AGFS Computing Policy 2024

Approved by:	Governing Body	**Date:**
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Introduction

The use of computers and computer systems is an integral part of the National Curriculum and knowing how they work is a key life skill. In an increasingly digital world there now exists a wealth of software, tools and technologies that can be used to communicate, collaborate, express ideas and create digital content. At Appletree we recognise that pupils are entitled to a broad and balanced computing education with a structured, progressive, approach to the learning how computer systems work, the use of IT and the skills necessary to become digitally literate and participate fully in the modern world. The purpose of this policy is to state how the school intends to make this provision.

Aims

At Appletree our aim is for all pupils to become safe and proficient users of technology. We believe that computing has the potential to bring topics to life, extend our knowledge beyond the realms of textbooks and enables us to develop ideas and make things happen. We aim to equip children with transferable skills to support our pupils to be independent lifelong learners with ambition to achieve in any chosen direction.

At Appletree we:

- Model and educate our pupils on how to use technology positively, responsibly and safely.
- Help pupils to understand that there is always a choice with using technology and as a school we utilise technology to model positive use as we strive to be thoughtful citizens who recognise the impact we can have on our friends, community and the wider world.
- Give pupils the Digital Literacy skills and knowledge needed in order to share their learning in creative ways.
- Actively encourage children to develop their knowledge and understanding of how computers work (Computer Science), while giving them practical experience of coding, programming and debugging.
- Encourage staff to try and embed computing across the whole curriculum to make learning creative and accessible.
- Meet the requirements of the national curriculum programmes of study for computing at Key Stage 1 and 2

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.

Rationale

The school believes that IT, computer science and digital literacy:

- are essential life skills necessary to fully participate in the modern digital world.
- allows children to become creators of digital content rather than simply consumers of it.
- provides access to a rich and varied source of information and content.
- communicates and presents information in new ways, which helps pupils understand, access and use it more readily.
- can motivate and enthuse pupils.
- offers opportunities for communication and collaboration through group working both inside and outside of school.
- has the flexibility to meet the individual needs and abilities of each pupil.

Objectives

Early years (see also early years policy)

It is important in the foundation stage to give children a broad, play-based experience of IT and computing in a range of contexts, including off-computer activities and outdoor play.

Computing in the Early Years at Appletree Gardens will be taught through a combination of well-planned learning environments alongside the specific teaching of computational thinking skills. These skills are embedded in the Early Years curriculum and delivered through a range of playful adult led and child initiated activities. Much of the 'computing' in Early Years is 'unplugged' however we also provide opportunities for children to use and explore a range of technologies including: ipads, computers, IWBs, role play resources (telephones, tills, microwaves, walkie talkies etc)

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 and computing the behaviour of 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.

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.

Appletree Gardens Computing Progression Document

Resources and access

The school acknowledges the need to continually maintain, update and develop its resources and to make progress towards consistent, compatible computer systems by investing in resources that will effectively deliver the objectives of the National Curriculum and support the use of IT, computer science and digital literacy across the school. Teachers are required to inform the computing subject leader/IT technician of any faults as soon as they are noticed. Resources if not classroom based are located in the computing suite and Resource Room. A service level agreement with North Tyneside is currently in place to help support the subject leader to fulfil this role both in hardware & software.

Computing network infrastructure and equipment has been sited so that:

- Every classroom from nursery to Y4 has a computer connected to the school network and an interactive whiteboard with sound, DVD and video facilities.
- There is a computing suite of 31 desktops.
- Each classroom from Reception to Year 4 is equipped with 6 ipads and charging stations.
- Internet access is available in all classrooms.
- Each class from Y1 – Y4 has allocated at least one slot per week for teaching computing as a discrete subject.
- The computing suite and iPads are available to book throughout the school week as part of computing lessons and for cross-curricular use.
- Pupils may use IT and computing independently, in pairs, alongside a TA or in a group with a teacher.

