



COMPUTING POLICY

At Fulwell Infant School Academy Computing is set within a broad, integrated curriculum. We aim to ensure that every child has access to the intentions set out in our curriculum intent document.

INTENT

A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with many other subjects including, mathematics, science, and design and technology. 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.

TIME ALLOCATION

Throughout the school year we aim to seek a balance between all subject areas. Computing will be taught using a thematic approach providing flexibility for short and long projects at a relevant time for the children to build onto all their learning. Teachers will use their professional judgement in deciding the best use of time. The Computing suite is timetabled and all classes have an allocated time slot. All classes have access to ICT equipment throughout each day. Nursery and Reception classrooms have a bank of three computers, with internet connection (fully supervised). Year 1 & 2 have access to laptops and iPads. Classrooms are also equipped with an interactive whiteboard to facilitate teaching and learning.

BEHAVIOUR and ATTITUDES

At Fulwell Infant School Academy, we ensure all pupils are provided with a high-quality computing education as it is essential for all pupils to understand modern information and communication technologies, and for them to use these skills to become responsible, competent, confident and creative participants of an increasingly digital world. We strive for all pupils to meet their full potential by setting set high expectations for all. We provide a safe and secure environment which allows the children to become competent and resilient learners. Pupils are Encouraged to apply their knowledge, skills and understanding of computers and ICT across the curriculum.



THE ESSENTIAL CHARACTERISTICS OF A Technologist AT FULWELL

Computer Science

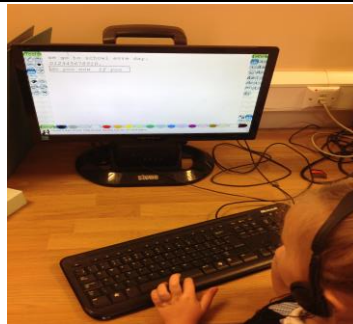
Information Technology

To enable children to become confident coders on a range of devices.



To develop ICT as a cross-curricular tool for learning and progression.

To create opportunities for collaborative and independent learning.



To promote learning through the development of thinking skills.

To enable children to understand and appreciate their place in the modern world.

Digital Literacy

To develop children's understanding of technology and how it is constantly evolving.



To allow children to explore a range of digital devices.



To enable a safe computing environment through appropriate computing behaviours.

To promote pupils' spiritual, moral, social and cultural development.





IMPLEMENTATION

- Motivate and stimulate interest and excitement for learning
- Ensure children discuss and take an active part in their learning
- Address the literacy and numeracy needs of each individual and make full use of computing in the provision of learning opportunities for all learners with additional educational needs, setting appropriate yet challenging targets for improvement.
- Provide a broad and balanced curriculum using a thematic approach where curriculum areas are linked.
- Computing is one of the most fundamentally cross curricular subject areas in education, by using technology, logic, creativity and computational thinking to solve problems that cross all disciplines. We are preparing pupils for how to live in an increasingly digital world by equipping them with the knowledge, understanding and skills to solve problems. The children will use computing as a means of making sense of the world and using what they learn in computing across the curriculum. Computing contributes to teaching and learning in all curriculum areas. 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. Computing enables children to present their information and conclusions in the most appropriate way. 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 learn how to improve the presentation of their work by using presentational or publishing software. Within Numeracy many computing 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. Ensure children embed key concepts in their long-term memory.
- Provide opportunities that extend and enrich learning to include visits or visitors, where appropriate
- Ensure that we use a range of classroom practice and teaching style appropriate to the needs of the learners in the group.
- Use the full range of differentiation (scaffold and challenge) strategies to ensure that all learners have the opportunity to access the curriculum and make progress and adopt teaching methods that reflect the differing learning styles of the individuals in the group.
- Monitor progress against targets and share the information with the learner and parents.
- Seek to overcome potential barriers to effective inclusion.
- Ensure display in the learning environment celebrates the achievement of our children and scaffolds their learning to extend their achievement further.
- Provide home learning activities which extend and support learning.



CURRICULUM PLANNING FOR COMPUTING

Curriculum planning for Computing

Long term plans

Purple Mash schemes of work are used to map out the themes covered in each term for each year group in key stage 1. The Purple Mash Computing Scheme of Work is a comprehensive set of resources aligned to the National Curriculum for Computing, Technology and Digital Competence. The Schemes of Work facilitates teachers in achieving the very best outcomes for all children. They expose children to a wide variety of digital tools, technological skills and innovations to enable them to become informed members of the digital community. The schemes contain everything that is needed to deliver inspiring and engaging lessons whilst allowing for the flexibility to meet individual school needs. The overlaps between some of the units are to deepen understanding of computational concepts and provide opportunities for pupils to apply and extend understanding and make links in their knowledge and capabilities. The curriculum leader for Computing will liaise with all curriculum leaders to ensure that learning builds upon learning.

