



Computing Policy

Gagle Brook Primary and Nursery School

Gagle Brook School's Computing Statement of Intent

At Gagle Brook Primary and Nursery School, we are passionate that our children will leave us as effective digital learners. Our aim is that each child will develop the skills to access technology as a tool for learning and contribute positively to the ever-changing digital world. We want our children to be safe and good digital citizens in society, so these skills are woven into our daily lives at Gagle Brook, becoming habitual. Through computing, children learn to be critical thinkers, problem solvers and computational thinkers that can be transferred into all aspects of their life. We encourage children to develop their own curiosity and challenge themselves in all their learning.

Principles

At Gagle Brook Primary and Nursery School we aim to:

- Meet the requirements of the National Curriculum programmes of study for computing.
- Provide a relevant, challenging and enjoyable curriculum for computing for all children.
- Use ICT and computing as a tool to enhance learning throughout the curriculum.
- Respond to new developments in technology.
- Equip children with the confidence and capability to use ICT and computing throughout their later life.
- Develop the understanding of how to use ICT and computing safely and responsibly.
- Enable children to become effective and reflective digital learners;

The National Curriculum aims to ensure that all children:

- 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.

Objectives

Early Years

It is important in the Foundation Stage to give children a broad, play-based experience of Computing in a range of contexts, including outdoor play. Computing is not just about computers. The early years learning environments feature Computing scenarios based on experience in the real world; such as role play. Children gain confidence, control and language skills through opportunities to explore using non - computer based resources such as metal detectors, controllable traffic lights and walkie-talkie sets. Recording devices such as sound clipboards support children to develop their communication skills. This is particularly useful with children who have English as an additional language.

By the end of key stage 1 children should be taught to:

Computer Science

- 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

Information Technology

- Use technology purposefully to create, organise, store, manipulate and retrieve digital content

Digital Literacy

- 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 children should be taught to:

Computer Science

- 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; (Digital Literacy) how they can provide multiple services, such as the World Wide Web, and the opportunities they offer for communication and collaboration

- (Digital Literacy) Use search technologies effectively, (CS) appreciate how results are selected and ranked, and be discerning in evaluating digital content

Information Technology

- 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

Digital Literacy

- Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

Teaching and Learning

At Gagle Brook Primary and Nursery School, we ensure that our curriculum is planned for and delivered using the six principles of learning providing rich opportunities for challenge, explanation, modelling, practice, questioning and feedback. We have high expectations for all pupils, all of the time. We encourage students to be resilient, question, have time to practice a skill and we support them in responding to modelling, feedback and critique so they can improve their work and learning behaviours. We like them to be inspired by the excellent work of others and use challenge as a key driver in everything we do.

We follow the Computing National Curriculum aims through our own developed 'Scheme of Work' which reflects our school's "big questions" and is adapted to suit the needs of our children. Our teaching and learning is ambitious so that children are always engaged, challenged and

continually building on their previous understanding. From EYFS through to Y6, we provide a broad, balanced and progressive curriculum, covering the three key strands in Computing: **Computer Science**, **Information Technology** and **Digital Literacy** along with eight Online Safety topics; Online Bullying, Health, Well-being and Lifestyle and Managing Online Information based on 'Education for a Connected World'- Evolve Project framework.

In Early Years, children have a variety of equipment when carrying out their learning challenges. They are encouraged to use IT on a daily basis to capture snapshots of their learning, and share their work with others. The children are also able to interact with remote control toys and explore how to programme simple robots in order to make them move. They use technology in role play scenarios and we use these opportunities to teach them how to stay safe when using technology especially when online.

The safety of our children is paramount; therefore, online safety is taught regularly and is part of our everyday lives at Southwold. The children are taught about online technology, its impact on behaviour and development, as well as what skills they need to navigate it safely. Children use SMART Rules and our school values, including the 4Rs (Respect, Responsibility, Reasoning & Resilience) to stay safe online and are encouraged to speak to an adult if they feel uneasy at any time while using the Internet. For our older children, we provide multiple reporting routes like the CEOP reporting tool via our website, as well as Childline. Staff have regular updates, training and take part in Safer Internet Day activities with the children. We communicate regularly with parents and offer support in school to help support parents, carers and the wider community.



