IN THE BEGINNING…

Design & Technology

On behalf of the entire team here at Scorpio Technology, welcome to your first Newsletter for 2017. We hope you had a good break and are recharged for a great year.

IN THE BEGINNING…
The school year brings with it many challenges – curriculum, assessing student levels and knowledge etc. Each new student has so much to learn and experience. We hope that Scorpio can assist in this exciting journey.

We believe that a student learns best when provided opportunities to work through problems & tasks that stimulate and excite.

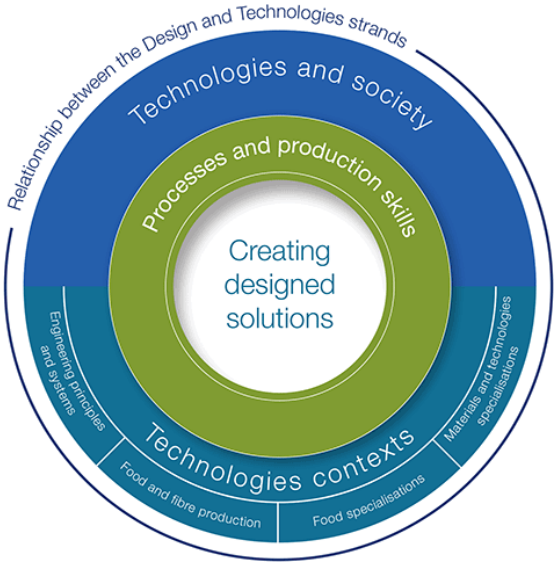
Scorpio has a large range of kits and projects that fulfil learning needs. We have simple to complex kits, soldered /unsoldered that let you tailor the projects to your students' experiences and skill levels.

In the beginning when learning electronics students struggle with soldering. This is a good example of "practice makes perfect". The ***Solder Practice kit*** (Code: SOLDPRAC) provides just that – soldering practice, component recognition and learning about polarity.

The Design and Technology subject area is broad – each state, school and teacher have their own way to approach the curriculum. Scorpio strives to support teachers by providing projects that cater to the skills that need to be developed.

With over 80 kits and more in the development stage we know that there is a project that will suit every student.

When we design a project we make a **prototype.** While you can use our design we encourage you and your students to make the project your own. Keep in mind the parameters given in the Teaching unit during the design and construction stages. The project is then in your hands.



Ref: http://curriculum.catholic.tas.edu.au

Check out the **"Kits in Action"** section on our website for some examples https://www.scorpiotechnology.com.au/ tol see some of the modifications made to our kits. These demonstrate the creativity and ingenuity of students and their teachers.

Thank you to the teachers and students that have allowed us to showcase their projects. *Keep up the great work!*

Inspirational projects for teaching Design, Creativity & Technology

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AUSTRALIAN INVENTIONS & INNOVATIONS

Technology plays an important part in almost every aspect of our daily life. Today's technology was only a dream or idea at one time. Most developed because the developer saw that there was a need.

We have gathered some Australian inventions that have made a difference worldwide.

? ? ? Before 1700
Indigenous Australians developed tools that helped them survive the local conditions. Boomerangs are one of their greatest inventions. The surface of the boomerang is designed to lift by making use of air current. Other notable inventions are the didgeridoo and woomera.

1888
Australian electrical engineer Arthur James Arnot patented the world's first **electric drill.** The invention was originally designed to drill rock and dig coal.

1902
J.A. Birchall developed the first **notepad**. Loose paper sheets were cut in half, backed with cardboard and were glued together at the top.

1906
Australian filmmakers created the first **feature length film** "The Story of the Kelly Gang".

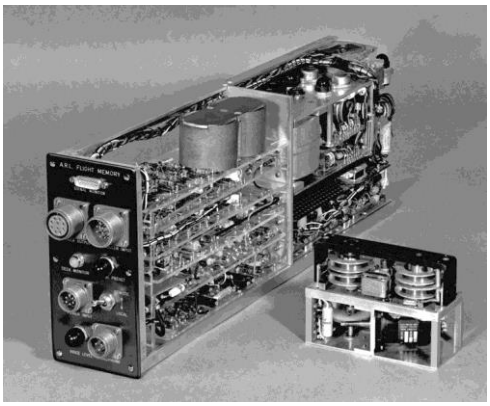
The **Surf lifesaving reel** allows a lifesaver wearing a vest with a rope attached to reach a distressed swimmer. It was first demonstrated on Bondi Beach.

