

# sciences

## SCHOOL NEWS

**\* Asquith Einsteins.** David Hinitt (Year 9), and Ben Stevens (Year 10), students of Asquith Boys' High School, had outstanding success in the Science Competition conducted by the University of NSW sponsored by Esso Aust.Ltd. Both boys received High Distinctions, being placed in the top 1% of the state.

Special mention also goes to Chris Leggatt or Year 8, Jamie Ferguson and George Samuel of Year 9, Ken Finnigan and David Macefield of year 10. 26 students also received Distinctions and 64 received Credits. The other winners of Distinctions were: Year 7 Bryn Price, Shane Murray, David Loudon, Mark Batey Year 8 Aaron Case, Timothy Milkins, Scott Newling, Shane Strohfeltd, Daniel Taylor Year 9 Gary Lamont, Kelvin Rolton Year 10 Steven Avery, Steven Brown, Adrian Defert.

## THE SCHOOL SCIENCE AWARDS SCHEME

This year, two students of the School, Ross Stephens and Alex Wardrop, entered projects in the School Science Awards Scheme. Both students gained £5 awards. This followed on from the year before when three students, Geoffrey Fuller, Peter Grey and Alex Wardrop entered a joint project on gas discharges and cathode rays and received a £3 award for their work.

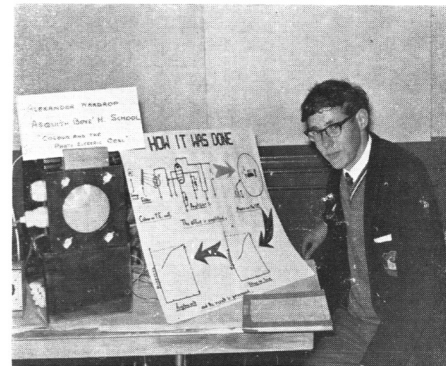
Ross Stephens prepared ethanol (ethyl alcohol) and investigated the formation of its main products. Firstly the influences of experimental conditions on the formation of it by the enzymical action of yeast on glucose were studied. From that, quantities of an ethanol and water mixture were obtained, but at first it proved difficult to obtain separation of the components because it cannot be achieved by simple distillation.

However, Ross designed and constructed a fractionating column which gave good results. With the ethanol thus obtained he went ahead and prepared ten of its main products: acetaldehyde; acetic acid; ethyl acetate; chloroacetic acid; glycine; glycollic acid; chloral; chloroform; formic acid; and ethyl formate. This work was carried out over a period of eight months.

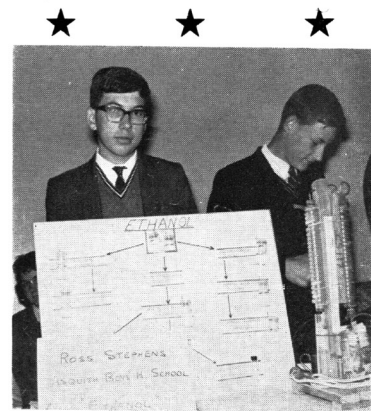
Alex Wardrop continued with his 1963 project in which he collaborated with Geoffrey Fuller and Peter Grey and submitted a project on colour and the photo-electric cell. His apparatus consisted of a cathode ray oscilloscope (he chose this piece of equipment because it allowed him to continue with the previous work) coupled to a photoelectric cell enclosed in a specially constructed light-proof box so that only a controlled amount of light and colour could be shone on the cell. The results were then monitored on the screen of the oscilloscope and processed and it was

found that red affected the cell the most and blue the least (it should be noted that he had to build four oscilloscopes before he had a satisfactory one.)

The awards were presented on the 1st August at the Sydney Town Hall, after an exhibition of the work that day. Sir Mark Oliphant was the guest speaker at the gathering.



Project on colour — A. Wardrop, 5A



Project on Ethanol - R. Stephens, 5A

Left: 1964 School Magazine

Photo below: 1967 Science class in action!



## Joining the elite

STUART Cooke of Pennant Hills is somewhat of a scientific phenomenon.

The Asquith Boys' High Year 11 student was one of 276 selected from 2000 high school students nationwide to attend the CRA National Youth Science Forum, to be held over two weeks in January next year.

Those selected get the chance to meet scientists working in the field and in laboratories, at such hallowed institutions as ANU and CSIRO Australia, to learn first hand what a career in science is all about.

Stuart was nominated by Berowra Rotary Club for his communication skills, presentation, community awareness as well as scientific aptitude.

Science whiz Stuart Cooke Photo: MARK SCOTT

## Students have the right chemistry

MORE than 40 students at Asquith Boys High School have received certificates of merit in the Australian Schools Science Competition.

