



Media release

Sunday 19 April 2009

Global crises must make Earth and Environmental Science a major focus of National Science Curriculum

The proposed National Science Curriculum for Australian schools must ensure that Earth and Environmental Science receives the same significant focus in classrooms as biology, chemistry and physics, given its critical role in combating the environmental, energy and economic crises that Australia and the world are now facing, the Geological Society of Australia (GSA) has warned.

In two submissions to the National Curriculum Board's consultative process on *The shape of the National Curriculum*, the GSA has strongly supported the development of a National Science Curriculum covering all years from kindergarten through to high school.

But it has warned that the new curriculum will be a 'make or break' opportunity for Earth and Environmental Science to finally be given dedicated teaching time at Australian schools after decades of being 'left in the classroom cupboard' to make way for studies in the traditional sciences of biology, chemistry and physics.

"We fully support the need for students to be well-grounded in biology, chemistry and physics, but a solid grounding in Earth and Environmental Science is just as critical given the centre-stage role this discipline is now playing in combating the major environmental, energy and economic crises of the 21st century" GSA President, Professor Peter Cawood, said.

"Earth and Environmental Science is already at the centre of global efforts to develop cost-effective responses to huge challenges like climate change, drought and water contamination, salinity and other environmental degradation, geo-hazards like tsunamis and earthquakes, the need for clean and reliable baseload energy, threats to food security, the contamination of productive land and the impact of urban development on land health.

"Earth and Environmental Science also generates much of the wealth that Australia enjoys (for example, it contributes about 10% of Australia's GDP through exports from related sectors like the minerals and petroleum industries), as well as holding the key to a sustainable future and underpinning much of the knowledge base of other sciences and allied fields such as agriculture, climate science, ecology, engineering and even medicine.

"At senior school level, Earth and Environmental Science is the perfect umbrella discipline for bringing biology, physics and chemistry together under one roof. It provides a 'real life' context to engage children of all ages in science, and it has real potential to be the key portal for increasing interest in science in the early school years.

"We also need to counter the serious 20 year decline in the number of those studying Earth and Environmental Science at our universities if we are to reverse the critical shortage of Earth and Environmental scientists in Australia. By far the best way to get more students into tertiary-level study in Earth and Environmental Science is to expose them to the discipline—and the wide-ranging careers it offers—throughout their school years."

The GSA has advised strongly against a National Curriculum Board recommendation that the fourth science subject at senior school should focus on Environmental Science only, arguing that Earth and Environmental Science is 'joined at the hip' and that effective Environmental Science can only be taught in full appreciation of Earth processes and how they evolve over time. It has also urged the Board to convene an advisory body comprising the GSA and other organisations in formulating Earth and Environmental Science subjects for Australia's schools.

The GSA is also deeply concerned about declining levels of student engagement in all science subjects, warning that better resourcing of all schools is critical in reversing this trend by ensuring students can gain adequate exposure to science by bringing class sizes down and enabling teachers to spend less time undertaking administrative tasks.

**Professor Peter Cawood and other GSA representatives are available for comment.
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