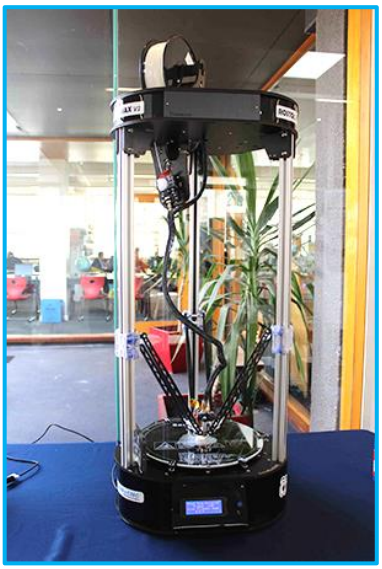
CATHOLIC DIOCESE of BALLARAT

# Diocesan e-News

## STUDENTS BUILD THEIR OWN 3D PRINTER



It's National Science Week here in Australia and what a way to introduce a new innovation to the community. A group of Damascus College Ballarat students from Year 8 to 12 have spent more than thirty hours over the last eight weeks building their very own 3D Printer, and it is now finished and ready to use.

This Rostock V2 Delta Printer, also affectionately known as Martin, is unique in itself as its build has been completely student led, with the assistance of some Damascus staff.

This printer is not merely an off-the-shelf unit, but a complex kit with hundreds of individual components. The students' knowledge and understanding of the printer was greatly enhanced through the process of assembly and if there is a breakdown, we have a team of students willing and able to assist with the maintenance work.

Science and Technology Teacher, Mark McLean said that at Damascus we offer progressive and innovative learning and teaching that maximises educational outcomes for all students. "The purpose of this printer is for students, staff and the Damascus community to use as needed, as it will become a bookable library resource, where the only cost to the user is to pay for the plastic, which is generally $1 per item" he said.

"It enables students to be creative and to get experience in the new fields of 3D design and manufacture. The students involved have volunteered their time to build the printer, and their passion and commitment truly is commendable", Mark said. "This particular printer is based around a Delta configuration, rather than a Cartesian system, enabling a build diameter of 28cm and a height of 33cm, and it prints with a speed of 60mm/s and a resolution of 20 microns."

The printer will be a cross-curriculum resource that will be used for many different purposes, including drama props, mathematics, IT, systems engineering, science and visual arts resources.

Mark continued to say "the opportunities it presents for learning are exciting, and we are also looking forward to building parts for the Energy Breakthrough (EBT) Vehicles, including hinges, fixings and fittings."

The future is bright, as Mark also plans to build scaled EBT vehicle models with the printer, and he plans to test their aerodynamics right here on campus, in a wind tunnel that will be restored to its former glory.

*Sarah Boswell*
*Leader of School Development*