The Queenswell Federation

COMPUTING POLICY

Policy Written by: Susan Smith & Laura Georgiou

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Rationale

As a Federation we understand that computing is an integral part of daily life. We want to provide the best possible opportunities for everyone.

We believe:

- Computing should be embedded as a natural part of everyday school life.
- All staff are provided with opportunities to further develop their computing skills and knowledge in order to feel confident and competent.
- Our expectations are high, but realistic – irrespective of ability, age, gender or race.
- We will provide, through the use of technology, a flexible learning and teaching environment that meets the needs of all the learners and contributes to raising standards and pupil's achievements.
- Computing will continue to develop – enhancing, supporting and changing the way in which we learn, teach, access computing and communicate.
- Pupils, staff, parents and governors will be provided with opportunities to access and use a range of computing equipment.

Equalities

At The Queenswell Federation we believe it is the right of all pupils, regardless of their gender, ethnicity, physical ability or linguistic, cultural or home background to have access to high quality learning experiences in stimulating and supporting environment where prejudice and stereotyping are challenged.

We are strongly committed to positive action to remove and challenge discrimination in all aspects of the Federation and its work. The importance of staff awareness regarding the dangers of preconceived expectations based on stereotypes is essential and we bear this in mind when teaching computing.

Aims

- Provide a relevant, challenging and enjoyable Computing curriculum 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.
- To respond to new developments in technology.
- To equip pupils with the confidence and capability to use Computing throughout their life.
- To enhance learning in other areas of the curriculum using computational skills.
- To develop an 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 and concepts of computer science, including abstraction, logic, algorithms and data representation.
- 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

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 programmes are executed by following precise and unambiguous instructions
- create and debug simple programmes
- use logical reasoning to predict the behaviour of simple programmes
- use technology purposefully to create, organise, store, manipulate and retrieve digital content
- 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 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 programmes
- use logical reasoning to explain how a simple algorithm works and to detect and correct errors in algorithms and programmes
- 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.

Implementation

A range of teaching and learning styles appropriate to the teaching of skills as laid down in the scheme of work includes:

- The Federation has an evolving bespoke scheme of work.
- Each year group plans cross curricular activities when possible.
- KS2 pupils are taught by a subject specialist teacher once a week for 1 hour.
- Working in mixed ability groups and individually.
- Discussion and questioning.
- Online Safety assemblies take place regularly throughout the year to promote specific online safety issues or special days, e.g., Safer Internet Day.
- Computing planning follows our bespoke scheme of work which is evolving all the time. We aim for computing to be integrated across the curriculum and for computing skills to be taught in context. Computing is recognised as a science.

Role & Responsibilities

Teacher

- To implement the Computing Scheme of Work in accordance with the National Curriculum and school policy.
- To support the Computing Policy through its use in other subjects
- To ensure lessons are evaluated and assessments completed and/or adjusted according to the needs of individual children.

Computing Leader

- To offer help and support to all members of staff (including teaching assistants) in their teaching, planning and assessment of computing.
- To provide colleagues opportunities to observe good practice in the teaching of computing.
- To maintain resources and advise staff on the use of digital tools, technologies and resources.
- To monitor classroom teaching or planning following the schools monitoring programme.
- To monitor the children's progression in computing, looking at examples of work of different abilities.
- To manage the computing budget.
- To keep up to date with new technological developments and communicate information and developments with colleagues
- To lead staff training on new initiatives.
- To attend appropriate in-service training
- To have enthusiasm for computing and encourage staff to share this enthusiasm.
- To keep parents and governors informed on the implementation of computing in the school.
- To write the Computing Policy, Online Safety Policy and AUP's.
- To report to the Governors via the Executive Headteacher's report.

LMT

- To oversee and support the work of the Computing Subject Leader.

Resources and access

The Federation 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 / technician of any faults as soon as they are noticed.

Health and Safety

- Children should not be responsible for moving heavy equipment around the school. They may load software but should not be given the responsibility of plugging in and switching machines on without a member of staff present.
- Food and drink should not be consumed near computing equipment.
- It is the responsibility of staff to ensure that classroom computing equipment is stored securely and tidy after use.
- Staff should ensure that the children are seated at the computing equipment comfortably with both feet firmly on the floor and backs straight. Children should be made aware of the dangers of continuous use (e.g., eye/wrist strain etc.).
- An adult should always supervise children when they are accessing information via the Internet. The service provider does filter information, but staff are responsible for information accessed by pupils (See Online Safety Policy).

Assessment

Pupil's work in computing is assessed continuously. Records are kept in the form of teacher evaluations, evidence of pupil's work is saved online (KS2), is recorded in a class floor book (KS1) and in Early Years work is recorded on Tapestry. Data is recorded on RouteMap. Teacher assessments, including the mid and end of year levels achieved, are reported to parents, and assessments are passed on to the next class teacher.

Monitoring, Evaluation and Review

- The quality of teaching and learning of computing is monitored through lesson observations, monitoring of planning and examples of pupils' work. Staff are given constructive feedback. The monitoring outcomes are passed on to the Senior Leadership Team and any whole school areas of development are discussed with all staff.

- Curriculum Subject Leaders are expected to monitor the use of subject specific computing in use in the classroom in relation to their own schemes of work.

The quality of the teaching and learning of computing across The Federation is monitored and evaluated by the Computing Subject Leader through:

- Monitoring of planning
- Lesson observations and team teaching

The following aspects will be considered when evaluating the effectiveness of this policy:

Planning includes:

- Activities are based around the components of the National Curriculum
  - can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
  - 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
- Activities which can be adapted in terms of difficulty.
- Resources to be used.
- Key vocabulary.
- Opportunities for children to review, evaluate and improve their work.

Teaching:

- A clear progression of computing is taught across The Federation.
- Good understanding of subject knowledge is demonstrated.
- Clear instructions and use of relevant teaching points.
- High expectations evident and success criteria made clear to children re – behaviour, participation, and development of skills.

- Good organisation of class and resources
- Enthusiasm and praise used throughout the lesson, promoting children's self-esteem.
- Previous work is referred to and built on to extend knowledge.
- Opportunities for creativity and challenge evident in lessons.
- Opportunities for gifted and talented pupils to be extended.
- Appropriate use of teaching support assistants.
- The lesson is well paced.
- Opportunities for children to evaluate and reflect.

A good standard of learning has been achieved when children:

- Have met or exceeded the learning objectives, demonstrating progress in the skills learnt.
- Can use resources effectively and appropriately.
- Are able to make links between previous computing skills and ideas.

Outcomes – children demonstrate:

- Their ability to code.
- Their ability to use IT software.
- They know how to be safe online.
- They can tell you about the history of computing and pioneers