



To Care

SCIENCE EDUCATION AT PICKERING COMMUNITY JUNIOR SCHOOL



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INTENT:

At Pickering Community Junior School, we work together to ensure that all children are engaged in a highly enriched science curriculum which builds on prior knowledge and motivates and enthuses children to develop a lifelong love of science where they are respectful for living organisms and the physical environment around them. We recognise the importance of science in every aspect of daily life and because of this, children develop a knowledge of how and why the world works. We aim to inspire children's curiosity to raise scientific questions, develop scientific knowledge and concepts and we provide opportunities to critically evaluate evidence through enquiry, investigations and working scientifically. All children will be provided with a broad and balanced curriculum which reflects the equality and diversity policies and practice in our school.

IMPLEMENTATION:

Skills

Investigation- Working scientifically

- Ask scientific questions
- Make observations
- Take measurements
- Gather, record, classify and present data
- Draw conclusions and make predictions
- Set up practical enquiries

Investigation- Areas of enquiry

- Observation over time
- Pattern seeking
- Research using secondary sources
- Comparative and fair testing
- Identifying, classifying and grouping

Knowledge and Understanding

- Plants
- Animals including humans
- Rocks
- Light
- Forces and magnets
- Living things and their habitats
- Sound
- Earth and Space
- State of matter
- Evolution and inheritance
- Properties and changing of matter
- Electricity

IMPACT:

By the end of Year 6, our pupils have the skills and knowledge to understand and make links between their science learning at our school and in nature, processes and methods of science in the world around them. They will have developed their conceptual understanding of biology, chemistry and physics through real life investigative practises and they will have the foundations for a life in an increasingly scientific world. Pupils will be able to plan, set up, carry out and critically evaluate science investigations. Our pupils will leave Pickering Community Junior School with a range of scientific knowledge and skills that helps to prepare them for their KS3 studies and builds a foundation so that they can care for, and scientifically advance, their world today and in the future.



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SCIENCE EDUCATION PEDAGOGY ON A PAGE



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Science Supporting Aspects

Cultural Capital

- Science Week
- Visiting local secondary school for science days
- Assemblies to raise awareness of science and environmental issues in the wider community
- Additional science reading materials
- Science Club
- Visitors, trips and visits
- 'Real life' examples of science in lessons
- Science careers and key scientists discussed with children

School/British values and SMSC

- Opportunity to reflect on real life experiences and how they link to science
- Ideas are challenged and celebrated
- A diverse range of scientists and careers are discussed
- Group work and encouragement of peer support
- Different beliefs and findings explored
- Safety rules given and followed

Learning outside the classroom

- Road to RIAT workshops
- Investigations carried out in different areas and rooms of the school, including outside
- Science week celebrated
- Visitors invited into school linked to science objectives
- Visits to local secondary school

Science Lesson structure and pedagogy



Core Principles to support the Science Pedagogy

- Health and Safety is at the core of all science investigation lessons. CLEAPPS is used for guidance and advise as required. Staff model and give safety briefings as needed
- Children develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
- Different types of scientific enquiries are encouraged to help children answer scientific questions, through hands on learning
- Real life concepts are discussed with the children to understand the uses and implications of science, today and for the future
- Connections are made to new learning, building on children's existing understanding
- Children are encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes