

Tēnā koutou

We hope this newsletter finds you in good health and high spirits. We are excited to share the exciting themes and projects that Innovative Learning programme followed during Term 3.

9IL dived deep into the world of "Invention and Design." This theme was designed to foster creativity, critical thinking, and an understanding of the role design plays in our lives. Through blocks of learning followed by investigation and research, 9IL students completed hands-on projects to showcase their learning.

The Year 10 theme centred around "Patterns," with the goal of helping students understand how patterns occur in nature and society, and how patterns can make complex ideas more easily understood.

These inquiries encourage critical thinking and enable students to uncover the diverse roles patterns play in our world.

Maryam Shahsavari  
Innovative Learning Programme Coordinator

## MOTAT Visit

MOTAT, the Museum of Transport and Technology, paid a visit to our 9IL classes, aligning with our "Invention and Design" theme. In this dynamic day, students were organised into groups of four, tasked with creating a simple machine. However, the excitement didn't stop there – at the culmination of their individual projects, students collaborated as a team to connect their machines, forming a pathway for a rolling marble.

The entire day was marked by engagement, effective communication, seamless collaboration, and, most importantly, a great deal of fun. This hands-on experience not only fueled their creativity but also reinforced the power of teamwork and problem-solving in the realm of invention and design.



## Women in Technology Day



On 15 September, 14 students from 9IL and 10IL attended the Women in Technology Day, held in Auckland CBD. This was a great opportunity to experience what working in the tech sector is like.

Students heard about the endless opportunities and needs in technology. They were taken through a “day in the life” experience that has them sitting in on meetings, witnessing the communication and interaction between peers, and seeing what a typical day is like in the tech industry.

ShadowTech Day was a fantastic opportunity for students to experience the wide range of career opportunities available to them in the tech sector. In addition, realising the world has changed, workplaces are not similar to what we imagine. They need to have a curious mind, be able to communicate and work collaboratively in a team.



## 9 IL - Game-based Learning

Blind Sport NZ recently paid us a visit to deliver an engaging presentation on blind sports and introduce our students to the fascinating world of Goalball. The session was both interactive and informative, with our students showing great enthusiasm and asking insightful questions during the discussion. What truly impressed us was how our students embraced the challenge of trying a sport none of them had experienced before, willingly stepping into various roles and scenarios. Their active participation and enthusiasm throughout the session made us extremely proud. It was indeed a memorable and enriching experience for everyone involved.



## 9 IL 1 Maths and Technology

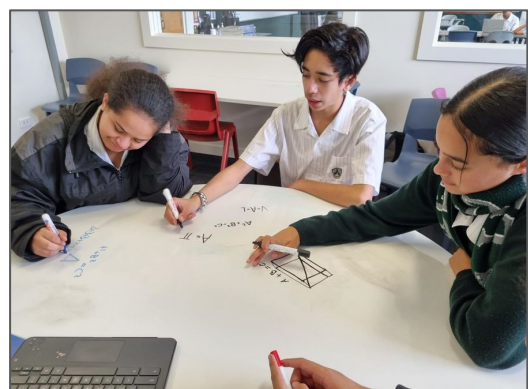
One of the engaging projects was designing, building, and testing Spaghetti Bridges. This project integrates lessons from Mathematics, Technology and Science creating a comprehensive learning experience. In groups of four, students collaborated to design and construct their spaghetti bridges. This cooperative approach not only fosters stronger interpersonal skills but also encourages creative problem-solving.

Upon completion, each group tests their bridge. This testing phase is marked by their classmates, creating an environment of healthy competition and peer learning. Students discover how much weight their bridges can bear before breaking, providing real-world feedback for further innovation.



## 9 IL 2 Maths

This term the 9IL2 Maths class completed units on Number, Algebra and Shape. We learned about right angled triangles, angles, polygons and prisms in preparation from our School Flood Disaster project, where we designed a drainage system using our knowledge of prisms, calculating volumes and flow rates of water through our system. We added a fun part to the flood disaster, incorporating recreational water sports into our design. Some great ideas were suggested such as white water rafting, free diving, sailing, rowing on the lake (fields), swimming with the dolphins, hot pool in the middle of V-block, water polo pool and kayaking course.





