Fox & Owl Class Trip to Science Oxford

On Friday 17th March 2023, Fox Class (Year 3/4) and Owl Class (Year 5/6) enjoyed an exciting and enriching visit to Science Oxford. The trip immersed pupils in hands-on scientific discovery, encouraged natural curiosity, and deepened their understanding of the world through investigation, exploration and practical experimentation.

The day provided outstanding opportunities for pupils to apply their scientific knowledge, refine their enquiry skills and experience high-quality STEM learning in a real-world context. It also aligned closely with our curriculum focus on States of Matter, while broadening children's understanding of wider scientific concepts such as sound, forces, electricity, light and engineering.

Curriculum Intent in Action

The visit was carefully chosen to support our aims of:

- inspiring a love of science through practical, engaging experiences
- enabling pupils to investigate physical phenomena first-hand
- strengthening understanding of States of Matter through a dedicated science show and workshop
- developing scientific enquiry skills including observing, predicting, experimenting, evaluating and questioning
- building confidence, curiosity and resilience

This trip provided powerful evidence of a broad and ambitious curriculum that supports both knowledge acquisition and personal development.

The Exploration Zone – Hands-On, Multi-Sensory Science

The children began their day in the Exploration Zone, an interactive gallery designed to encourage free exploration, experimentation and problem-solving. While the exhibits change over time, the space typically features dozens of stimulating stations covering varied scientific themes. Pupils were encouraged to move freely between activities, try things out, pose their own questions and discover answers through play and investigation.

Sound & Vibration Activities

Many children were drawn to sound-based exhibits, which may have included:

- giant tuning forks they could strike to *feel* vibrations
- resonance tubes showing how sound travels through air
- sound pipes, where pupils experimented with pitch, frequency and volume

These activities strengthened understanding of:

- how sound is created through vibrations
- how sound travels through different materials
- how pitch can change depending on the size or tension of an object

Pupils enjoyed testing ideas, discussing what they noticed, and collaborating to create different sound effects.

Forces, Movement & Engineering Stations

Children also engaged with various hands-on activities linked to forces and motion such as:

- magnetic mazes
- air-powered rockets or tubes
- ball-run construction kits
- gravity ramps

These encouraged pupils to experiment with:

- friction, magnetism and air resistance
- predicting how objects move
- building structures to test stability and strength

Light, Colour & Reflections

Other popular exhibits typically involve:

- mirrors and periscopes
- light tables
- colour-mixing stations
- shadow shapes

These helped pupils explore:

- how light travels
- how shadows form and change
- how colours combine

Electricity, Circuits & Energy
Some groups explored interactive exhibits that demonstrated:

- how a circuit works
- how energy transfers
- how electricity can power movement, sound or light

This prompted excellent questioning and discussion.

What made the Exploration Zone so valuable?
The open-ended, exploratory nature of the space meant pupils were:

- thinking like real scientists
- experimenting independently
- refining their observational skills
- learning through trial and improvement
- communicating ideas with enthusiasm

Teachers noted extremely high levels of engagement, curiosity and collaboration across all age groups.

The Science Show – States of Matter Brought to Life
Next, pupils attended an exciting and highly practical science show all about States of Matter, linking directly to their current classroom learning.

The presenter used:

- dramatic demonstrations
- scientific puzzles
- unexpected reactions
- lots of child volunteers
- smoke, bubbles, dry ice or special effects

Children explored:

- the properties of solids, liquids and gases
- how heating and cooling cause changes of state
- melting, freezing, evaporation and condensation
- particle behaviour in different states of matter

Pupils were thrilled by each demonstration and showed strong scientific thinking as they predicted what might happen and reflected afterwards on why it occurred.

Practical Workshop – Investigating States of Matter
After the show, pupils took part in a hands-on workshop where they explored states of matter through real experiments.

Activities may have included:

- observing melting and freezing
- experimenting with materials that behave like both solids and liquids (e.g., oobleck)
- exploring how gases can be trapped, measured or created
- comparing the behaviour of different liquids
- using thermometers to measure temperature changes

The workshop supported:

- developing scientific vocabulary
- making predictions
- recording observations
- working methodically and safely
- drawing conclusions from evidence

Teachers noted excellent teamwork as older and younger pupils supported one another.

Behaviour, Attitudes & Personal Development
Throughout the trip, children demonstrated:

- exemplary behaviour
- high levels of curiosity and engagement
- excellent teamwork across mixed year groups
- confidence in trying new challenges
- resilience when experiments didn't work the first time
- thoughtful questioning

The trip also contributed to children's **cultural capital**, giving them experiences not available in the school environment.

Impact of the Visit
By the end of the day, pupils had:

- strengthened understanding of States of Matter through real experiments
- deepened wider scientific knowledge (sound, forces, electricity, light)
- experienced hands-on STEM learning
- improved teamwork, communication and problem-solving
- demonstrated high levels of motivation and scientific curiosity
- broadened their understanding of how science works in the real world

The visit to Science Oxford was a fantastic opportunity for both classes to immerse themselves in practical STEM learning and ignite a passion for discovery - something that will continue to inspire their science learning for the rest of the year.