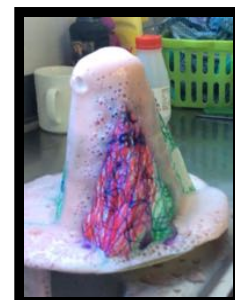
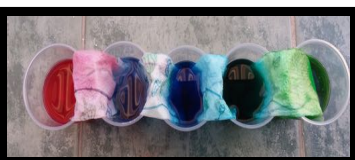
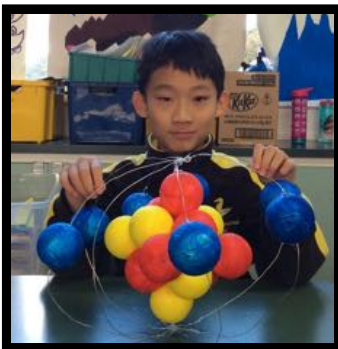


Science and Technology at Sunnybrae Normal School in 2017



What a wonderful year for Science and Technology at Sunnybrae! The *WOW of Science* week was held in Term 2 and was certainly a community event with amazing family projects created and shared. These included videos, models, slide shows, diagrams, working contraptions, experiments and posters. It was wonderful to see all parts of the New Zealand curriculum covered - *The Nature of Science, The Living World, The Physical World, The Material World, and Planet Earth and Beyond*. Thank you to all the families who took part. The students also enjoyed a visit from the *Science in a Van* team who mesmerised and imparted important science knowledge through four interactive shows. Extra activities provided by teachers during the week included making playdough, creating marble runs, and powering electrical circuits with lemons.



Throughout the year, teachers of Sunnybrae have been driving learning through the teaching of concepts, with science being a particular focus. Rich micro-lessons have been designed to target particular concepts. Each lesson begins with a motivating prompt and encourages students to observe, think deeply, discuss and develop important knowledge. New contexts are then used in follow-up lessons so that students build a strong understanding of the concept, seeing it applied in different ways. Each syndicate has had their own unique areas of focus.



Junior Syndicate

In Term 1 the Junior Syndicate inquiry was about patterns in our world, which looked at the cycles of day and night, seasons and shadows. This focus is part of the Science curriculum - *Planet Earth and Beyond*. This unit is the beginning of our students' understanding that things happen in a cycle and can be predicted. The children enjoyed observing the changes that happen in Autumn as part of this unit. The Science in a Van motivated our next inquiry on the forces of push and pull. The children explored ramps, marbles and cars to discover how different forces work and the effects of friction on objects.



This term the unit of inquiry has focused on animal classifications, particularly animals on the farm. The children are developing an understanding that animals are living things. Animals do some things in similar ways but some of their features are different because they have different jobs to carry out e.g. milk from a cow, wool from a sheep. The Juniors enjoyed their experience at Ambury Park Farm as part of this inquiry and were able to see how animals grow and change over time.

Middle Syndicate

In Term 2 the Middle Syndicate inquired into the way force creates cause and effect in our world, how science is the study of such behaviours and how scientists act in particular ways to observe, experiment, record and make new understandings. Scientists explore their world to understand it and students in the Middles learned about science in their immediate school environment. A highlight of this was a *'what is science'* walk around the school followed by a *'how does it work'* play on the fitness trail.



Next up for Science and Technology was inquiry into the way weather creates cause and effect in our world, how science is the study of such phenomena and how scientists act in particular ways to observe, experiment, record, predict and make new understandings. Students completed activities that show how the weather affects them and how mankind affects weather. They participated in experiments that demonstrated aspects of weather systems. They then worked together to complete a study on a weather event of their own choosing and presented findings to each other.

Senior Syndicate

As a special extra in Term One, the Senior Syndicate students were entertained and informed by a travelling show that told the story of yellow rubber ducks, which fell overboard from a container ship and travelled the ocean currents to different places around the world. An oceanographer gave first hand accounts of his job as part of the show.





The next focus was all about 'force' and the students experimented with forms of energy, friction and simple machines. To test new ideas, the students tried their hand at indoor bowls, experimenting with release, push and friction, and discovered the way the bias of the bowls worked. Marble and car runs, flight, bounce and magnetism were other contexts used to develop an understanding of force.

In Term Two, the Senior Syndicate launched into 'Planet Earth and Beyond'. They explored cycles and patterns on Earth and within the Solar System. Expert groups were formed and they developed their own understandings about a particular context, before teaching others through demonstrations and models. These contexts included tides, wind currents, orbits, parts of Earth, Earth's rotation and eclipses. This style of teaching encouraged students to be both learners and educators.