The scheme of work for Early Years (Reception) provides opportunities for using Mini Mash or Purple Mash as part of the Early Years classroom to support children in working towards early learning goals.' The Children are given a broad, play-based experience of computing in a range of contexts, including outdoor play. Computing is not just about computers. Early years learning environments feature Computing scenarios based on experience in the real world, such as, through role-play. Children gain confidence, control and language skills through opportunities to explore, using non-computer based resources such as metal detectors and BeeBots. Recording devices support children to develop their communication skills.

Medium term plans

- A mapping overview of content [which are constantly being reviewed and amended to ensure relevance for the cohort of children, give details of each unit of work for each term. They ensure an appropriate balance and distribution of work across each term.
- Key skills development to ensure children progress at a level according to their ability. They identify learning objectives and outcomes for each theme.

Short-term plans are completed by staff for each block of learning.

These include:

- The specific learning objectives and detail how the lessons are to be taught,
- Success criteria which are shared with the children to ensure children understand their next steps to learning,
- Activities to engage the children and to lead their development through active participation.

The activities in Computing are planned so that they build upon the prior learning of the children. The children of all abilities are given the opportunity to develop their skills, knowledge and understanding and we also build planned progression into the scheme of work, so that the children are increasingly challenged as they move through the school.



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Planning is recorded in class files which are accessible to all staff. In this way subject/curriculum leaders can monitor and develop learning within their curriculum area. Scrutinies of planning and work are carried out by subject leader/leadership with feedback given to ensure children access the full curriculum. We will ensure that we plan to meet the needs of the following clearly identifiable groups:

- Gifted and talented learners
- Learners from different ethnic groups
- Learners for whom English is an Additional Language
- Learners with Special Needs and disabilities
- LGBT
- Learners with emotional, behavioural or social needs
- Learners who are at risk of disaffection or exclusion
- Learners who are "Looked After" in public care
- Learners in receipt of Pupil Premium.

SPIRITUAL, MORAL, SOCIAL AND CULTURAL DEVELOPMENT

Learning through Computing contributes to the children's spiritual development in many ways. We provide children with the opportunity to discuss moral questions, what is right and wrong. Children learn how society has changed and develop skills to become good citizens. They study their own rich cultural heritage and developing an understanding of how this culture is enriched by the multi-cultural British society of today, based on British values of democracy, the rule of law, individual liberty and mutual respect and tolerance of those with different faiths and beliefs.

PERSONAL DEVELOPMENT

Children at Fulwell Infant School Academy demonstrate the following values whilst learning about Computing by:

Democracy:

- Listening to everyone's ideas in order to form a majority.
- Working as part of a team and collaborating to use computing devices effectively.

Rule of Law:

- By developing knowledge of lawful computing behaviours.
- Demonstrating respect for computing laws.

Individual Liberty:

- Taking responsibility for our own computing behaviours.
- Exercising rights and personal freedoms safely through knowledge of E-safety.

Respect and Tolerance:

- Showing respect for other cultures when undertaking research using computing devices.
- Providing opportunities for pupils of all backgrounds to achieve in computing.



INTERNET SAFETY

Internet access is planned to enrich and extend learning activities. The school has acknowledged the need to ensure that all pupils are responsible and safe users of the Internet and other communication technologies. Although the school offers a safe online environment through filtered internet access we recognise the importance of teaching our children about online safety and their responsibilities when using communication technology. Teachers plan in regular lessons on internet safety to ensure that children are kept up to date with the latest steps on how to ensure their privacy and safety online. Purple Mash schemes of work are used to cover all aspects of keeping safe online; it offers a secure programme to carry out a range of activities in a safe space e.g. sending emails securely. We also acknowledge and take part in Internet Safety Day every year. This encourages children to share practical advice on how to stay safe on sites that the children regularly use.

