

Policy Title:	Computing Policy	
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Author & Role	H.Fisher – Computing Subject Lead	
Ratified by:	Governors Policy Committee	
Responsible signatory:	W Blundell	M Maher
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Outcome:	This Policy: Reflects the school values and philosophy in relation to the teaching and learning of Computing, setting out a framework within which teaching staff and support staff can operate; and gives guidance on planning, teaching and assessment.	
Cross Reference:	A, R & R Policy Curriculum Policies Evidence for Learning Health and Safety Policy Online Safety Single Equality Policy Teaching and Learning Policy	

EQUALITY AND DIVERSITY STATEMENT

Astley Park School is committed to the fair treatment of all in line with the Equality Act 2010. An equality impact assessment has been completed on this policy to ensure that it can be implemented consistently regardless of any protected characteristics and all will be treated with dignity and respect.

POLICY REVIEW

To ensure that this policy is relevant and up to date, comments and suggestions for additions or amendments are sought from users of this document. To contribute towards the process of review, please contact the author of the policy.

Computing Policy

This policy reflects the school values and philosophy in relation to the teaching and learning of Computing. It sets out a framework within which teaching staff and support staff can operate and gives guidance on planning, teaching and assessment.

It is intended for all teaching staff and support staff, school governors, parents and advisers/inspectors as appropriate.

Aims

Computing is a foundation subject with the National Curriculum. The aims of the subject are:

- To understand Computing and its importance and relevance to today's world.
- To enable children to develop Computing as a tool for learning and investigation in all subject areas and in a range of different contexts.
- To enable children to acquire a broad, balanced, relevant, challenging and enjoyable range of Computing capabilities and to be confident about using a range of hardware and software in order to equip them with the confidence and capability to use Computing throughout their education, home and further work life.
- To ensure pupils know how to stay safe online.
- To stimulate, develop interest and understanding of new technologies.

These aims are consistent with our school philosophy and take account the National Curriculum non-statutory guidance. In order to achieve these aims, Computing is taught throughout Key Stage 1,2,3 and 4 (KS1, 2, 3 & 4) on a modular basis. Within the Scheme of Work, learning activities are sequenced to ensure progression and taught through direct teaching, providing pupils with real experiences, and planned experiences as appropriate to develop children's understanding in Communicating and Handling Information, Controlling, Modelling and Monitoring. Subject planning and evaluation is at a class level with a co-ordinator for the whole school.

Differentiation

At Astley Park we cater for pupils from age 4-16 who have a diverse range of individual needs and carry statements of special educational need and consequently we take particular account of the Statutory Inclusion Statement of the National Curriculum. Computing is therefore used to increase access to the curriculum, raise levels of motivation and self-esteem, improve the accuracy and presentation of work and address individual needs across the curriculum.

Where appropriate specialised access software and hardware is available to suit the specific needs of individual or groups of children. Software has been mapped out to ensure that pupils make use of a wide range of Computing applications, and grow in confidence, competence, make progress and achieve. A number of pupils have an

ascribed laptop or iPad. Use is made of commercially published materials, teacher-prepared materials, support materials and visual aids.

When undertaking Computing, pupils will work at levels appropriate to their ability and progression will be in very small steps with much over learning and reinforcement.

With the knowledge that Computing will form part of the pupils' life at home, in further education and places of work, we will ensure the Computing experiences and abilities that pupils are equipped with at Astley Park, are effective and transferrable life skills. With this in mind, we are striving towards ensuring that current curriculum provision for Computing ensures that pupils' learning is supported with cutting edge technology.

Computing will be delivered by the class teacher and supported by their class teaching assistant. This should be taught as part of an integrated themed curriculum, but emphasis will be placed on the key skills required. To ensure that individual pupils can make progress, show that they can achieve and acquire key skills, it may be necessary for staff to modify programmes to provide relevant an appropriately challenging work and deliver programmes out of key stage.

Differentiation is planned in the medium-term planning which is supported by in class support.

