Katherine Semar Schools

SCIENCE POLICY

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Katherine Semar Schools Curriculum

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Katherine Semar Schools

SCIENCE 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 SCIENCE – What do we want to do?

At Katherine Semar Schools, pupils not only acquire the necessary knowledge, but also understand its value, enjoy the experience of working scientifically, and sustain their interest in learning it. Pupils discover the concepts revealed through observing scientific phenomena and conducting experimental investigations for themselves. Then they are more likely to continue to study science and use that learning for work, for family, and to contribute as informed citizens.

At Katherine Semar Schools, Science is a valued part of the curriculum providing a purposeful means for exploring, appreciating and understanding the world in which we live. Through building up a body of key foundational knowledge and concepts, pupils are encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They are encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.

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

- develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
- develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them
- are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.

OUR IMPLEMENTATION – How will we achieve our aims?

Science long term plan

- Each year group will teach the areas of Science identified in the school's long term plan to ensure coverage of statutory knowledge and skills.
- Each year group will teach all areas of Working Scientifically through planned investigative work, as identified in Year Group planning.
- The school's Science 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 Science. Lessons will often be linked to children's learning in English, Maths, Computing, Geography, PSHE etc.

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.

Enrichment

- We understand, through analysis of relevant research, that engaging real life experience is an essential element of an outstanding Science curriculum and therefore ensure it is a high priority for all learners.
- Outdoor and practical science is carried out in every year group across the school and the skills progression ensures children gradually build their experience and working scientifically skills across the school.

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. We assess them in working scientifically as well as their knowledge and understanding in each aspect of their study.

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

At Katherine Semar we believe that the most effective way to monitor the impact of our Science 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 Science:

- **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 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 Two to Six has a learning mentor from the senior leadership team. They have individual pupil conferences 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 Science at our school and their feedback actively informs subject development through our curriculum action plan.
  - Children meet with subject leaders to discuss their science learning and books