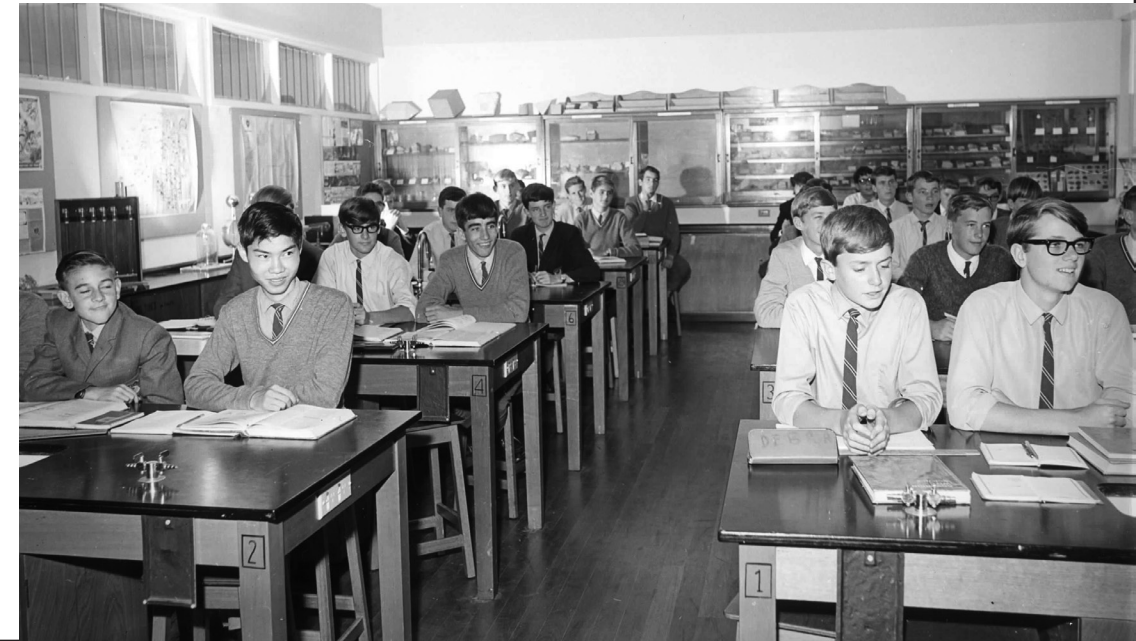
This year over 400,000 students from Australasia took part. ABHS had 15 students placed in the top 10 per cent.

"Students see the competition as a chance to challenge their ability to think and solve science problems," said Rolf Jacobsen, convenor of the competition. "Teachers can gain insight into their students' capacities as well as direction in their own teaching."

Top left: 1991 publication?

Middle left: 1996 Hornsby Advocate

Above: 1995 Hornsby Advocate



# Students get outdoors to further studies

## Environmental science class visits national park

BEING taught inside a classroom is one way to learn but for the students at Asquith Boys High School, getting outside and dirty proved to be even more valuable.

Earlier this month the students who are studying environmental science spent a day learning about bush regeneration.

They worked on the Lyrebird Gully Track in Berowra Valley National Park, near Mt Ku-ring-gai railway station and filled 32 bags with weeds and rubbish.

It was a joint project of Asquith Boys High School, National Parks and Wildlife Service and Friends of Berowra Valley.

Friends of Berowra Valley chairman Bob Salt said they were very impressed by the effort.

"We were absolutely delighted when the group, consisting of 16 senior students, turned up at the Mt Ku-ring-gai site," Mr Salt said.

"On behalf of the Friends I would like to record our appreciation and thanks not

only for the significant effort by the students, but the time given by the supervising teachers and the NP&WS staff to ensure the operation was properly and safely carried out."

Mr Salt said he hoped the project would help the students to understand their environment.

"This will be an on going project and hopefully many of the boys will continue to appreciate how, with effort, weed infested areas can be returned to nature," he said.



Asquith Boys High School students cleaning up a bush track

## 92 Year 9 students were treated to a fantastic day out to visit the Port Kembla Steelworks and Wollongong Science Centre.

The day started with a cold morning before morning tea at Stuart Park at the beachside at Wollongong. After this one group headed to BlueScope Steel at Port Kembla for a 2hr tour where the boys donned their safety gear and headed to the main smelter for a chance to see hot slabs of steel being poured and cut to size before being sent to the rollers to be made into sheet metal. The boys witnessed the steel being rolled to various thicknesses and packaged up to be sent to

customers. The second group spent some time in the Science Centre run by the University of Wollongong. The boys watched a star show in the planetarium followed by hands on activities including a radar gun to measure the speed of a baseball throw, a bicycle that produces electricity and a strength machine where the students couldn't quite match the teachers. The visit culminated with a Liquid Nitrogen show which was very cool! The excursion was long but the boys behaviour was excellent and I would like to congratulate all students on their conduct.

Mr. Robertson Head Teacher Science August 2011

## 3D Models of a Cell

8E had the task of making a 3D model of a cell. Some comments + reflections:

Lachlan Baker Use normal paint instead of water colour for a better result.

Jacob Victa I did learn a lot about a sperm cell.

Ben Russell I have learnt how to read and follow a rubric to maximise marks.

Andrew Sheldon Have learnt to not leave a complex task till the last minute to get started.

Anthony He Following the criteria sheet made the task a lot easier.

Connor Seery Ballons don't shape well for this. If you know what you are doing you will succeed.

Ethan Boyle I learnt how to use a hot glue gun.

Connor Ryan I have learnt how to stick to the time limit and use what is around me to make this.

Dominic Tonu-Jiare It taught me to think outside the box and to be creative, how to compromise and use things I already have.

Patrick Bostelman Learnt to use different materials even cakes and lollies to make my model.

Luke Ivers Having the marking criteria made the project much easier.

Oliver Fielden Hair spray does not make things stiff when making a model.

Sean Lanske How complex is a simple cell in our body???

April 2017 Backchat



Above: 2016 Hornsby Advocate

Below photo: 2011 Port Kembla Steelworks in action

Middle below photos: April 2017 Backchat cell models

Bottom photo: April 2017 Backchat, even more cell models with boys having fun

Frog: 1985 Calendar print illustration

