News Story – Young Scientists in the Making: A Week of STEM Exploration

Babies

This week, the babies took part in an exciting experiment activity that encouraged them to explore, observe, and engage through hands-on learning.

One of the favourite activities was the bubble experiment. The babies loved standing in the cool bubble tray, watching the bubbles rise all around them as the hoop was lifted.

To extend the babies' learning, we encouraged them to observe how the bubbles moved, floated, and popped, helping them develop early scientific thinking and curiosity about cause and effect. The apa's modelled new vocabulary such as *"float," "pop," "big,"* and *"small,"* supporting early language development.



We also introduced counting as the bubbles rose, and encouraged the babies to reach, stretch, and track the bubbles with their eyes, further strengthening their physical development and coordination.

These simple moments of wonder offered rich opportunities for exploration, communication, and sensory discovery.

Toddlers

Polymer Power: Why the Water Didn't Spill

This week, the toddlers have been taking part in a range of fun and engaging STEM challenges. One of the highlights was an exciting hands-on experiment where the children pushed pencils through a water-filled bag, a simple yet fascinating activity that introduces early concepts of polymer science and water pressure.



The children were completely absorbed as they watched what happened when the pencils pierced the bag. Their faces lit up with amazement when they realised the water wasn't leaking out, sparking curiosity and lots of eager observations. This activity also supported their learning by helping them to make simple predictions, observe cause and effect, use new language and practise fine motor skills.

Fizzy Colour Explosion

The other experiment the children enjoyed was a colourful milk reaction activity. They added milk, different food colourings, baby powder and a few drops of fairy liquid to a plate. The children loved pouring in the bright colours and sprinkling the baby powder over the top. When they added the fairy liquid, they were excited to watch the mixture fizz and swirl, creating a lively and surprising reaction.

This activity supported their learning by helping them to explore colour mixing, observe cause and effect, develop early scientific thinking, use descriptive language and practise fine motor control.

Giant Bubble Lift-Off

Another STEM challenge the children enjoyed was the bubble experiment. They were excited to take off their shoes and socks and stand in the cool bubble tuff tray, especially in this warm weather. The children were fascinated as they watched the giant bubble rise up around them when the hoop was lifted, creating a magical and memorable moment.



This activity supported their learning by helping them to explore cause and effect as the bubble formed, to develop sensory awareness through the cool, bubbly texture, to build confidence by trying something new, to strengthen balance and body awareness while standing in the tray and use descriptive language to talk about what they saw and felt.

Exploding Colours Experiment

The children also took part in a firework experiment using baking soda, food colouring, vinegar and glitter. They loved pouring the ingredients into the plate and each child had a turn to add the vinegar. They were fascinated as the mixture began to fizz and bubble, creating a colourful "firework" effect.

This activity supported their learning by helping them to observe cause and effect as the reaction took place, to explore early scientific concepts such as mixing and chemical reactions and to use descriptive language to talk about what they saw.

Pre-School

This week, our children stepped into the roles of scientists and engineers as we dedicated our learning to hands-on STEM (Science, Technology, Engineering, and Maths) activities. Through a series of interactive experiments, the children engaged in deep critical thinking, problem-solving, and scientific inquiry.

Engineering Strong Foundations: The Lollipop Stick Bridge Challenge

Our first engineering challenge invited the children to construct functional bridges using lollipop sticks. This activity sparked fantastic problem-solving opportunities as the children calculated and tested how many sticks were required to support a toy car.

Whenever the structure faced design challenges, the children demonstrated wonderful resilience; they evaluated why the bridge collapsed and enthusiastically modified their designs to try again.



The Great Ice Rescue: Exploring States of Matter

Over in the water tray, the children discovered toy animals trapped in blocks of ice, prompting an exciting "Ice Rescue" mission. Utilising child-safe hammers and various nursery objects, the children applied both their fine and gross motor skills to chip away at the ice.

Beyond the joy of staying cool, this sensory experience served as a practical introduction to physics, allowing children to observe solids transforming into liquids. It also provided a rich platform for building vocabulary and directly supported the Understanding the World (UTW) curriculum as children explored the properties of different materials.



Visual Chemistry: The Magic Milk Experiment

To conclude our scientific investigations, the children participated in the fascinating "Magic Milk" experiment. After applying vibrant food colouring to cotton pads, the children added washing-up liquid and submerged them into a tray of milk. This triggered an immediate chemical reaction, causing the colours to dance, swirl, and separate rapidly across the surface. This experiment aligned beautifully with our Understanding the World framework by introducing the concept of cause and effect, encouraging the children to ponder the science behind this captivating visual display.