This Semester in Science

At Our Lady of the Southern Cross College, Science is one of the core curriculum subjects that your child will study each term from Prep through to Year 10. In the Primary Years, studies in Science begin with students observing and describing the properties of everyday objects and learning that asking questions and making observations is a core part of Science. By the Middle Years, Science involves students developing their understanding of a range of concepts; some more abstract and unfamiliar than in previous years. The Middle Years are crucial in terms of developing a positive attitude to Science and establishing scientific thinking and inquiry skills. Research frequently highlights the need for hands-on experiences in Science to actively engage students in their learning. A hands-on approach aims to foster an interest and curiosity in Science and makes the learning experience a more enjoyable and memorable one. OLSCC Middle Years students have been busy with a range of hands-on experiences in Science so far this year.

Students in Year 6 had a marvellous start to the year with the ‘Marvellous Micro-organisms’ unit where they studied a range of micro-organisms in everyday applications. They studied yeast micro-organisms in the bread making process and had a go at bread-making as well. They also cultivated various samples of mould from food products and investigated the factors that affect the growth of the mould. Year 6 got creative in Science by making a three dimensional model of their marvellous micro-organisms. This term, Year 6 explored energy transfer in electrical circuits and batteries. They built electrical circuits and switches using wires, batteries, bulbs and everyday materials like alfoil, paperclips, pegs and cardboard. Year 6 students are currently busy making a model with a working electrical circuit that can be switched on and off.

Year 7 students started the academic year by earning their Bunsen Burner Licence. Their first exposure to the Science Laboratories was a memorable one as they went on to design an experiment to separate a mixture of sand, salt and iron filings into pure substances. To do this they used a range of separation techniques including filtration, decanting and evaporation. In Term 2, students used dichotomous keys to classify a range of plant and insect specimens collected from home and from around the College. They also had the opportunity to identify and classify organisms that were part of an impressive insect collection sourced from Toowoomba’s Cobb & Co Museum.

Students in Year 8 had a creative start to the year by designing and assembling a three dimensional model of a cell which they presented to the rest of the cohort in a seminar-style setting. This term, they were tasked with demonstrating the transfer or transformation of energy. One group built a small car driven by a battery and an old compressor motor from an old fridge. Other groups used lemons to power a small light bulb and created a small steam-driven boat using aluminium cans as the steam jacket. Year 8 students are currently investigating the properties of insulating materials and how they can be used in an energy efficient home. Year 9 students began the year with studies on the dynamic nature of the Earth’s crust. They participated in online interactive activities and viewed a range of animations and simulations in their studies. In Term 2, Year 9 were delighted at the opportunity to explore the internal anatomy of the cane toad in a dissection. They were tasked with identifying a range of organs and organ systems, comparing them to human body systems and evaluating their interconnectedness. More recently, Year 9 students have been busy conducting experiments using Daphnia (water flea); a small crustacean with a translucent outer skeleton and a heart that is visible under a microscope. They are investigating the effect of a change in temperature on the heart rate of Daphnia, and will present their findings in a Scientific Poster that will be available for viewing and judging at the OLSCC Science Fair later this year.
Clockwise from top left: Harry Coman from Year 8; Jacinta Towers and Emily Kay from Year 7; Sarah McQuaid, Year 8; a battery and compressor powered car made by Patrick Boland and Samuel Cullen, Year 8; and Garet Mathews from Year 9 on the microscope.