each class have a computing folder saved on Book Creator. This will also be monitored to look for evidence of computing being used in a cross-curricular way. Unplugged lessons to make the objective relevant to the children will also be evidenced on Book Creator.

Online Safety (see Online Safety policy)

Online safety is of the upmost importance at Highfield. Using the Purple Mash computing scheme of work, Highfield provide a progressive computing curriculum, which also teaches children about staying safe online. This is also supported throughout PSHE lessons. Online Safety is taught progressively in each year group throughout Purple Mash and are continuously reinforced whenever technology is used. Clear rules for online safety are set out in the form of acceptable usage agreement which parents and pupils sign when a pupil first starts at school. Children are made aware of the importance of online safety when undertaking online homework each week. Work completed online is continuously monitored by teachers and blog forums on Purple Mash can only be accepted once reviewed by the class teacher.

Filtering and monitoring are regularly reviewed and all staff are aware of and understand the systems in place and know how to escalate concerns when identified.

Inclusion

At our school, we teach computing to all children, whatever their ability and individual needs. This is in line with the school's curriculum policy of providing a broad and

balanced education to all children. Through our computing teaching, we provide learning opportunities that enable all pupils to make good progress. We strive to meet the needs of those pupils with special educational needs, those with disabilities, those with special gifts and talents, and those learning English as an additional language, and we take all reasonable steps to achieve this. For further details, see the relevant SEN, Pupil Premium and Able policies.

SEN

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, and differentiation - so that we can take some additional or different action to enable the child to learn more effectively. Assessments made by teachers using the National Curriculum statements allow us to consider each child's attainment and progress in relation to the expected year group. This helps to ensure that our teaching is matched to the child's needs.

Pupil Premium

Every teacher is aware of the children who receive Pupil Premium funding in their class.

We recognise that not all pupils who receive free school meals will be socially disadvantaged. Through all subjects, we seek to ensure that teaching and learning opportunities meet the needs of all of the pupils and appropriate provision is made for pupils who belong to vulnerable groups. This includes ensuring that the needs of Pupil Premium children are adequately catered for and provision is put in place where needed.

More Able/Talented

Teachers accurately plan to meet the needs of all children, including those who are able/talented. Challenging provision and differentiation of activities are accessible to children throughout the computing units. Teachers will provide these children with extra opportunities and challenges to broaden their application of skills in computing. This does not necessarily mean moving them onto a higher level but rather giving the children a broader range of experiences within a level to expand their skills.

Equal opportunities

It is the responsibility of all teachers to ensure that all pupils, irrespective of gender, ability, including able and gifted children, ethnicity and social circumstance, have access to the curriculum and make the greatest progress possible. The use of differentiation by outcome allows children to respond to the work presented to them at the appropriate level.

Health and safety

The school is aware of the health and safety issues involved in children's use of Computing.

All fixed electrical appliances in School are tested by a LA contractor every five years and all portable electrical equipment in School is tested by an external contractor every twelve months. This also applies to any equipment brought into School by, for example, people running workshops, activities, etc. and it is the responsibility of the member of staff organising the workshop, etc. to advise those people. All staff should visually check electrical equipment before they use it and take any damaged equipment out of use. Damaged equipment should then be reported to the Subject Leader or Headteacher who will arrange for repair or disposal.

Children should not put plugs into sockets or switch the sockets on.

Trailing leads should be made safe behind the equipment.

Liquids must not be taken near the computers.

Magnets must be kept away from all equipment.

The below guidelines should be implemented when using the iPad charging trolleys:

- Sockets should be **switched off** before inserting or removing the charging trolley plug.
- An adult should switch off the trolley at the mains and wait for two minutes before pulling out the plug. Pupils can then remove the iPads from the trolleys as usual.
- A cable storage facility should be fitted to the trolleys to prevent cables and plugs trailing on the floor.
- A daily visual check of the condition of plugs should be carried out by adults within their key stages. Each key stage has a bank of iPads that should be checked daily. Any concerns regarding the condition of the plugs should be reported to the subject leader with immediate effect.
- Ensure the equipment is maintained in a safe condition and used within the manufacturer's guidelines.
- Pupils should be made aware about the basic safety around electrics so they are aware that if they notice any issues with the equipment they should not touch it and report an issue to their teacher immediately.

Online Safety guidelines will be set out in the Online Safety Policy.

Security

- The Computing technician and Subject Leader will be responsible for regularly updating anti-virus software.
- Use of ICT and Computing will be in line with the School's 'Acceptable Use Policy'. All staff, volunteers and children must sign a copy of the School's AUP.
- Parents will be made aware of the 'Acceptable Use Policy' on admission and again in KS2.
- All pupils and parents will be aware of the School Rules for Responsible Use of ICT and Computing and the Internet and will understand the consequence of any misuse.
- The agreed Rules for Safe and Responsible Use of ICT and Computing and the Internet will be displayed in all ICT and computing areas.

Cross reference to other policies

eSafety Policy

Health and Safety

Acceptable Use Policy'

SEND Policy

Resources

- The school has 30 laptops situated in a Computing suite each with a working mouse. There are also three small laptops available.
- There are three laptops situated in the staff room, alongside a working PC for teachers to use during their PPA.
- A class set of iPads are available for each Key Stage. Key Stage 1 (x30), Lower Key Stage 2 (x30) and Upper Key Stage 2 (x30).
- Each classroom is equipped with a PC monitor and a touch screen monitor, as well as a staff iPad.
- All devices are linked to the school's wifi which is secured with a Lancashire County Council filter to prevent inappropriate content being accessed.

In addition to the above there is a variety of other ICT equipment in school including:

- bee-bots
- Microphones
- Talking tins

- Digital microscope.
- Green screen
- A variety of software is available for supporting lessons across the curriculum. All software is recommended by the LA is used in School.
- Pupils also have access to resources online to cover all aspects of the curriculum. These resources are monitored and used under the guidance and supervision of the class teacher.

To ensure that copyright laws are adhered to; staff, pupils and parents are not permitted to run software brought in from outside school on school machines. An Internet policy has been developed in order to allow the safe and efficient use of the Internet for both staff and pupils in an educational context.