The Maritime High School based at Le Fevre High School, is an initiative of the South Australian government which combines secondary school studies with a specific focus on high level maths and science and technical Vocational Education and Training (VET) within a maritime context.

In addition to the maritime vocational courses, a number of maritime scientific studies courses have been developed providing opportunities for students to study ship design, electronics, radar, GPS and navigation technologies. This provides a training pathway towards achieving a nationally recognised vocational accreditation and the South Australian Certificate of Education (SACE) at the same time.

A maritime adventure of a lifetime

Jumping from great heights, simulated rescues and fire fighting - Students from across South Australia did much more than touring and talking when they took part in a 3 day trip to the Australian Maritime College (AMC) in Launceston, Tasmania.

In June, 13 students and staff travelled to Launceston Tasmania to visit the AMC, a trip sponsored jointly by the AMC and Le Fevre High School Maritime Program.

Over three days, students participated in lectures in maritime engineering and mathematics, took a tour of the AMC and accessed some of the college’s outstanding facilities. They also had opportunities to spend time with numerous AMC staff and ask lots of questions about study options.

The hands-on practical experiences generated the most excitement and interest. These included a morning on the college’s 400-ton training vessel, the Bluefin; jumping safely from great heights into the AMC’s indoor pool to perform life raft simulated rescues and putting out fires at the fire fighting facility at Bell Bay.

Participants experienced a great 3 days of student life at the AMC and the University of Tasmania, living in student accommodation and dining in the student cafeteria with full days participating in ‘student life’. The AMC has an association with Flinders University in a 2 + 2 arrangement, whereby students can begin studying in South Australia before venturing to Tasmania. The diverse range of Maritime Pathways available can be viewed on the AMC website www.amc.edu.au.

Mussa from Playford International said:

This visit has provided an insight as to the range of courses that are running. We were all blown away with the magnitude of courses that are operating at the AMC.

On behalf of all the students, thank you for giving us this opportunity that we will all remember for the rest of our lives.

A power partnership

ASC Pty Ltd has been a great industry partner for Le Fevre High School since the start of the Maritime Program in 2011 and the relationship between the two continues to grow and develop.

Over the past term, 5 Le Fevre High School students have partnered with the ASC to work on designing and constructing a submarine for Re-Engineering Australia’s ‘SUBS in Schools’ competition.

Students visited the Portside Swimming and Leisure Centre to see the ASC’s model submarine in the water and took turns controlling their own model submarine. ASC staff also visited the school on a weekly basis and worked with students to design and construct a submarine for this year’s competition.

Students used Inventor® to design certain parts on the 3D printer and laser cutter, before spending time in the school’s electronics and technology workshops to begin the process of making the submarine actually work. The submarine is coming along well and sea trials are set to start by mid November.

As well as ASC staff visiting the school, Le Fevre students had the opportunity to visit the high-tech submarine facilities and see different aspects and what it takes to build and maintain a submarine. A tour of a Collins Class Submarine was a highlight and the weapons room was a big hit.

Le Fevre extends a big ‘thank you’ to the ASC for such a fantastic opportunity and for being a great industry partner.
Innovative ideas

A submarine prototype, remote-controlled sand yachts and a ship’s replica are just three of the Naval Engineering projects completed or underway at Le Fevre High School.

Stage 1 (Year 11) Naval Engineering

This semester, Stage 1 students are studying STEM themes relating to the design and engineering of sailboats, including hydrodynamic and aerodynamic principles, such as Archimedes’ Principle, lift, variation of momentum and how it relates to forces and navigation principles. This year, aside from studying the properties of sailboats built in previous years, these naval engineering students were challenged to design and build remote controlled sand yachts. This allows students to conduct races without the need to leave the school grounds in search of a suitable pond.

The sand yachts allow students to easily and quickly check and improve their designs. It is intended that a fleet of racers will be produced and controlled with remote control systems bought through part of an Advanced Technology Project grant awarded to Le Fevre.

Stage 2 (Year 12) Naval Engineering

In 2016, 12 Advanced Naval Engineering students took on the challenge of creating a functional replica of the Bluefin, the flagship of the Australian Maritime College based in Tasmania. This involved drafting a plan, designing the various parts of the hull and superstructures, then designing and fitting the remote control systems on the ship. It is still a work in progress. This project has allowed students to study STEM themes relating to technologies found in modern ships, including the air warfare destroyer.

Thierry Herman
ATP Manager

Le Fevre accepts a tampion challenge

Le Fevre High School has a close working relationship with ASC Pty Ltd and the Royal Australian Navy. A request for three tampions for the air warfare destroyers is not the first challenge undertaken by the school.

Earlier this year employees from the ASC met with staff and students from Le Fevre’s Maritime Engineering vocational education and training (VET) course to discuss the manufacturing of three tampions for the air warfare destroyers being built in Adelaide.

The ASC has been a great engineering partner to Le Fevre since it became the Maritime High School so there was no way it would decline to take on the challenge.

So what is a tampion? A tampion is a cover for the muzzle of the cannon at the front of the ship. It is chromed and is a purely decorative piece used when the ship enters a port.

The cylinders are rolled and welded from flat mild steel with an end cap welded on to complete the tampion. The end cover will have a 100mm diameter brass ship’s insignia, which will be manufactured on the school’s computer numeric control milling machine.

Both the ASC and the Royal Australian Navy have used Le Fevre’s VET engineering class to work on numerous other projects, such as reconditioning the cannon from HMAS Protector and repairing and painting an anchor found by navy divers.

Below are Chris Chrisakis (VET Engineering teacher) and Leading Able Seaman David Dunne after the completion of the restoration of the cannon from HMAS Protector. Associated bodies that supported the restoration project included: the Australian Navy, GRH Engineering Supplies, Port Adelaide Council, Paint Supplies, Northern Sand Blasters and the Port Adelaide Maritime Museum.