

PENRYN PRIMARY ACADEMY - SCIENCE POLICY 2021**Our intent is to:**

Provide a curriculum to meet the needs of all pupils, to develop their knowledge and understanding of science and their ability to think and act scientifically. We encourage children to be inquisitive throughout their time at school and beyond. We endeavour to offer pupils a wide range of opportunities and contexts for the application of key concepts in the form of investigations, where possible, promoting working scientifically skills in order to develop confidence and enjoyment in science. Our curriculum encompasses the acquisition of knowledge, concepts, skills and positive attitudes to cover the National Curriculum.

Understanding key concepts

We realise that it is essential for the children at Penryn Primary to:

- 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.
- Be equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.
- Develop a 'can do' attitude and perceive themselves as scientists.

Working scientifically

This will enable pupils:

- To develop skills in posing questions, suggesting ideas and making predictions, which increasingly draw on their scientific knowledge and understanding.
- To plan and carry out investigations which answer questions that they have posed.
- To consider the evidence they have collected, look for patterns, draw conclusions and offer explanations.
- To record and display information using a range of methods.

Pupils' school-based experiences

We believe that, wherever possible, science should be of a practical nature. We encourage children to work scientifically. These skills are not always taught discreetly, but through lessons that have substantive scientific content. Teaching of these skills starts at EYFS and progresses through to Key Stage 2. The school environment includes opportunities, which should be taken advantage of. Technology is used to enhance the science curriculum wherever possible.

Pupils' experiences beyond the school gates

Where appropriate visits to external sites should be arranged to complement the children's in school scientific learning. These visits must contribute to the broadening and enhancement of the Science Curriculum.

Inclusion

Science is carefully planned to ensure that it is accessible for all children.

EYFS

In EYFS Science is taught through the aspect of The World, within the area Understanding the World, which is a Specific Area of the EYFS curriculum.

In our nursery and reception classes, aspects of Understanding the World are taught on a daily basis through Continuous Provision areas, outdoor activities, topic work and educational visits. In Reception this is further developed through participation in British Science Week. We follow the Development Matters curriculum and use the Ogden Trust materials to help deliver this. Every half term there is a different focus to ensure the development of fundamental skills.

We use Tapestry, our online learning journal, to record and track children's progress and achievements in Understanding the World against the Development Matters statements. Children's progress within Understanding the World is reported to parents through settling in and focus child meetings throughout the year. In line with statutory requirements children are assessed against the Early Learning Goals for Physical Understanding the World at the end of the Reception year and this is reported to the LA and parents.

Planning and teaching of Science

The school delivers the requirements of the national curriculum primarily through a variety of carefully selected resources. Each lesson is carefully crafted to ensure key concepts and working scientifically skills at age related expectations (ARE) are being met, where possible. To ensure coverage and progression, all year groups have clearly identified these on their coverage maps and identified their intent statements linked to each topic. Differentiation is achieved in a number of ways, e.g. by task, outcome or adult intervention. Furthermore, staff identify opportunities for purposeful cross-curricular links with other subject areas. At Penryn, we see the important value in having well-tailored and bespoke slides for our children in science lessons. As these slides are in detail, teachers do not provide written planning and instead, focus on creating well prepared lessons using a variety of resources.

Marking

Science marking is in line with our school marking policy.

Monitoring procedures

The Head of School, phase leaders and science subject leader play a central role in the monitoring and evaluation of the quality of teaching and learning in the school.

Monitoring includes: book scrutiny, assessment reviews, pupil conferencing and learning walks.

Assessment

Rising Stars Assessments are used after every topic from Year 2 onwards to identify strengths and areas for development. 'Working scientifically' skills are assessed by staff at age related expectation, where possible, to ensure progress through Key Stage 1 and Key Stage 2.

In Key Stage 2, the children's science books move through the school with them. This means that evidence for end of Key Stage 2 judgements will be based from work dating back to Year 3. At the end of each year, all year groups will be asked to make an informed judgement of attainment (WTS, EXS or GDS) on each child in science for the summer data drop. They will use a triangulation of observations, pupil work and formative assessments to support this end of year summative assessment. Teachers' ongoing assessments are used to inform planning and teaching. Assessment data is analysed and used to support planning and next steps.

Safety

Staff are aware of and have access to the ASE publication "BE SAFE." All teaching staff have also received training on AssessNet.

Liaison with other schools

We are developing our relationship with other establishments, particularly Penryn College and the University of Exeter (Penryn Campus) so we can make use of expertise and resources in the local area. In addition to this, we are also part of an OGDEN Trust Partnership which provides valuable opportunities for collaboration with other schools within the Academy, training opportunities and resources, funding towards science fayres, school trips and opportunities to broaden the use of STEAM within the school.

Date reviewed: 04/05/21

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