Katherine Semar Schools

COMPUTING POLICY

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Katherine Semar Schools
COMPUTING POLICY

INSPIRE CURRICULUM

At Katherine Semar Schools we have developed the INSPIRE curriculum, which is underpinned by what we believe makes an outstanding curriculum for our children; offering them opportunities to question, be challenged, investigate, experience, communicate, create and understand. Learning is developed in a cross-curricular approach wherever appropriate and the children are given real contexts for their learning which motivate them by creating a genuine purpose for learning.

OUR AIMS IN Computing – What do we want to do?

The schools' aims are to:

- Provide a broad, balanced, challenging and enjoyable curriculum for all pupils.
- Develop pupil's computational thinking skills that will benefit them throughout their lives.
- Meet the requirements of the national curriculum programmes of study for Computing at Key Stage 1 and 2
- To respond to new developments in technology
- To equip pupils with the confidence and skills to use digital tools and technologies throughout their lives.
- To enhance and enrich learning in other areas of the curriculum using IT and Computing.
- To develop the understanding of how to use computers, digital tools and the internet safely and responsibly

The school believes that Online Safety, Computer Science and Digital Literacy:

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

In-line with the National Curriculum 2014 we aim to ensure 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.

OUR IMPLEMENTATION – How will we achieve our aims?

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 is not just about computers. Early years learning environments should feature IT scenarios based on experience in the real world, such as in role play. Children gain confidence, control and language skills through opportunities such as 'programming' each other using directional language to find toys/objects, creating artwork using digital drawing tools and controlling programmable toys.

Outdoor exploration is an important aspect and using digital recording devices such as video recorders, cameras and microphones can support children in developing communication skills. This is particularly beneficial for children who have English as an additional language.

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, both digitally and 'unplugged'
- use logical reasoning to predict and compare 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.

Mastery Curriculum

We understand that every learner develops differently and adapt our provision continuously to ensure every child receives the correct balance of support and challenge in order to achieve their very best. We recognise this fact and provide suitable learning opportunities for all children (including those who may be gifted and talented or have additional needs) by matching the challenge of the task to the ability of the child. Each child is valued, respected and challenged regardless of ability, race, gender, religion, social background, culture or disability.

OUR IMPLEMENTATION – How will we achieve our aims?

Computing long term plan
- Each year group will experience the areas of music identified in the school's long term plan to ensure coverage of statutory knowledge and skills.

- The school's computing progression of skills will be used to identify the learning objectives for each year group, in line with the school's raised expectations.

Cross-curricular learning and real world contexts.

- Wherever possible, a cross-curricular approach will be taken to the teaching of computing. Lessons will often be linked to children's learning in other subjects such as Science, Art and Geography.

Topic launch and land

- Each half term topic will begin with a cross-curricular launch event to engage and motivate the children. This will also act as 'knowledge harvest' allowing teachers to assess children's existing knowledge and skills in order to adapt planning and ensure appropriate levels of challenge for all children.
- Each half term will end with a land event which celebrates children's learning and progress. This will involve the children communicating their learning in some way, for example exhibitions or assemblies.

A whole school commitment to Computing

- Computing is a highly valued aspect of our school curriculum and permeates all aspects of our school community.
- A budget is allocated to Computing every year with a dedicated team from SAT (Saffron Academy Trust) including a network manager to ensue effective Computing delivery is a priority.

Extra-Curricular activities

- In KS2 there is a Coding club for children to access and expand their knowledge of this aspect of curriculum.
- There are excellent links with secondary school, which often put on enrichment events for Computing.

Challenge and support for all learners

- We understand that every learner develops differently and adapt our provision continuously to ensure every child receives the correct balance of support and challenge in order to achieve their very best. We recognise this fact and provide suitable learning opportunities for all children (including those who may be gifted and talented or have additional needs) by matching the challenge of the task to the ability of the child. Each child is valued, respected and challenged regardless of ability, race, gender, religion, social background, culture or disability.

Assessment

We use MAPP (Mapping attainment and progress for pupils) to assess children's progress against the expectations of our INSPIRE curriculum. We assess children against both the requirements and standards of the National Curriculum as well as our school's own raised expectations for all children.

OUR MONITORING – How will we monitor the effectiveness of our Computing policy?

At Katherine Semar we believe that the most effective way to monitor the impact of our Computing policy is to utilise and triangulate a broad range of moderating activities, involve our stakeholders, and apply these regularly, consistently and robustly. Through our annual Monitoring, Evaluation and Review cycle, we employ the following monitoring activities in Computing:

- **Lesson Observations and Learning Walks**
  - Senior Leaders and Subject Co-ordinators regularly undertake planned and unplanned lesson observations and learning walks. These have a clear focus and feedback and findings are used to inform individual and whole-school Continuing Professional Development (CPD), School Development Planning and future monitoring activities.
- **Internal Assessments**

In line with the school's assessment policy, each year group undertakes a range of internal and external assessments as appropriate to their age and stage of development. Data from these assessments is used to inform planning, teaching, interventions, and adult support to ensure all children are making maximum progress.

- **MAPP (Mapping attainment and progress for pupils)**
    We use MAPP to assess children's progress against the expectations of our INSPIRE curriculum. We assess children against both the requirements and standards of the National Curriculum as well as our school's own raised expectations for all children. This is analysed annually and used to inform our school development plan.

- **Work Scrutinies**
    - Work scrutinies are carried out by subject coordinators, Senior Leadership Team and whole staff.

- **Pupil Conferences**
    - Every child from Year Three to Six has an individual pupil conference each term which supports children to take ownership of their own learning, review their progress and set themselves development targets.

- **Governor Visits**
    - As part of the Governors' Monitoring, Evaluation and Review cycle, lead governors in each subject, make regular visits to school to monitor progress towards the school development plan.
    - Monitoring activities include a range of teaching and learning observations, discussions with subject co-ordinators, meetings with pupils, visits to subject specific celebration assemblies, work scrutinies and subject leader reports.

- **Pupil interviews**
    - Senior staff, subject co-ordinators and governors take regular opportunities to listen to the views of pupils in relation to their experience of Computing at our school and their feedback actively informs subject development through our curriculum action plan.

- **Planning Scrutiny**
    - Planning scrutinies are carried out by subject coordinators and Senior Leadership Team.