We ensure through high quality e safety teaching that all pupils are educated about E-safety issues and appropriate behaviours so that they remain safe and legal online. Making clear the guidelines about the ethical use of the internet and how we keep ourselves and others safe e.g. discussing the moral and social implications of cyber-bullying at an age appropriate level. We ensure pupils develop critical thinking skills to reflect and enable them to keep themselves safe and to keep any personal data and information secure and to minimise the risks of handling sensitive information. The school has an E-safety policy in place that details how the principles of E safety will be promoted and monitored in school

ENRICHMENT

The immediate environment is a rich source of experiential learning and can be used to deepen children's Computing skills, knowledge and understanding. The National Curriculum aims can be further developed by children experiencing our local environment as a positive stimulus for children's learning.

RESOURCES

We have sufficient resources available in school to meet the needs of the Academy Curriculum. This allows resources to be matched to any developments in the curriculum, through the teaching of knowledge, skills and understanding. In Computing, we encourage the children to work confidently with a variety of equipment, including iPads, computers and programmable toys. Each reception classroom has a bank of three computers, with internet connection (fully supervised). Classrooms are also equipped with iPads and interactive whiteboards to facilitate teaching and learning. In addition, there is a dedicated IT resources room, which enables whole-class teaching of computer skills, including work on coding - an introduction to computer programming. The school uses Espresso to cover elements of the KS1 computing curriculum.



ASSESSMENT

Formative assessment involves spending time before and during each unit or theme time eliciting children's knowledge and understanding - Mind Mapping/ Spider Graphs, discussions etc. We follow the principles of Assessment for Learning in all of our Knowledge and understanding. This involves identifying a child's progress in each area of learning, determining what each child has learned and identifying the next steps in his/her learning, linked to the learning intention and success criteria for the session. Effective tools used by our teaching staff include:

- Sharing explicit learning intentions and success criteria
- Quality questioning Self-assessment and peer assessment against learning intentions and success criteria
- Quality marking to identify areas where the success criteria has been met and areas that need to be improved
- Summative assessment involves spending time at the end of each unit or at the end of year assessing children's skills and understanding. The National Baseline (2019) will provide a baseline assessment level for each child. Class teachers assess children against
- Key learning, identified on the termly foundation plan. This identifies children needing additional support and those who are working at a mastery level.

Assessment against the National Curriculum allows us to consider each child's attainment and progress against age related expectations. This ensures that our teaching is matched to the child's needs. Intervention is provided, as set out in the renewed SEN code of Practice (2014), through quality first teaching and where a child is in receipt of a statement of Special Educational Needs or Education Health Care (EHC) plan a specific education plan will be in place linked to specific targets. The targets may include, as appropriate, specific targets relating to the Computing. There is a facility within Purple Mash for teachers to set activities for the children, which they can then complete and hand-in online (2Dos). This enables teachers to assess the children's work easily and to use this information to assist future planning.

INCLUSION

The governors and staff of the academy are committed to providing an inclusive range of high quality learning opportunities for everyone involved with the school and Community. We will ensure that everyone has an equal opportunity to access the full range of provision available in Computing and will actively seek to remove barriers to learning and participation. The teaching and learning, achievements, attitudes and well-being of every child are important.



HEALTH AND SAFETY

The teacher will be responsible for planned activities within Computing that are appropriately risk assessed to comply with health and safety requirements. They are also responsible for the health and safety of themselves, classroom assistants, visitors and pupils within their class.

IMPACT

Leadership will consider first hand evidence of how children are doing in each subject. Quality first teaching in response to the planned curriculum will provide evidence and information to answer the key questions listed below:

- Do all our children achieve as much as they can?
- Are there differences in the achievement of different groups of children?
- What are we doing for those children who we know are not achieving their potential?
- Are our actions effective?
- Is the curriculum promoting outstanding learning?

SUBJECT LEADER

The Subject Leader has the responsibility for overseeing and resourcing the subject. There is an annual budget for resourcing Computing so that effective teaching can take place and the school's policy can be maintained. This may vary from year to year according to curricular priority and resources available.

(see role of subject leader document)

MONITORING AND REVIEW

The leadership team (including the subject leader) is responsible for monitoring planning and the standard of children's work. Monitoring activities include planning and work scrutinies. This involves interviewing children across key stages. Children are asked focused questions about their learning with their work. This enables curriculum leaders to monitor progress within their subject. The curriculum leader supports colleagues in the teaching of Computing, by giving them information about current developments in the subject and by providing a strategic lead and direction for the curriculum area in the school. Curriculum leaders meet with governors, as appropriate, to discuss current developments in their subject. Key questions are discussed during these meetings.

Eve Dunbar