Planning

Our school uses planning created by the Education North Tyneside ICT Team. It includes long term plans for delivery and the whole-school scheme of work for Year 1 to Year 4 pupils.

This fully meets the objectives of the National Curriculum for Computing and allows for clear progression in computing. Pupil progress towards these objectives will be recorded by teachers as part of the school recording system. Staff will follow North Tyneside suggested units, planning guidance and assess pupil progress using our school assessment system.

A minority of children will have particular teaching and learning requirements which go beyond the provision for that age range and if not addressed, could create barriers to learning. This could include G&T children, those with SEN or those who have EAL.

Teachers must take account of these requirements and plan, where necessary, to support individuals or groups of pupils to enable them to participate effectively in the curriculum and assessment activities. During any teaching activities, teachers should bear in mind that special arrangements could be made available to support individual pupils. This is in accordance with the school inclusion policy. These children should be identified and discussed at pupil progress meetings to ensure that appropriate provisions and/or interventions are effected.

Assessment and record keeping (also see Assessment Policy)

Teachers regularly assess progress through observations and evidence. Key objectives to be assessed are taken from the National Curriculum to assess computing each term. Assessing computing is an integral part of teaching & learning and key to good practice. Assessment should be process oriented - reviewing the way that techniques and skills are applied purposefully by pupils to demonstrate their understanding of computing concepts. As assessment is part of the learning process, it is essential that pupils are closely involved.

Assessment can be broken down into;

- Formative assessments are carried out during and following short focused tasks and activities. They provide pupils and teaching staff the opportunity to reflect on their learning in the context of the agreed success criteria. This feeds into planning for the next lesson or activity.

- Summative assessment should review pupils' ability and provide a best fit 'level'. Independent tasks provide a number of opportunities and scope for pupils to demonstrate their capability throughout the term. There should be an opportunity for pupil review and identification of next steps. Summative assessment should be recorded for all pupils – showing whether the pupils have met, exceeded or not achieved the learning objectives.

We assess the children's work in computing by making informal judgments as we observe the children during lessons. Once the children complete a unit of work, we make a summary judgement of the work for each pupil as to whether they have yet to obtain, obtained or exceeded the expectations of the unit.

Recording Pupil Work

Pupils Y1 - Y4 record ICT in subject books. This will allow clear progression between ICT lessons/ units and for children to build on prior learning.

Subject overview should be glued into books at the start of each new topic. Sheets should be highlighted using the schools marking policy - see assessment. The overview is used to support the consistency of computing offer, to track progress and to ensure that the computing curriculum is being followed comprehensively.

- All children should have individual overviews in their computing books
- Support children to understand the overview - use child speak to make it accessible to children.
- There should be evidence of peer marking or self assessment to show children have ownership of the objectives/learning where possible (age\stage appropriate)

- Staff should be identifying where the evidence is stored - seesaw, purple mash, in their emails etc. There is also an evidence folder on seesaw to keep samples of pupil work and coverage.
- Add your overview to your ICT working wall.
- Pre and Post unit assessments - pencil then green pen.

Key Stage Leads should include Computing moderation in their Key Stage meetings to ensure there is consistency between year groups and key stages.

Monitoring and evaluation

The subject leader is responsible for monitoring the standard of the children's work and the quality of teaching in line with the schools monitoring cycle. This may be through lesson observations, pupil discussion and evaluating pupil work. The subject leader is allocated time each half term to complete subject monitoring.

Pupils with special educational needs (see also SEN policy)

We believe that all children have the right to access IT and computing. In order to ensure that children with special educational needs achieve to the best of their ability, it may be necessary to adapt the delivery of the computing curriculum for some pupils.
We teach IT and computing to all children, whatever their ability. Computing forms part of the national curriculum to provide a broad and balanced education for all children. Through the teaching of computing we provide opportunities that enable all pupils to make progress. We do this by setting suitable challenges and responding to each child's individual needs. Where appropriate IT can be used to support SEN children on a one to one basis where children receive additional support. Working walls in Computer Suite are an effective toolkit for pupils to develop independence and build upon prior knowledge. They display current units, vocabulary and top tips to refer back to in each session.

