

KINGSCLIFF HIGH SCHOOL

Subject Selection Information



Faculty:

Industrial Arts & Computing Studies

Subject: **Industrial Technology -
Engineering**



Nature of the Course

The Engineering focus area provides opportunities for students to develop knowledge, understanding and skills in relation to engineering and associated industries.

The Engineering Core Module 1 (Year 9) includes common content and topic content that develops knowledge and skills in the use of tools, materials and techniques related to Engineered Structures and Engineered Mechanisms.

These are enhanced and further developed in Year 10 through the study of any two specialist modules in:

- Alternative Energy
- Control Systems
- School-Developed Module
- Transport



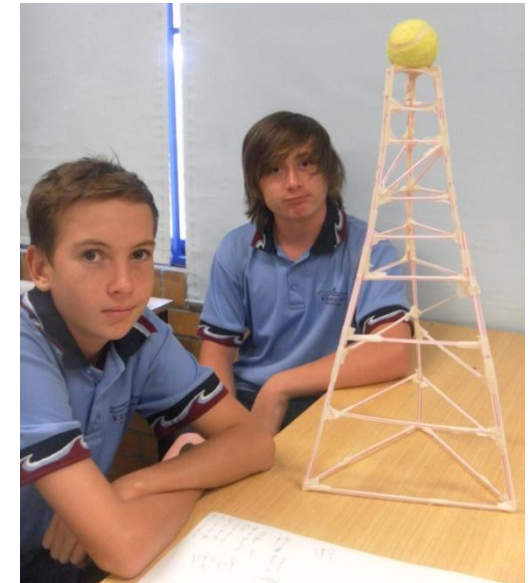
Nature of the Course

The 100Hr course includes:

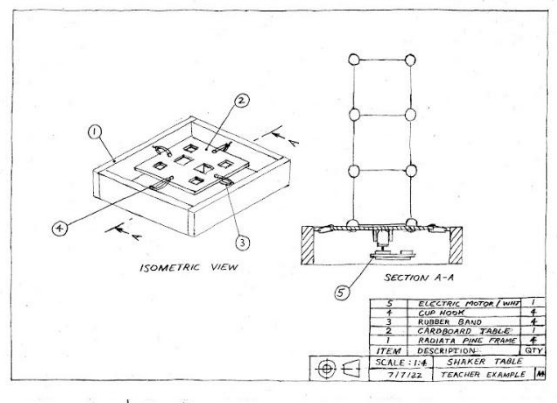
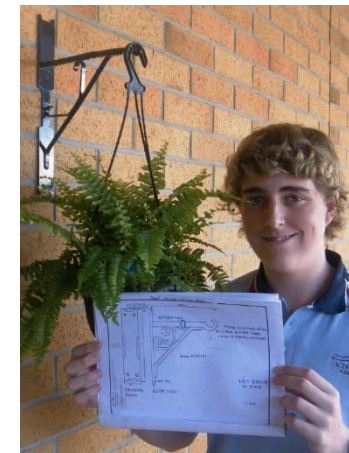
- Engineered Structures



Bridge Challenge



Tower Challenge



Earthquake Tower Challenge

Nature of the Course

The 100Hr course includes:

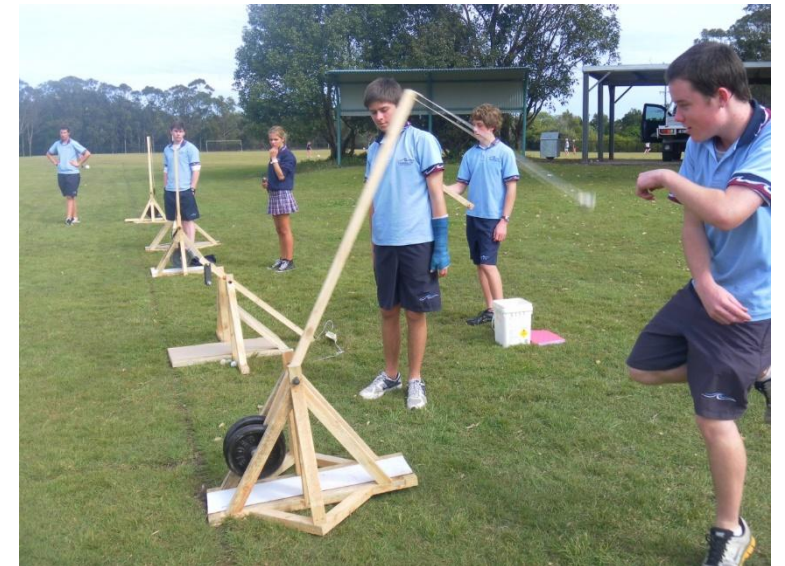
- Engineered Mechanisms



Hydraulic Robot Arm



Co2 Dragster Racing



Trebuchet Challenge

Nature of the Course

The 200Hr course includes:

- Alternative Energies



Solar Powered Boats



Hydrogen Fuel Cell Cars

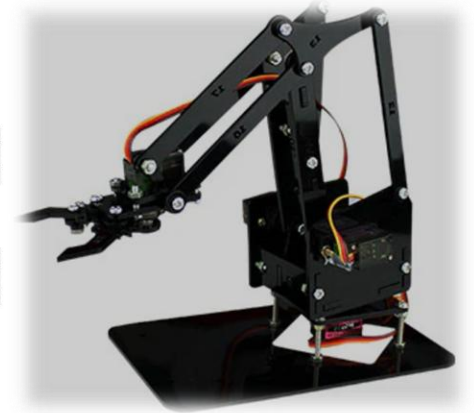
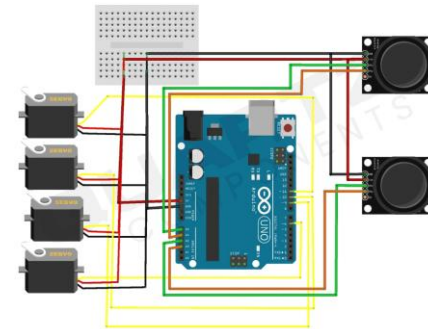


Wind Turbines

Nature of the Course

The 200Hr course includes:

- School Developed Module
- Teacher/student negotiated projects such as:



Arduino – Robotic Arm



Bottle Rockets



Human Powered Vehicle



Power Anchor Planes



Assessment Structure

100Hr Course

2 x Design Projects and Design Folios
Research Assignment
Yearly Exam

200Hr Course

2 x Design Projects and Design Folios
Research Assignment
Yearly Exam



Elective fees for the Course:

100Hr Course - \$80 (one year)

200Hr Course - \$160 (two years)

Students who choose this subject are expected to pay the subject contribution fee to cover resource expenses.



Skills Required for this subject and/or any Prerequisites:

- Students may study up to **two** Industrial Technology subjects that contribute to the award of their Record of School Achievement (RoSA).
- Students will develop skills in drawing and communicating design ideas and plans.
- Students will apply material science and engineering maths principles to projects.

Career Opportunities

This course caters for students who wish to undertake further study in Engineering Studies in Stage 6. It is also suited to students wishing to pursue a related trade in engineering.



Career Opportunities

- * Aerospace Engineering
- * Agricultural Engineering
- * Biomedical Engineering
- * Building Services Engineers
- * Chemical Engineering
- * Coastal and Ocean Engineers
- * Civil Engineering
- * Electrical Engineering
- * Electronics and Telecommunications Engineering
- * Environmental Engineering
- * Food Engineering
- * Geotechnical Engineering
- * Hydraulic Engineering
- * Industrial Engineering
- * Marine Engineering
- * Materials Engineering
- * Mechanical and Manufacturing Engineering
- * Mechatronics Engineering
- * Minerals and Metallurgical Engineering
- * Mining Engineering
- * Petroleum and Petrochemical Engineering
- * Pharmaceutical Engineering
- * Process Control Engineering
- * Production Engineering
- * Resource Engineering
- * Risk Engineering
- * Software Engineering
- * Structural Engineering
- * Transportation Engineering