

Secondary entry #3: Bishop Tyrrell Anglican College



THE BISHOP TYRRELL BUGLE



FIGURES: Dr Jon Borwein, numbers fan. Picture: Cameron Arnott

Maths study vital for jobs in the future

By ALEX HUNT

DOCTOR Jon Borwein, a laureate professor in the school of mathematical and physical sciences at the University of Newcastle, believes mathematics is an essential part of daily life, in contrast to many high school students.

"Maths is not scary, it's fun. Maths is everywhere – it's in every part of everyone's life. You couldn't use anything you have today if it wasn't for maths," he said.

Dr Borwein refutes suggestions there are few jobs for those who study mathematics.

"More and more jobs now require mathematics."

"If you don't have mathematics in future you will be excluding yourself from most of the jobs."

"We [society] have a real problem though – very few girls are taking more than basic maths in year 11 and 12. This could exclude them from many jobs in the future, especially the most useful, well-paid and enjoyable ones."

"A good maths degree teaches you how to think, organise thoughts, be flexible, use your brain and solve problems."

"You learn how to see patterns, not just use recipes."

The maths professor originally wanted to be an historian but decided if he did maths he could still do history later, but if he did history he might get left behind in maths.

By ROSE VILLARI

THERE is a saying that goes: "Old teachers never die, they just lose their faculties."

Veteran teacher, 90-year-old Geoff Borham, is bucking the saying and is still well and truly an active member of the community with all his faculties.

He has led a fascinating life from which to draw upon for teaching inspiration. While Mr Borham was a trainee teacher in Armidale in 1941, the Japanese attacked Pearl Harbor and since he was attached to the Sydney University Regiment and training near Sydney at Ingleburn, he remembers the events of the time very clearly.

"I was at elementary Flying School at Naranderra, then a recorder. I went to lots of different places ... small islands including Manus Island, which is still in the news today. I was also keen to get out of Australia during the war to see other things like most young men," he said.

Post-war, he held a number of jobs.

As a result of the wartime disruptions, Mr Borham did not return to Armidale until after the war, in 1946. But it was teaching that held a strong interest for Mr Borham. He felt that school and home lives were always connected, an educational idea that many see as recent,



KNOWLEDGE FONT: Former classroom teacher Geoff Borham, at the age of 90, still has plenty to teach the students of today. Picture: Cameron Arnott

but Mr Borham's considerable experience and sensibility to the needs of his students showed him how important this link was even back then.

"When there are problems in a child's life, or no support from families, it makes it hard for a child to learn, focus or care about much."

Mr Borham was the first deputy principal of Salty Creek Public School, now known as Edgeworth Heights Public School.

He continues to be a fully active and enthusiastic member of the local community.

Incredibly, Mr Borham is still in touch with one of his first pupils,

who is now 79 years of age.

Mr Borham observes with his customary sense of humour: "I have been retired for almost 31 years. The superannuation board are waiting for me to fall off the perch, but I am not ready to go. On average, they only have to pay a teacher for 12 years."



UNDER THE MICROSCOPE: Dr Stephen Graves in his laboratory. Picture: Cameron Arnott

Beating the bugs and saving lives

By GAYATHRI MENON

DOCTOR Stephen Graves is the director of microbiology at the Hunter Area Pathology Service (HAPS) in the John Hunter Hospital.

As a microbiologist, he studies microbes under a microscope.

There are different types of microbiology – industrial, environmental and medical. The HAPS is a unit which

covers the area from North Sydney to the Queensland border. They work in six areas – microbiology, immunology, haematology, biochemistry, molecular medicine and anatomical pathology.

Dr Graves had wanted to major in zoology at university, however the molecular revolution, or the study of DNA, had just started in the 1960s and many exciting

opportunities arose.

Microbiology has changed in many different ways since then. Much of the equipment is automated and the focus of the research has also changed.

Through study, it is now known that 20 per cent of cancers are due to microbes. Microbiologists may not deal with patients directly, but their work is just as important.

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