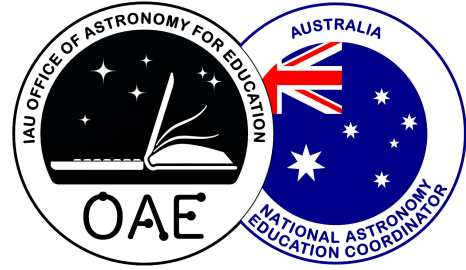


Astronomy Education in Australia



This overview is part of the project "Astronomy Education Worldwide" of the International Astronomical Union's Office of Astronomy for Education.

More information: <https://astro4edu.org/worldwide>

Structure of education: The latest [data on schooling in Australia](#) is from 2018. There are about 9,500 schools in Australia with 3.9 million students and 290,00 teachers. 70% of schools are government, the other 30% non-government, mostly associated with religious organisations. Both sectors receive government funding whilst non-government schools also charge fees. About 66% of students are enrolled in government schools, 34% in non-government. 69% of primary students attend government schools and 60% of high school students attend government schools, the others attend non-government schools. Students in Australia start school in Kindergarten, typically at the age of five then have 12 more years of schooling for a K-12 system, with Primary up to Year 6 and High School 7-12.

Education facilities: By global standards Australian schools are well equipped. The standard varies across the country -at the top level some wealthy private or non-government schools have outstanding facilities. Class size would be at a maximum of 30 in some high school classes and usually no more than 24 in primary classes. Schools have reliable internet connections and computers and other digital technology is in widespread use. School transport is free or heavily subsidised.

Governance and organisation: Australia now has a national curriculum in core subjects including science. This is set by the Australian Curriculum and Assessment Authority ([ACARA](#)). The implementation and delivery of this is then the responsibility of each of the six states and two territories. Each state has its own system of accreditation for teachers, assessment of schools and students' work. Funding of government is a state responsibility whereas the Federal government funds non-government schools.

Teacher Training: Teachers are trained in universities, 40 universities across Australia offer teacher or education degrees. Training is typically via a four year Bachelor of Education degree or a double degree involving a bachelor's degree in a science field and follow on graduate diploma or Masters of Teaching. Most Primary-trained teachers whilst having some science methods training within their course lack expertise in the field. At the secondary level teachers of Physics and Mathematics are in short supply. Science teachers sometimes have to teach outside the area of expertise. In many of the states/territories teachers are encouraged to undertake professional development courses in order to continue developing their skills and knowledge in teaching. The only state where this is mandated is New South Wales where teachers have to undertake 50 hours of registered professional development and 50 hours of teacher identified professional development per 5 years.

Astronomy in the curriculum: Science and Technology is an integrated subject in primary schools (K-6). In Years 7-10 at high school Science is taught as an integrated subject. Students in Years

11-12 can choose separate science subjects including Physics. Astronomy appears across the primary, secondary, and Physics curriculum. In primary school, themes including observable changes in the sky, forces at a distance, and the solar system. In secondary school, gravity and orbits, stellar evolution, and galaxies are addressed. Some states also have extension science courses or options that allow for independent student research projects on topics including astronomy. Astronomy is a component of the senior Physics courses in New South Wales and Victoria.

Astronomy education outside the classroom: There are many organisations in Australia that engage in informal astronomy education via events at public observatories, science centres, planetariums, and other not-for-profit groups, including open days at professional observatories. Furthermore there are camps and other holiday programs for school-age students that focus on space and astronomy topics.

The International Astronomical Union's National Astronomy Education Coordinator (NAEC) Team for Australia: Robert Hollow (Chair & Contact Person), Jackie Bondell, Matt Dodds

For specific information about astronomy education in Australia or on this document please contact the Office of Astronomy for Education (oea@astro4edu.org).