

# Year 10 Engineering

Yr 10 Engineering is a new subject for 2008 that uses the application of problem solving skills to create a new product. Students are in the process of learning the concepts and skills they will need to develop a small electronic device. They are completing this as part of the Concept to Creation "NAMIG" project.

We began Engineering in week 8 of term 2 with a lesson on "What is Engineering?" and an activity where students were given a set of equipment, like paper, straws, cotton wool, etc, and needed to design and then construct a device which would effectively catch an egg dropped from a height of at least one metre.



*"During the egg drop task, I learnt that the egg needed more padding and movement so that the egg would not crack. It needed to be more stable so when the egg was dropped it would not fall over. Therefore, if our structure had more flexibility and stability it would have caught the egg without falling over and it wouldn't have cracked."*

**Rebecca Benson**

They also completed an activity where they needed to use some of the design concepts Engineers use to make bridges to build a bridge out of pop sticks and straws. The idea was that their bridges would extend over a 25 cm gap and hold at least 2 kg in weights.



*"Some ideas we used were to make our bridge longer than the 25 cm gap. We tried to build a beam/truss bridge with a very strong deck, the deck worked, but the beams on the sides did little more than hold the weights in place."*

**Jack McGee**

The idea behind these types of activities is that students need to work effectively in groups, communicate with their team members and follow set criteria for the products they were creating, the same way that professional Engineers do every day.

Currently, the students are learning basic electronics (such as the purpose of different components, how to solder components onto a printed circuit board, etc) and coming up with some ideas for their NAMIG project, to be completed next term. Some ideas the students have had so far are solar powered remote controlled cars and pencil cases with speakers installed in them. Their projects will be displayed at the C2C expo in November and students will receive an SACE point for the work they complete. They will also participate in an excursion to UniSA and visit an engineering firm later in the year.

**Alana Madden, Science Teacher**