

STEM Achievements: 2020-2021

This year, although we have been separated, our STEM activities and achievements have brought the school together. Here is an insight to an academic year that was like no other and the collective vision that enabled our pupils think both critically and creatively about Science, Technology, Engineering and Mathematics.

In September 2020, we celebrated Math's Week (in school):

- **Art Attack:** The St Raphaela's STEM Committee gave each class in the school a challenge – to create an art installation from any school resource such as PE equipment or even school bags. The maths concept would then be displayed in the grounds of the school. Just some examples made include a giant number 2 made with teddy bears, a beach scene made of 3D shapes and a gigantic bar-chart made from classroom items. Bringing STEM and Arts subjects together, our teachers engendered enthusiasm in children for mathematics in a creative way. Each class's limitless imagination led them into an exciting world of discovery and learning.
- We held an Outdoor Gallery Walk. Every class spent the morning preparing their Art Attack maths installation outside to be ready on time for the Outdoor Gallery Walk. We used our outdoor spaces to display each maths concept for classes to view, as though they were visiting a gallery. We also captured the Art Attack with Drone footage with the help of Alisa's Dad (Second Class).
- We also undertook the 'Having Maths Eyes' Poster Challenge. This challenge to design a poster changes the view of mathematics as being something everyone does in school. Rather, with 'maths eyes' people see the mathematics they do every day and mathematics becomes real and meaningful. The children designed their 'maths eyes' posters, showing the maths all around them whether they are shopping, walking, driving, at sports events – everywhere. The pupils worked within their pods to design a poster explaining a particular maths concept. These posters opened a channel for talking about real world mathematics, with the children then presenting their posters to other classes. We did this via Maths Mini-Lessons using Zoom, connecting classes and bringing us together through STEM.

In January 2021, we delivered the INTEL Science Week (while we all worked from home):

- Due to COVID-19 we revised this year's science week took a different approach with 4th, 5th & 6th class students taking part. The program included 4 Mini Scientist experiments which the children partook in at home. On-line Seesaw lessons explored Energy & Forces, Materials, Living Things, and Environmental Awareness & Care.
- These lessons were accompanied with video content provided by Intel. Phil "The Scientist" from RTÉ's Home School Hub presented a series of science related videos.
- The experiments were accompanied by activity packs and worksheets which our school's teachers sent home with every child from these classes during lockdown in January 2021.

In March 2021, we celebrated a hybrid version of Engineers' Week (at home and in school):

- Our teachers designed with Lego and Pinwheel challenges for those in school and created similar engineering challenges on Seesaw for those at home. We welcomed 180 students who participated in two on-line Digital Engineers' Visits from Irish Water Engineers during lockdown. Engineers from Irish Water helped us deliver an engaging digital engineers visit exploring the site works at the Stillorgan Reservoir which is located beside our school.
- Working with Irish Water as our community partners has helped us to continue to promote and celebrate pupils' creativity, problem solving and technical innovation and inquiry through engagement with wonderful engineers! Civil Engineers Emer Donnelly (Nicholas O'Dwyer Engineers) and Paul McLoughlin (Irish Water) were impressed by the level of engagement the girls had with the presentations and the wonderful questions asked. They were both amazing communicators.

In May 2021, we submitted our Discover Primary Science and Maths – Award of Excellence

In May 2021, the STEM Committee submitted our school's entry to the Discover Primary Science and Maths Award (DPSM) organised by Science Foundation Ireland. For the Sixth Year in a row, we have successfully documented achievements across all class levels in the areas of Science, Technology, Engineering, Mathematics, and a STEM Showcase. Sincere thanks to Ms. Crowley for completing the Technology section which was outstanding. Special thanks also to Ms. Doyle and Ms. O'Crowley for the creativity and passion they brought to our STEM Committee this year.

Celebrating the important work of our School Committees, we took the opportunity to recognise their wonderful contributions as part of our DPSM Submission this year, namely:

- The Green Schools Committee (Ms. Hehir) and their commitment to Biodiversity in setting up teams at every class level.
- The Garden Committee (Ms. Byrne, Ms. Corry, parents and volunteer staff members) and their work with our fantastic parents to deliver change in our local environment.
- The Student Council (Ms. Bradley, Ms. Doheny and Ms. Doyle) and the children's support of the animals in Dublin Zoo.
- The Active School Week (Mr. Fox, Ms. Lacey and Ms. Noctor) which got us all out exploring our outdoor spaces and promoted our overall wellbeing, continuously referencing the health benefits, both physical and mental, that the natural environment provides.

Throughout this most challenging year, our teachers shared ideas on-line and in school, celebrating National Tree Week, Earth Day, and many other STEM related initiatives. They enabled the children to undertake scientific investigations and continuously enhanced the students' enjoyment of STEM activities during a most challenging year. Mags Buckley, Ms. Crowley, Ms. Corry, Gemma Dardis and Caroline Fox redesigned the school website to give an insight in to all these aspects of school life and this inspiring work that our teachers undertake daily.

Supporting all of our work are our many community and national partners, many of whom took a different approach to help us in imaginative ways this year given the challenges presented by COVID-19 - namely dlr Libraries, Engineers Ireland, Imaginosity, INTEL, Irish Water, Junior Achievement Ireland, Learn-it Ireland, National Museum of Ireland, Nicholas O'Dwyer Engineers, Stillorgan Credit Union and the Tree Council of Ireland.

Sending our log of evidence into Science Foundation Ireland gives us all the opportunity to fully recognise that STEM work being undertaken by every teacher in our school and acknowledge the support of wonderful parents and valued partners who help us to make it all happen.

Our sincere thanks to you all.

Áine Rooney

Assistant Principal (STEM)