Astronomy Education in China, Hong Kong



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: Usually, children start their learning in kindergartens from 3 to 6 years old. It is followed by 6-year formal education in mainstream primary education (taught in Chinese, English and Mandarin). Secondary school is compulsory for 6 years, studying all subjects for the first 3 years and registering their interested subjects (from Liberal Arts, Science and Business) as electives for the remaining 3 years. There would be Territory-wide System Assessments for P.3, P.6 and F.3 students every year for evaluating the overall learning standard of students. All twelve years of education at public schools are free of charge if studying at government and aided schools. In the final year of secondary studies, Form 6 Students need to prepare for the Hong Kong Diploma of Secondary Education (HKDSE) Examination to fulfill requirements for higher-level studies. As for Post-secondary Education, there are multiple study pathways, such as 4-year bachelor's degree programs and 2-year sub-degree programs.

For non-Chinese speaking students and foreign nationals, there are also some international schools and private schools in primary and secondary education. They will continue their further studies to overseas universities or high-level educational colleges after another public examination, such as GCE A-Level and IB Diploma (different curriculum comparing to the mainstream education).

Education facilities: Hong Kong schools have typical class sizes of around 25 to 30 students, students usually would have the same timetables from primary to secondary (P.1-P.6 and F.1-F.3). Only in the senior secondary curriculum (F.4-F.6), students could pick their electives and the class sizes would be smaller, around 15-20 students. All schools in Hong Kong have access to running water and good internet connections. The public transportation system in Hong Kong is convenient but always having traffic congestion during school arrival. School buses would be offered for students living in specific regions. School buildings are usually well-developed but the laboratory facilities and interactive spaces for students might not be sufficient.

Governance and organisation: Government schools are run by the government. As for the Aided schools, they are run by local charitable or religious organizations with government funding. Regarding the Direct Subsidy Scheme (DSS) (https://en.wikipedia.org/wiki/Direct_Subsidy_Scheme) schools, they are run by non-government organizations and schools are free to decide their curriculum, fees and entrance requirements. Unlike private international schools, the mainstream education will make references from the Curriculum Hong Kong Education Bureau (EDB), and arrangement of public assessments and examinations of Hong Kong Examinations and Assessment Authority.

Teacher Training: Both Primary and Secondary school teachers not only need to study a 4-year bachelor's degree at university, but they also require a professional qualification of a 1-year program on Postgraduate Diploma in Education (PGDE) after a relevant undergraduate degree. Field experiences in teaching would be provided during PGDE programs. Only teachers who have studied a 5-year local bachelor's degree in Education could be exempted.

Astronomy in the curriculum: For the primary school, there are no specialized school subjects called Astronomy. Instead, astronomy content can be found in General Studies (P.4-P.6 in primary schools) which is related to the solar system, including the orbit of Earth, planets, solar and lunar eclipses, and space exploration. It could also be found in Science (F.1-F.3 in secondary schools) and Geography (secondary schools) which includes climate change, earth science and essential elements for living organisms. More advances in Physics, besides basic understanding of gravity and forces, there would be an elective subject called "Astronomy and Space Science" for F.4-F.6 secondary students. Unlike Student Astronomy Club, some schools would have enrichment classes (experiential learning) on Science and Technology and STEM outreach activities with Astronomy lectures and stargazing experience. There are also programs available in Undergraduate level-courses about Introduction of Astrophysics and Cosmology, such as HKU, CUHK and HKUST.

Astronomy education outside the classroom: For the general public, there are several active astronomical organizations, facilities and outreach centers, such as Hong Kong Space Museum, Hong Kong Astropark, Hong Kong Observatory and Ho Koon Astronomical Centre. There are many student astronomy clubs in secondary schools and universities, which actively organized sidewalk astronomy and stargazing camps with youth organizations every year.

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For specific information about astronomy education in China, Hong Kong or on this document please contact the Office of Astronomy for Education (oae@astro4edu.org).