Planning

Curriculum planning is half-termly, by the teacher's own systems, and other individuals as appropriate in relation to the whole school format. It is used to set clear, achievable goals matched to pupil's own abilities, as well as ensuring progression, continuity and subject coverage throughout the school. All planning should include Assessment for Learning (AFL), Personal Learning Targets (PLTs), Spiritual, Moral, and Social, Cultural development (SMSC). Planning is the responsibility of the teacher and plans are available to the Lead Practitioner, Deputy Head and Head Teacher.

Assessment

Assessment is used to plan future teaching and learning and to contribute to the pupil's record. Continuous assessment by AFL and teacher observation is carried out and recorded on B-Squared (B²).

Some evidence of pupil's work is kept as a record. Where appropriate the Evidence for Learning iPad app is used to capture and record evidence and a pupil learning journey is produced. Photographs of displays, tasks, completed work and video clips are retained as evidence of curriculum areas and concepts undertaken.

At KS4 pupils follow the AQA Entry Level – Functional Skills in Computing Entry Level and ASDAN Personal Progress & PSD Entry Level. An overall level is awarded to each pupil. A formal assessment is given to pupils at the end of the AQA Functional Skills in Computing at Entry Level and a level is awarded to each

individual pupil. A portfolio of evidence is sent off to ASDAN for the Personal Progress and PSD and a level awarded to each pupil.

Scheme of Work

The scheme of work can be found on the school drive under Computing. It has been written according to the National Curriculum requirements and shows all skills required and a range of topics which can be interlinked to themes throughout the year.

Cross curricular links

Effective use of Computing across the Curriculum - is a key aim for our school and should be an inherent tool within the classroom environment.

Microsoft Office Packages allow pupils to formulate, edit and finalise text, order and prioritise information. For English this could involve writing their name/sentence, manipulating the text of a poem, changing vocabulary or putting the text in the correct order. For DT this could involve correctly sorting a set of instructions.

Modelling and spreadsheets applications have obvious uses for mathematics. A model/ spreadsheet could be used in Geography or Science to calculate and produce graphs. Databases can be used to sort, order, group and analyse data - perfect for use in Humanities.

Presentational software - pupils can display their ideas, research or conclusions using fun and attention grabbing animation. Such work is cross-curricular - from Food Technology to Modern Foreign Languages. Microsoft Office applications similarly empower pupils to develop, draft, edit and display work.

The Internet is also a fantastic resource - pupils can take a quiz online that provides instant, specific feedback. They can get involved in a decision making exercise that allows them to see the results of their actions. Educational 'games' provide a whole wealth of learning opportunities.

There are amazing cross curricular possibilities that can be used in most subjects and are just limited by one's imagination.

Spiritual, Moral, Social, and Cultural Development in Computing

Computing contributes to the pupils' SMSC development through:
Preparing pupils for the challenge of living and learning in a technologically enriched, increasingly inter connected world.

Acknowledging advances in technology and appreciation for human achievement.

An awareness of the moral dilemmas created by technological advances e.g. social media sites, anti-social media, communication and e safety.

Providing opportunities to work as a team, recognising other's achievements and sharing enjoyment.

Using Computing for developing, planning, sharing and communicating ideas.

Approaches to teaching

All Key stages will take into account the diverse needs of our pupils and will be required to include a range of different learning styles (musical/auditory, lingual, kinaesthetic and visual) and Personal and Thinking Skills.

All classrooms are equipped with a minimum of two computers, two laptops, two iPads and an Interactive Whiteboard. It is our aim that pupil's should work on a computer or Computing application regularly. Pupils may be required to work individually, in pairs or in small groups according to the nature or activity of the task.

When group work is necessary it may occasionally be of mixed ability to enable more competent pupils to help those who are less so.

The emphasis on our teaching with Computing is on the use of computers and other Computing and ICT devices as tools to support and enhance learning.

Pupil's experiences of Computing should incorporate:

- Microsoft Office packages;
- Using communication packages;
- Data handling;
- Modelling;
- Use of touch screens, switch devices;
- Use of programmable toys/devices, i.e Bluebots, Codebugs, BBC Microbits;
- Use of cameras;
- Opportunities to work independently and co-operatively;
- Use of IT based models and simulations;
- Use of multimedia;
- Use of laptops
- Use of iPads
- Use of Purple Mash Computing Module and other software/apps

Organisation

To help ensure pupils have the opportunity to develop a wide range of skills, experiences and competencies with technology, the curriculum covers 3 strands.