We use IT to support learning in a range of cross curricular ways, to enhance child's learning experience throughout their time with us. In Key Stage 1 and 2, the children are able to learn and develop the skills and techniques that allow them to present their work creatively in a variety of

ways. They also learn how to store and organise files so they can be found easily. Our school uses 'Purple Mash' to produce a variety of work, and provide access to the platform at school and home.

Within Computer Science, the children use Computational Thinking to solve problems effectively with or without a computer. They think of a sequence of steps (algorithm), needed to solve a problem. Then they use their technical skills by coding a program on the computer. So, when programming, the children develop knowledge of digital systems by writing an algorithm and implementing these as code. The children are taught to be detectives by finding mistakes in a program and fixing/ debugging them to make them work more effectively. In KS2 they build up knowledge about computer networks so that they understand how the internet works and how searches are performed.

(See our Computing skills coverage and progression document & our long-term planning document for more information.)

Resources

Each teacher has access to a laptop in their classroom and an interactive whiteboard. EYFS staff have separate ipads to record child's progress on Tapestry. Computers around the school are networked and have Internet access.

Online resources for home use

To ensure that our children have access to online educational opportunities inside and outside of school, we have bought or set up free access to:

- PurpleMash
- Oxford Owl
- Explorify (free)
- Tapestry (EYFS Staff & parents)

Childs have passwords that can be used to access these sites. Childs have been shown how to use them and how to keep their passwords safe from others.

Cross-curricular links

Computing is used to enhance learning across all areas of the curriculum. We use technology, logic, creativity and computational thinking to solve problems that span across all topics. It is the systematic breakdown (decomposition) of both the problem and the solution e.g. how to make a sandwich by using precise instructions and 'debug' it if the process is not working effectively. Technology is used to improve other topics e.g. create a mini scenario to demonstrate a topic vocabulary through 'Green Screen', using Pic Collage app to show the learning at the end of a topic or PowerPoint to show the process of how a volcano erupts.

Teaching 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 to provide a broad and balanced education to all children. Through our Computing teaching, we provide learning opportunities that enable all children to make progress. We do this by setting suitable learning challenges and responding to each different need. Assessment against the National Curriculum allows us to consider each child's attainment and progress.

When progress falls significantly outside the expected range with a range of subjects/ specific areas, the child may have special educational needs. Our assessment process looks at a range of factors – classroom organisation, child's teaching materials, teaching style, differentiation – 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.

Interventions are planned when a teacher has assessed that a child has a particular need. As we adopt a fully inclusive approach to teaching, we enable children to have access to the full range of activities involved in learning Computing.

Teachers provide help with communication and English through:

- using texts that children can read and understand;
- using visual and written materials in different formats;
- using ICT, other technological aids and materials (e.g. talking tins);
- using alternative communication, such as signs and symbols;
- using Google translate.

Performance

Teachers constantly assess the children's work. To assess Computing, at the beginning and the end of each unit, children complete concept cartoons to demonstrate their progress made. Younger children may draw, write or discuss this with a member of staff. Teachers then use this information to feed into their future planning to support or challenge children. Every class has their own working wall to aid the teaching and learning of topics. This is a place that children can refer to key vocabulary, processes and examples of work, to support and challenge them. At the end of each topic, teachers select a sample of work to put in our 'Floor book' which shows progress between year groups and for each strand. We have this range of assessments to measure progress against the key objectives which the future teacher then uses to plan and adapt the following year's work.

A written report is sent to parents at the end of the year which highlight's their children's computing ability and provides direction for their future development.

Monitoring and review

Monitoring of the standards of the children's work and of the quality of teaching in Computing is the responsibility of the lead. The work of the subject lead also involves supporting colleagues in the teaching of Computing, being informed about current developments in the subject, and providing a strategic lead and direction for the subject in the school. The coordinators give the principal an annual summary report in which s/he evaluates the strengths and weaknesses in the subject, and indicates areas for further improvement.

Signed: Mrs C Palser

Date: July 2022