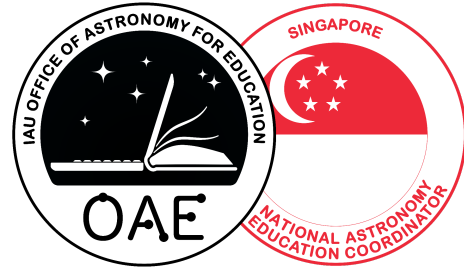


Astronomy Education in Singapore



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: English Language is the language of instruction in Singapore. Compulsory education includes six years of primary school, followed by four to six years of secondary school, and one to three years of postsecondary school. Most students in Singapore undergo the state education while a small percentage are either home-schooled (and required to take the national examination) or attend private schools (largely catered to foreigners). With the exception of SAP or religious schools (a small percentage of schools), there is a diverse mix of students from various ethnicities and religions..

The Special Assistance Plan, or SAP for short, is a program dedicated to academically strong students skilled in both Chinese and English. Only primary and secondary schools focused on Mandarin as a mother tongue offer the Special Assistance Plan.

Education facilities: Most schools in Singapore have an average class size of 30-40 students while some independent/specialised schools may have a smaller class size of 20-30 students to cater to the learning needs of the student profile. All schools are fitted with LAN and WiFi for internet access. Potable water runs from taps and water coolers/dispensers. Refurbishment works are conducted every 5- 10 years or depending on the status of the facility.

The Ministry of Education (MOE) allocates annual budgets fairly to all schools for facilities upgrading and academic needs.

Students in Singapore take public or private transport (including school buses) to schools and average traveling time ranges from 5 minutes to 70 minutes depending on where their homes are located.

Governance and organisation: Singapore is a city-state and all curriculum is decided by the Ministry of Education. Most of the schools follow a similar curriculum as dictated by the Ministry. Schools with independent status are allowed to plan their curriculum according to their school mission and focus.

Teacher Training: Primary, Secondary, and Tertiary Education teachers selected by the Ministry of Education are trained at the National Institute of Education (NIE). Teachers are required to undergo the Postgraduate Diploma in Education (PGDE) which is a full-time programme meant for degree holders who would like to become teachers. The training programme provided by the NIE aims to equip teachers with the knowledge and skills to teach school subjects and better understand the teaching profession in Singapore's educational context.

The PGDE training programme at NIE broadly covers:

- Education Studies
- Curriculum Studies
- Practicum
- Language Enhancement and Academic Discourse Skills

Astronomy in the curriculum: Before the revision of the curriculum in the 1990s, topics on Astronomy were mentioned in the Geography and Primary Science curriculum. Currently, Astronomy concepts are integrated into the Lower Secondary Science (Middle School Science) and Junior College (JC) Physics syllabus. These concepts include the forming of shadows during an eclipse, high and low tides due to the influence of the moon and optical effects of the sky. For JC physics, elements of astrophysics such as nuclear physics, gravitational field strength, and orbits are covered.

Astronomy education outside the classroom: Astronomy education outside the classroom is generally limited to two main groups: educational institutions and social networks.

In schools, several Astronomy Clubs have been established amongst some schools. It caters to the interest of students who are keen in Astronomy. Some of the local universities in Singapore (National University of Singapore, Yale-NUS, Nanyang Technological University, and Singapore University of Technology and Design) have Astronomy Clubs as well.

As part of school activities, visits to Science Centers, Observatories and Planetariums are made occasionally either locally or overseas. Field trips to stargazing locations are organised annually for schools by the university's clubs or the universities.

The social networks include clubs or societies that have been set up by adults and amateur astronomers. These groups include:

- The Astronomy Society of Singapore (TASOS)
- Singastro Forum
- Galaxy CC Observatory (Community Center-based)

The main focus of their activities are in Astrophotography and stargazing.

The International Astronomical Union's National Astronomy Education Coordinator (NAEC) Team for Singapore: Tan Hoe Teck, Geraldine Tan, Yang Jiahui Abel

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