1928
The first artificial **Electronic pacemaker** was made. Artificial pacemakers send small electric charges into the heart to help it maintain a regular beat. They were first implanted inside a patient in the 1960s. This technology has helped more than three million people worldwide.

1930
The **clapperboard** was invented by F.W. Thring. The original design had two sticks hinged together.

1940s
Penicillin is purified from a special mould. It becomes invaluable in saving lives.

1953
The **Black box flight recorder** records the voices in the cockpit and data from flight instruments. Compulsory on all commercial flights.



The preproduction model (left) with the original experimental prototype (right).Photo: Bill Schofield

1960
Plastic spectacle lenses that were scratch resistant, light weight and durable are now used throughout the world. The technology was further developed to create the first plastic bifocal, trifocal, and progressive-focus lenses.

1965
Inflatable escape slide and raft provides an inflatable floating escape slide during an emergency escape from an aircraft. It is mandatory on all major airlines.

1967
Dr. Graeme Clark invented the **Cochlear implant (bionic ear).** Development continued

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until the world's first multichannel cochlear implant in 1978. Cochlear implants are implanted into the head . They electronically stimulate the auditory nerve. The implant has brought hearing to more than 180,000 deaf and partially deaf people worldwide.

1976
Ultrasound scanners are used to check and diagnose medical problem in soft tissue. The ultrasound echoes bounce off soft tissue and convert them into pictures.

1970s
Wi-Fi technology is a local area wireless computer networking technology that allows electronic devices to be connected to the network. It was developed during a failed experiment on atoms and echoes of black holes. Wi-Fi technology was improved until it was patented in 1992 and 1996 by CSIRO. This invention changed the way people worldwide connect their devices.

1988
Polymer bank notes were released in Australia. These new bank notes were more durable and difficult to counterfeit due to a series of in-built security devices.

1992
Plastic surgeon Professor Fiona Wood took a small patch of the patient's healthy skin and using it to grow new cells. These new skin cells were sprayed on the victim's damaged skin. The patient has a reduced recovery time and scarring. Using the spray-on skin technique 28 severely burnt Bali bombing victims survived.

1993
Frazier lens is a deep-focus camera lens that allows both the subject and background to be in focus at the same time. The lens can be rotated without moving the camera. The lens is used in movies and films worldwide.

2003
Google Maps software technology was developed by Lars and Jens Rasmussen.

2006
The world's first anti-cancer vaccine **Gardasil (Cervarix)** was developed in 2006. The vaccine protects women against four strains of human papillomavirus (HPV) which causes most cervical cancers. The vaccine is used in more than 120 countries.

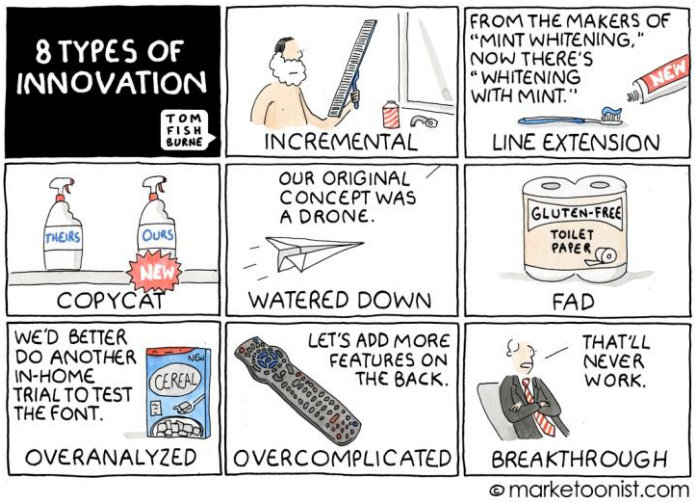
2013
Australian engineers built a "**quantum microscope"** which offers unprecedented levels of precision in measuring live biological systems.

2015
A titanium 3D-printed prosthetic jaw is successfully implanted in a patient by surgeons in Melbourne, Australia.

2017 & onward
The future can be changed by **Y O U** !

FURTHER INVESTIGATION:

- Investigate Australian inventions and innovations and the people who made them.
- Find examples of the 8 types of innovation.



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