Where are they now? story continued...

"Campus! We have been even more enjoyable than I anticipated — there is always something happening and many new people in the same situation as me, who have just moved states and are straight out of high school," said Mikayla.

"The campus activities range from sitting together outside on a nice day, playing pool or table tennis, or having a shared dinner. There's a sports competition set up for residents only, which is always a laugh — we play or watch anything from bubble soccer, volleyball or netball.

"The other great thing about living in Tasmania is that I've got to enjoy the lovely snow throughout the state."

Written by Mikayla Thompson

Sailing the 'One and All' to Wallaroo

Sailing the 'One and All'

It was an early start for half of the maritime industry pathway VET students on Saturday, 12 September. They met at 7:30 in the morning at Mataro Wharf in Port Adelaide for the start of their journey sailing on the 'One and All' to Wallaroo in South Australia’s mid-north.

"We spent the first day on board the ship learning 'the ropes' and running through a full training including ascending the masts and staysails, flood and fire checks and taking the helm," said Liam Nairns from Le Fevre High School.

It wasn’t until 6.00pm that the Tom ‘Diver’ Derrick Bridge allowed to allow the sail ship out of the harbour.

"We made our way north out the break water, and then south to exit the Gulf of St Vincent. Throughout the first night all trainees and crew members took four-hour shifts. We were each part of three watch groups: starboard, port and middle. That night was fairly smooth sailing with calm seas and an excited crew. On Sunday morning at breakfast there were a few weary eyes as crews struggled with being up most of the night. All members on the voyage were awake for breakfast in the morning and ‘happy hour’ which has teams assigned an area of the ship to clean. Cleaning ranges from scrubbing the decks to cleaning the galley and heads (toilets)," said Lachlan.

The students took part in activities on Sunday, including setting the sails, which needed a group effort to haul the heavy sails. Ascending the masts and staysails was a highlight for several people, and gave them the opportunity to climb the 27-metre-high mast and then walk a further five metres outboard on the staysails.

By Sunday night there was a change in sailing conditions as the ship left the shelter provided by Kangaroo Island and York Peninsula. A few crew members succumbed to sea sickness and the night watchers were busy ensuring the ship kept a smooth sail. By the next morning the seas had calmed and, after the daily chores, the crew members who were not on watch had some time to relax and enjoy the numerous dolphins swimming alongside.

"On Monday we needed to prepare the boat for the next school to board at Wallaroo. Our students took down all the sails ready for the boat to dock. After one last dinner, the final goodbyes were said and we all started the two-hour bus journey back to Adelaide."

Overall the students and staff enjoyed the fantastic opportunity on the ‘One and All’ and now we look forward to the other half of the class undertaking the same journey in November.

Studying the physics of sail boats

The physics of sail boats has been examined by Le Fevre High School’s Year 11 students this year, which took in the study of hydrostatic, hydrodynamic and aeronautical principles such as Archimedes principle, righting moments and torques, fluid mechanics, physics of sails and electronics control systems.

The class of 21 students — 16 boys and 5 girls — manufactured a one-metre sailing boat by tailor-making all the necessary parts and hull, using a blend of traditional methods and advanced technologies such as laser cutting and engraving.

"The hull is made of a wood called paulownia, easy to cut on the laser cutter and easy to sand afterwards," said teacher Thierry Herman.

"Students glued about eight layers of this wood to create a 3D shape looking very much like contour maps. They then used various sanding techniques to shape the outside to create a hydrodynamic hull."

Studying the physics of sail boats

Continued next page

Students in the pool participating in a survival exercise at AMC.

Written by Phoebe-Mae, student at Fremantle Elizabeth City High School

Studying the physics of sail boats story continued...

"They also used similar techniques to create the keel and rudder, which are the components giving dynamic stability and control for the operation of the sail boat. The mast and sail team decided to design and make what is called a wing mast," he said.

A wing mast is more involved than a simple sail arrangement as a hollow mast had to be created, to allow the sail to slide inside it and thus create a more aerodynamically efficient mast/sail system.

Thierry said that students shared their time all through terms 1 and 2 between building their boat and documenting their progress to satisfy the SACE requirements for their Naval Engineering integrated Learning course.

"They had a great time and it was a real pleasure as a teacher to see them bloom and grow confident to such an extent that in the end, I was more guiding than actually teaching. As one of my students put it, ‘Not only have we built an efficient sail boat, we also know now — and can explain — how and why the different parts work together to make this boat seaworthy.’"