

Science Policy

Christ the King RC Primary School



Background

At Christ the King School our mission statement explains that within the Catholic environment children are encouraged to accept moral responsibility for their actions. It is within this spirit that the school's science policy has been developed.

Together we **WONDER**

Together we **BELIEVE**

Together we **SHINE**

Together we **ACHIEVE**

Principles of teaching science (developed for PSQM Silver Award 2017-2020)

We want all our children and staff to:

- Be independent thinkers
- Work scientifically
- Use initiative
- Have excellent scientific knowledge and understanding
- Be original, imaginative and innovative
- Undertake practical work in a variety of contexts
- Have a passion for scientific application in past, present and future technologies

Rationale

The teaching of science at Christ the King is firmly embedded within the 'Vow' to 'Wow' curriculum that has been developed over the last few years to use the pedagogy of 'Mantle of the Expert' ensuring literacy and scientific stories are part of our science learning whilst using our engineering pedagogy 'Tinkology'.

Science is taught within a topic-based approach but also discretely where appropriate against the framework of the National Curriculum 2014 guidelines and the Early Years Foundation Stage Framework, which aims to ensure all 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 a variety of different scientific enquiries that help them to answer 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
- are encouraged to understand how Science can be used to explain what is occurring, predict how things will behave, and analyse causes.

The policy is reviewed every two years.

Aims, Objectives and Expectations

- What are the expectations for the end of significant milestones along the primary age range, e.g. Y2; Y6 in England; P4; P7 in Scotland

Progression

Science teaching is primarily based on 'working scientifically', with the Rising Stars Scheme of Work 'Switched on Science' as a guide for each class to follow. The units taught in each year group are taken from the National Curriculum and adapted to fit into the current topic being taught each term.

Progression is checked against the PLAN resources to support planning and assessment in science - <https://www.planassessment.com/>

Learning and Teaching

To provide adequate time for developing scientific knowledge, skills and understanding, each teacher will provide weekly Science lessons. These may vary in length but will usually last for about one and a half hours in Key Stage 1, and up to two hours in Key Stage 2. For some units, teachers have found it more effective to 'block' units of work rather than teach them as an integrated part of the topic for the term. At Foundation level, Science is an integral part of topic learning and should be throughout activities. At this stage, the 'understanding the world' area of learning commands at least one hour of structured time per week and is evident throughout other learning tasks. Cross-curricular links are made with other subjects so that pupils can develop and apply their scientific skills.

Learning Environment

Each class will have a science display linked to the topic currently taught which will include key vocabulary and questions from the children. Links, where appropriate are made to the Tinkology topic currently being taught.

Monitoring

Monitoring is determined by the school improvement plan and the current objectives for the year.

Monitoring is conducted through the use of a book scrutiny and learning walks and covers the following areas:

- Curriculum:
 - Long term plan is followed. There is continuity and progression between topics and year groups
 - Children are learning from their own starting points (AfL)
 - Appropriate levels of challenge are being set
 - Links to ICT, literacy and mathematical skills
- Learning gains:
 - Development of scientific vocabulary
 - Opportunities to apply learning in different contexts
 - Working scientifically skills/understanding of concepts are developed progressively for different groups
 - Approaches to teaching and learning support breadth and depth of understanding
- Teaching approaches:
 - Feedback is appropriate and manageable
 - Identifies misunderstandings, strengths
 - Promotes critical reflection, checks/challenges understanding
- Feedback:
 - Children respond to feedback

Assessment

Assessments are made using Rising Stars unit checks along with the Teacher Assessment in Primary Science (TAPS) materials developed by the PSTT - <https://pstt.org.uk/resources/curriculum-materials/assessment>

Primary Science enquiry is referenced against 'It's not fair – or is it?' the ASE guide to developing children's ideas.

Explorify materials from the Wellcome Trust <https://explorify.wellcome.ac.uk/> are used to enhance science teaching and encourage pupils to think like scientists.

Marking and feedback are in accordance with the 'marking and feedback policy'.

Resourcing

Resources for teaching science are kept in class according to the topics being taught.

Health and Safety

Through Salford Local Authority we have access to CLEAPSS <http://primary.cleapss.org.uk/> teachers are encouraged to risk assess all practical activities with reference to CLEAPSS and the ASE publication 'Be Safe!'.