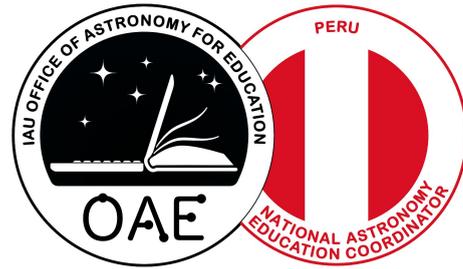


Astronomy Education in Peru



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: Children begin formal schooling at aged 5 or 6 after 1 year or 2 of preschool education. There then follows six years of primary education. Secondary school is compulsory for five years. Primary and secondary school are considered "Basic Education". After secondary school, higher education is welcome, but not mandatory. Technical (technological colleges) education lasts 3 years and university education lasts 5 years. The latter leads to a bachelor's degree. The official language is Spanish, but some communities, especially in the Peruvian Andes and Amazonia, have bilingual education: Spanish with some other indigenous language (Quechua, Aymara and others). Almost 30% of schoolchildren attend private schools, where education is better qualified with the best facilities given in Peru, in contrast with the 70% of public (state) schools, where education is free of charge, but quality and learning indicators do not show expected results. Education is strongly influenced by religion. Although the Constitution of the Republic of Peru guarantees religious freedom, more than 90% of families send their children to Roman Catholic schools (public and private). Other kinds of Christian schools (private) also exist. In practice, secular education is not part of our educational system. Alternative and special basic education are also considered in our educational system. The former is addressed to those (adults, poor sectors) who did not attend schools on time, or were unable to complete it, due to different factors (economic, social, geographical and others). The latter is addressed to children and young people with differentiated abilities.

Education facilities: Many schools, especially in the Amazonia and the Andes, lack basic facilities such as running water and toilets. There is a limited access to education resources, for example, libraries and good internet connection, and science laboratories are poorly equipped. Poor and insufficient school infrastructure negatively and deeply impacts our inclusion goals and student learning. The Programme for International Student Assessment (PISA) places Peru at the bottom of the ranking in all three categories (math, science and reading) with a small progress in the last couple of years. Peruvian schools have typical class sizes of 30-40 pupils. In some few cases, schoolchildren may have some additional practical subjects after formal schedule, like art and technical subjects with smaller classes. School science clubs are being promoted in the last years by our Ministry of Education and the National Council of Science and Technology (CONCYTEC).

Governance and organisation: Education in Peru is under the jurisdiction of the Ministry of Education which formulates, implements and supervises our national educational policy. There are 26 regional directorates of basic education in Peru. Every directorate has under its responsibilities some local units of education. The latter rule education in every district. The Curriculum is set by the central government under the direction of the Ministry of Education. The curriculum was last reformed in 2017. It is a competency-based curriculum.

Teacher Training: Primary and secondary school teachers mostly study undergraduate degrees in education at a university. Secondary science (math, chemistry, physics, biology) teachers may study for a joint degree in science physics at a university. It is not necessary to study for a postgraduate education qualification after a science undergraduate degree to teach in a school. Constant teacher training is mandatory for those who already works in schools. Most of trainings are presencial some days per year, depending of the subject, but due to the pandemic our government is trying to spread virtual training. Teacher training are mainly focused in educational management. Experts can notice a lack of technical training, specially in science.

Astronomy in the curriculum: Astronomy is almost absent in the program of our competency-based curriculum. There are only some topics vaguely conceptually explained at primary and secondary levels in the content of the subject “Science, Technology and Environment”, like seasons, the solar system and origin of the Universe. Although “gravity” is contemplated in the program of basic education, insufficient academic and management tools do not permit conclude the program and theses vital topics are overlooked, specially in public schools. Only some few private and public high performance schools have implemented science clubs where astronomy is included. “Galileo Teacher Training Program” and “Peruvian Olympiads on Astronomy and Astronautics” has mainly motivated the creation of some astronomy educational clubs in schools.

Astronomy education outside the classroom: Informal education on astronomy has risen up in the last few years. Some outreach programs are held in national institutes and universities. There are some astronomy/amateurs clubs, mostly in Lima, that actively and efficiently complement the labour of professional astronomer dedicated to outreach activities. There is only one national planetarium located in the Peruvian Geophysical Institute, belong to the Ministry of Environment. It receives hundreds of school children per year.

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