

Report on Raleigh Education Trust SEND Event for British Science Week

Dates: 7 – 14th March 2025

Location: Woodlands Academy and Ambleside Academy

Attendees: Approximately 300 children in total from Raleigh Education Trust Academies along with children from Local SEND schools.

Introduction

British Science Week is an annual celebration of science, technology, engineering, and mathematics (STEM), engaging children, young people, and communities across the UK.

This year, the Raleigh STEM event was expanded to a week-long celebration with activities taking place at Woodlands and Ambleside academies. In recognition of the importance of inclusivity in STEM education, the Raleigh Science Network planned and delivered events for children from Raleigh Schools along with children from local SEND schools, to provide an accessible, enjoyable, and educational experience in line with the Week's theme; 'Change and Adapt'.

The events aimed to spark curiosity, foster creativity, and encourage participation in STEM subjects among children with SEND. Around 300 children attended the events, accompanied by their teachers and support staff. The events offered a range of hands-on activities, workshops and demonstrations that were designed to be accessible for all participants, irrespective of their specific needs.

Event Highlights

1. **Bird on the Hand:** On Monday 10th March, Woodlands hosted the 'Bird on the Hand' falconry experience. Children learned about birds of prey including owls and falcons by observing and interacting with them. Children from Woodlands, Ambleside, Westbury and Denwood attended.



Interactive STEM activities: Woodlands hosted a carousel of STEM activities on Tuesday 11th March and Thursday 13th March. Children attended from Woodlands, Ambleside, Denewood, Westbury, Ash Lea, Brackenfield, Nethergate, Oakfield, Rosehill and Sutherland House attended over two days. Children engaged in 6 hands on activities:

- **Marble Run:** Children explored cause and effect and forces through a Rube Goldberg machine. Children arranged pipes, ramps and dominoes to try and get a marble to the of the course.
- **Animal Adaptations:** Children explored how animals are adapted including making jumping frogs, how chameleon's tongues catch insects and a pneumatic spider leg demonstration.
- **Rainbow Fizz:** Children explored the reactions of acids and alkalis using universal indicator to create a rainbow in a tube.
- **Water bead stress balls:** Pupils used water beads and balloons to make squeezey 'stress heads' which they decorated with faces and wool hair. The bowls of water beads also provided a sensory activity for children to explore.
- **Telephones through time:** A sorting challenge where children interacted with various different types of telephone from rotary dial to modern mobile phones. Children then had to sort these in order of age in a times challenge.
- **Water Worms:** Pupils made jelly worms and balls using a seaweed extract and an alkaline solution to precipitate a gel.



A scaled down version was held on Friday 7th March specifically for children on the Woodlands yellow pathway. These children have complex autism, sensory processing and communication needs. The four activities were **Water Beads**, **Animal Adaptations**, **Water Worms** and **Giant Bubbles**.



2. **Captivating Creatures:** On Thursday 13th March, Ambleside hosted the Captivating Creatures workshop. Children got to learn about different animals including a tortoise, snake, bearded dragon and tarantula but interacting with them and holding them. Children from Woodlands, Ambleside, Denewood, Westbury and Nethergate joined these sessions.



3. **Underwater VR experience:** On Friday 14th March, Ambleside hosted the final activity and underwater virtual reality experience. Children got explore the depths of the ocean using VR viewers in this immersive experience. Children from Woodlands, Ambleside, Denewood, Westbury and Ash Lea joined these sessions.



Key Achievements

- **Engagement and Participation:** The event was highly successful in engaging children, with around 300 attendees participating in the workshops and demonstrations over the course of the week. Feedback from staff and children supported how engaging the event was.
 - **Inclusivity:** The event provided a variety of adaptations and accommodations to ensure that children with a wide range of SEND could access and enjoy the activities, regardless of their specific needs.
 - **Collaboration:** Children attended from Woodlands, Ambleside, Denewood, Westbury, Ash Lea, Brackenfield, Nethergate, Oakfield, Rosehill and Sutherland House, bringing together children from across the Trust, city and county, mainstream and SEND.
 - **Trust Values:** The event supported the Trust Values, with children demonstrating all of the 5 C's (Confidence, Challenge, Curiosity, Character and Creativity).
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Feedback and Reflections

Feedback from children and staff was overwhelmingly positive.

Feedback from staff highlighted how engaged the pupils were and praised the organisation and inclusivity of the events. *“Each activity was correctly pitched with appropriate length of time at each to maintain engagement”, “They were all engaged, not realising they were learning because they were having fun”, “The event was amazing, it really brought science to life”, “I think the event was a great opportunity to raise the profile of STEM subjects and for the community to come together and learn”, “Seeing people in lab coats and goggles and using scientific equipment was great for our pupils to illustrate scientists’ role and environment”.*

Children expressed how much they enjoyed the hands-on activities, particularly the chance to get involved in experiments that they had never tried before. *“I liked the circus of activities because there were things I have never done before”, “I enjoyed seeing other schools”, “It was the first time I had a chance to hold a bird of prey and be that close”, “best trip ever!”.*

Pupils expressed that they would like to repeat these activities, and they were able to recall facts they had learned.

The feedback also included some suggested improvements for future events:

- A holding activity for children who finished early during the circus of experiments.
- More access to the ‘Yellow Pathway’ activity for children with complex needs from other settings.
- Have symbols like widget available as a communication board at each station for those with non-verbal communication.
- More opportunities to ask questions.
- A visual timer for staff to know when activities are about to end.

Conclusion

The SEND event for British Science Week successfully achieved its goal of making science accessible and enjoyable for children, including those with SEND. By offering a wide range of interactive and inclusive activities, the event provided a fun and educational experience for all involved. The positive feedback from attendees demonstrates the importance of creating inclusive opportunities in STEM education and highlights the value of engaging children in hands-on science activities. The event also highlighted the power of collaboration with pupils and staff from across Nottingham City and Nottinghamshire County coming together to celebrate STEM.

This event has prompted discussion around further collaboration between local SEND Science leads who will now seek to form a collaborative network.

Acknowledgments:

We would like to thank staff from the Raleigh Education Trust Science Network for their hard work and dedication in setting up these events. Special thanks go to the children, staff and volunteers for their participation and enthusiasm throughout the day.