Computer Science – *is the study of the foundational principles and practices of computation and computational thinking, and their application in the design*

and development of computer systems. Following instructions (Algorithms), programming devices Beebots, Bluebots, Codebugs.

Digital Literacy – is the ability to use computer systems and a broad range of digital devices such as tablets, laptops, cameras, toy with switches and desktop PCs confidently and effectively, including basic keyboard and mouse skills. Simple use of 'office applications' such as word processing, presentations and spreadsheets. Use of the Internet, including browsing, searching and creating content for the Web, communication and collaboration via e-mail.

Information Technology - deals with the creative and productive use and application of computer systems, especially in organisations, including considerations of online safety, privacy, ethics, and intellectual property.

The coverage of each strand will vary year group by year group, with some areas being covered primarily in KS1 and others primarily in KS2, KS3 & KS4.

It is important that technology is used as a day-day element of school life and across all subject areas, therefore if opportunities to use Computing arise which do not fall within the curriculum for each year group they should be taken advantage of.

Online Safety

Online Safety is a fundamental element of Computing teaching and technology use at Astley Park School. The school has a separate Online Safety policy that is embedded into the curriculum and is overseen by the designated online safety lead. Online Safety should take place regularly as part of both Computing and Personal, Social, Health education (PSHE) sessions.

Subject specialist role

The Subject Specialist role involves general oversight (monitoring and evaluating) of the subject through school. They will be involved in planning with teachers, maintain progress of the subject, attending courses where relevant and keeping abreast of changes and developments, which may affect the subject. They will develop the Policy and program of study in consultation with the headteacher/staff/governors and recommend INSET as appropriate. Monitoring the policy in operation is the responsibility of all those staff involved in the teaching of Computing. The subject specialist will be asked to contribute towards the School Development Plan, estimating and projecting costs and resources relevant to the subject appropriately.

Resources

- The Headteacher will allocate an annual budget for Computing
- ICT Manager will be responsible for the purchase of software
- The School Business Manager/ICT Manager will be responsible for the purchase of hardware

- Each individual classroom has a computer system (including PC, whiteboard /Projector or CTouch Interactive Screen)

Commercially produced support materials are kept in the ICT resource room or ICT Managers Office and should be used and replaced accordingly. Replacement consumables such e.g. mice and headphones are kept by the ICT Manager and are available on request.

Many Computing and ICT resources are deployed throughout the school to maximise access, to enhance teaching & learning and to raise attainment.

A consistent interface is provided on all machines to enable familiarity and continuity with generic 'toolkit' software licensed and available on all curriculum computers in school.

The following resources can be borrowed when needed;

4 Microphones
 3 Fuji cameras.
 3 Beebots (Programmable Floor Robot)
 6 Bluebots (Bluetooth/iPad Controlled Floor Robot)
 1 Osmo Genius Kit (for iPad)
 Class Set of Laptops (10)
 Class Set of Mini iPads (10)
 30 Codebugs
 10 BBC Microbits
 5 Raspberry Pi's
 Green Screen

Hardware Resources

- The school has a completed ICT equipment audit which is updated at least yearly
- Broken and obsolete equipment should be replaced as necessary
- All staff and pupil users have access through the curriculum network to their personal data areas, shared data, applications that are not held locally including the Intranet and Internet

Security Systems

Hardware serial numbers are recorded by the ICT Manager and kept in a Spreadsheet.

In accordance with school policy, all software loaded on school computer systems must have been agreed with the ICT Manager in the school prior to loading on the system. All master copies are to be passed to the ICT Manager and kept in a lockable cupboard. We don't allow personal software to be loaded onto school computers. All software is listed in a database, which is stored by ICT Manager.

Passwords and licenses are stored by the ICT Manager.

All classrooms are alarmed.

Upgrading of resources, repair and replacement

As Computing is an expensive and evolving resource area, the school has carefully considered the management of resources. We have acknowledged that equipment needs to be upgraded or replaced on a regular basis, and consequently the budget will need to reflect this annually.