Equal opportunities (see also equal opportunities policy)

We will ensure that all children are provided with the same learning opportunities regardless of social class, gender, culture, race, disability or learning difficulties. As a result, we hope to enable all children to develop positive attitudes towards others. All pupils have equal access to computing and all staff members follow the equal opportunities policy. Resources for SEN children and gifted & talented will be made available to support and challenge appropriately.
The role of the Subject Leader
There is a computing subject leader who is responsible for the implementation of computing policy across the school. Their role is to:

- offer help and support to all members of staff (including teaching assistants) in their teaching, planning and assessment of computing.
- provide colleagues opportunities to observe good practice in the teaching of computing.
- maintain resources and advise staff on the use of digital tools, technologies and resources.
- monitor classroom teaching or planning following the schools monitoring programme.
- monitor the children's progression in computing, looking at examples of work of different abilities.
- manage the computing budget.
- keep up-to-date with new technological developments and communicate information

and developments with colleagues
- lead staff training on new initiatives.
- attend appropriate in-service training
- have enthusiasm for computing and encourage staff to share this enthusiasm.
- keep parents and governors informed on the implementation of computing in the school.
- liaise with all members of staff on how to reach and improve on agreed targets
- help staff to use assessment to inform future planning.

The role of the class teacher

Individual teachers will be responsible for ensuring that pupils in their classes have opportunities for learning computing and using their knowledge, skills and understanding of computing across the curriculum.

They will plan and deliver the requirements of the National Curriculum for Computing to the best of their ability. We set high expectations for our pupils and provide opportunities for all to achieve, including girls and boys, pupils with educational special needs, pupils with disabilities, pupils from all social and cultural backgrounds, and those from diverse linguistic backgrounds.

The class teacher's role is a vital role in the development of computing throughout the school and will ensure continued progression in learning and understanding, and create effective learning environments.

The class teacher will also:
- secure pupil motivation and engagement
- provide equality of opportunity using a range of teaching approaches and techniques
- use appropriate assessment techniques and approaches
- set suitable targets for learning as outlined in the inclusion policy.
- maintain up to date assessment records (see policy document).

Staff training

The computing subject leader will assess and address staff training needs as part of the annual development plan process 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 IT and computing to produce plans, reports, communications and teaching resources.

Health and safety (see also Health and Safety policy)

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

All fixed electrical appliances in school are tested by a Local Authority contractor routinely.

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 a computer technician, bursar or head teacher who will arrange for repair or disposal.

In addition:

- 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
- e-safety guidelines will be set out in the e-safety policy & Acceptable Use Policy

Security

We take security very seriously. As such:

- the computing technician will be responsible for regularly updating anti-virus software.
- use of IT and computing will be in line with the school's 'acceptable use policy'. All staff, volunteers and children must sign a copy of the schools AUP.
- parents will be made aware of the 'acceptable use policy' at the beginning of each school year.
- all pupils and parents will be aware of the school rules for responsible use of IT and computing and the internet and will understand the consequence of any misuse.
- the agreed SMART rules for safe and responsible use of IT and computing and the internet will be displayed in all computing areas.

Cross curricular links

As a staff we are all aware that IT and computing skills should be developed through core and foundation subjects. Where appropriate, IT and computing should be incorporated into schemes of work for all subjects. IT and computing should be used to support learning in other subjects as well as developing computing knowledge, skills and understanding. Our school provides pupils with opportunities to enrich and deepen learning using cross-curricular approaches as well as encouraging parental involvement.

Parents are encouraged to support the implementation of IT and computing where possible by encouraging use of IT and computing skills at home for pleasure, through home-learning tasks and use of the school website. Parents will be made aware of issues surrounding e-safety and encouraged to promote this at home.