## 9 IL 1- English and Science

While the overarching theme of the term was "Invention and design" in the realm of science, students delved into the fascinating subjects of energy, light, and waves. The primary objective was to grasp the significance of clean energy solutions and cultivate creative thinking for a better future in the context of energy resources. To enhance their understanding and foster valuable skills, students were divided into two groups, representing opposing perspectives on the feasibility of introducing nuclear energy in New Zealand. It was truly impressive to witness their passion as they eloquently debated their viewpoints. This endeavour aimed not only to bolster team-building and accountability but also to boost their confidence in the art of public speaking, equipping them with valuable life skills.



## 9 IL 2 Science and Invention

Students harnessed their scientific knowledge to embark on exciting hands-on projects. They're diving deep into the world of forces and materials, applying their understanding of physics to real-world challenges. One project involves designing and testing aluminium foil boats to determine which design can hold the maximum mass while staying afloat. This experiment not only teaches them about buoyancy but also encourages creative engineering. Additionally, they're exploring the principles of aerodynamics by designing rotocopters (paper helicopters) with varying wingspans to achieve the elusive goal of straight flight. These engaging activities allow our students to bridge the gap between theory and practice while fostering critical thinking and problem-solving skills.



## 9IL Flood Project

During Week 9, 9IL classes undertook the Flood Disaster project. They worked together to devise strategies for mitigating damage to the school grounds in the event of water inundation. The concept involved applying knowledge from various curriculum ideas to minimise damage, ensure the safe evacuation of students, and enable the future productive use of water. They also presented their projects to their peers. It was pleasing to observe the extent of research and collaboration within the team. Below, you can find some photos and [links](#) to the projects.



## Pattern in the laboratory

In Term 3, for 10IL, our overarching theme was "Patterns," which extended into various subjects, including science. Within the context of patterns, we explored concepts related to Acid and Base reactions.

In our science curriculum, students delved into the fascinating world of chemical reactions involving acids and bases. Within the laboratory setting, they had the opportunity to experiment with acid/base indicators. These indicators provided a visual representation of the pH scale, creating a vibrant spectrum of colours – what we fondly refer to as our "pH indicator rainbows."

This hands-on experience not only deepened their understanding of chemical patterns and reactions but also allowed them to witness the beauty of scientific patterns as they emerged through these colourful transformations. These experiments exemplify how patterns are woven into the fabric of science, enriching our exploration of the world around us.



# 10 IL - Short Film Competition



All Year 10 English classes created films for a short film contest. Of course, 10IL had to do things a bit differently!

The students had this challenge to draw all their learning together: *Create a short film on the stability of life which uses patterns to make complex ideas accessible.*



Students applied for production roles based on their strengths and expertise: directors, scriptwriters, production designers, editors, etc. They were then put into groups so that every group had the skills that were needed.

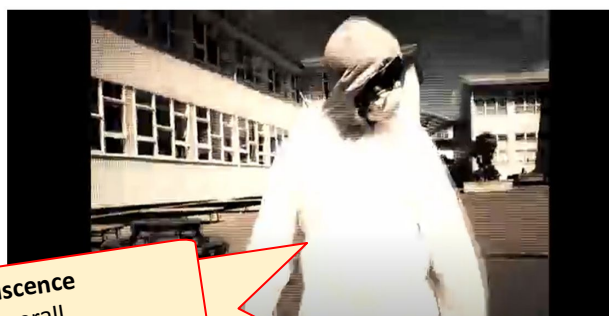


The students had three days in Week 6 to do pre-production, then a day a week for the next three weeks. This schedule was developed so that students had a chance to work on an extended project over several weeks. High quality was expected in terms of attention to detail and productive relationships. During this time, locations were scouted, costumes sourced, lines learnt and props made. Finally in Week 9, it was another full week of filming and editing. Rain and internet outages made life challenging, but the students did an amazing job of working together and being innovative.



**Gone astray**  
3rd overall

Friday afternoon was the Grand Showing! With popcorn and chocolates, the students presented their films and they were amazing! Teachers commented on the entertaining stories and the high quality of the cinematography and editing.



**Reminiscence**  
2nd overall  
Best use of film techniques