Antivirus Software

It is the policy of the school to have antivirus software installed on all our units. All machines are protected and upgraded a minimum of once a week, by remote update where possible. Updates to the Anti-Virus Database occur at least daily on to the schools' server and are distributed to the workstations through the domain. A backup system to retrieve updates direct from county servers is also in place.

All staff with curriculum laptops should have the county anti-virus software installed and bring their laptops in at least once a term to ensure that their machine is up-to-date.

In general, Sophos, the schools Anti-Virus Software, is effective at catching a majority of Virus Attacks on a machine, though staff and pupils should adhere to guidelines about downloading of information from unsafe or unknown sites on the Internet and the use of external media devices on Curriculum machines is prohibited to only those authorised by or given by the school for the staff/pupils.

If a staff member/pupil should find that their machine has become infected with a virus, or suspect this to be the case, they should notify the ICT Manager of this immediately to ensure that the machine is quarantined from the network and is not a danger to other workstations in the school.

Health and Safety

Comfort

Pupils should be comfortably positioned with easy access to all equipment. Pupils should take frequent short breaks from computer work, such as a 10-minute break every hour, to allow eyes to readjust to greater distance.

Space

There should be enough space around each workstation for peripherals such as papers, books or other materials. There should also be space for more than one pupil at a time and for the teacher to gain access.

Monitors

These should tilt and swivel to suit the requirement of individual pupils. Screens should be positioned to reduce reflections and glare from lights and windows. Pupils should also be able to control brightness, and for many, comfort is increased if they can adjust screen colours and type fonts.

Keyboards

Pupils should have the option to have the keyboard flat or tilted, and to be able to move the keyboard to a more comfortable position on the desk to suit them.

CD's / DVD's

Always check that discs are in perfect condition by holding them up to the light to ensure there are no cracks, scratches or defects near the inner rim of the disc.

Noise

Headphones will help to reduce distractions and aid concentration. A child's ears are more sensitive than an adult's, and it is advisable to ensure that volume controls are turned down before use by pupils.

Heat and light

Ideally, the temperature for PCs should be between 18° and 24° degrees, with humidity between 40% and 60%. Almost all Computing equipment gives off heat. In many cases, this can build up during the day and become quite oppressive for users, and it is not good for the equipment. A thermometer in the room is useful for monitoring the temperature.

Blinds are provided to ensure that pupils do not suffer from glare. Clean screens give better visibility and reduce glare. Screens should be cleaned regularly using appropriate cleaning materials.

Electrical safety

Pupils should only be allowed to connect or unplug electrical equipment after proper instruction, and always under the supervision of the teacher.

Under the Electricity at Work Regulations 1989, all electrical equipment should be maintained regularly.

Ensure that keyboard and mouse connecting cables do not hang over the front of the computer workstation. Where the workstations are accessible from the rear, as in the case of trolleys, ensure that trailing loops of cable are tidied to allow easy access to equipment for maintenance and to prevent equipment from being dragged accidentally from the workstation by pupils.

Mobile equipment

When using mobile equipment, ensure that the equipment is anchored firmly when in use, and that trailing power cables are covered and secured.

Hazardous substances

Toner that is used in printers and photocopiers is a fine dust. Careful handling required the use of gloves and special waste disposal. Inhalation should be avoided, as should contact with skin. It is important to check manufacturer's instructions.

Fluids used for cleaning and in some reprographic processes are flammable. Always handle these with care and store in minimum quantities, preferably in metal containers, away from heat. Other substances, such as solvents, are dangerous to inhale. Care should always be taken to re-seal lids securely and store in upright containers. They should not be used in confined spaces, and adequate ventilation should be maintained.

Whenever possible, Computing and ICT equipment will be re-cycled, or disposed of in an ethical way.

INSET

INSET needs for Computing will be ascertained through appraisal, review, change, external advice, School Development Planning and prioritised by the co-ordinator through the Senior Management Team. Sources of INSET provision will be sought from school staff, advisory teachers and other professionals.

Inclusion

It is the responsibility of all staff to ensure that all pupils, irrespective of gender, ability, ethnicity or social circumstance, have access to the curriculum and make the greatest progress possible.

Astley Park School