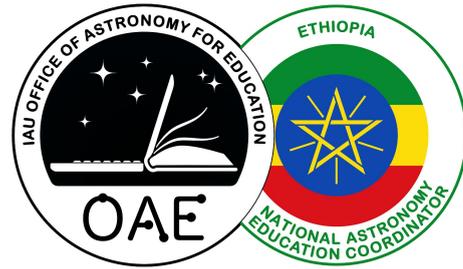


# Astronomy Education in Ethiopia



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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>

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**Structure of education:** Unfortunately, Ethiopia's education system was underdeveloped for years. Nowadays, the government and Non-Governmental Organizations (NGOs) and private sectors have been taking great measures to provide higher quality education to the people. Most children living in urban areas go to kindergartens, which are mostly run by non-governmental organizations. However, most children in rural regions join churches or mosques as a nursery school before joining the primary school. Most pupils enter primary education at the age of 7, although there is a sizable number of over aged children. After spending 8 years of primary school, the pupils take Primary School Leaving Certificate Examination at the end of grade 8. Those who passed will join secondary school and spend four years and proceed to take the Ethiopian Higher Education Entrance Certificate Examination at the end of grade 12. Students passing this examination are eligible for university. In the university the undergraduate program ranges from four years to six years depending on their field of studies.

The core curriculum is standardized nationwide, but there are some variations, including the language of instruction, at the local level. In the nursery and primary school from 1 to the 6th grade; mother tongue is used as a medium of instruction and English is taught as one course. Most regions start using English as a medium of instruction from Grade 7, and very few regions from Grade 5. All twelve years of education at public (state) schools are free of charge. There are also private (independent) schools which charge fees and they account for a small number of pupils, because the majority of people can't afford the fee.

**Education facilities:** In Ethiopia, there are inadequate facilities and professional capacity is low. These problems are particularly acute in rural areas. There is a shortage of school classrooms (especially among rural communities) and often the existing buildings are dilapidated. Since last year the government and volunteers have been involved in the refurbishing process of the schools. Schools don't have a uniform standard for the number of students in one class. Public schools host many students depending on the availability of classrooms or schools in their respective regions. In many schools, there is insufficient furniture and a lack of basic educational materials. Although there is much attention given for the expansion of schools to reach all school-aged children in Ethiopia, the concern on focusing on school hygiene and sanitation remains to be a challenge. The access to drinking water facilities (water taps) and hand washing facilities was very much limited to the extent of not conforming to the standard. There are wireline internet connections to some schools where students and teachers can access the service in laboratories and libraries.

**Governance and organisation:** School education is mostly administered by local authorities in subdistricts within the individual regions, a move designed to better accommodate local needs. The federal government manages the education system with multi-year development programs that set performance targets and reform agendas for the entire system. School curricula are standardized

nationwide. They use a national curriculum framework that includes textbooks developed by the General Education Curriculum Framework Development Department of the Federal Minister of Education (MOE). Curriculums usually change relatively in shorter period of time.

**Teacher Training:** Teachers in primary school are required to complete three year training and earn a diploma in elementary education. Secondary school teachers are required to hold at least a bachelor's degree and additionally required to complete a postgraduate teacher training on summer in-service program where schools are closed for two months. For this to be achieved, teachers in the regions and areas with the lowest rates of qualification are prioritized for upgrading.

**Astronomy in the curriculum:** With the exception of few international schools, there are not any schools that give courses of astronomy. Instead, some astronomy topics can be found in physics and general science courses. In grade 5, there's a topic called solar system which deals about the Sun, planets, asteroids, comets and eclipse. Besides that few examples of astronomy are taught in physics chapters of gravity and optics. No topics on stars, galaxies and cosmology are raised at any grade level (1-12). In private primary and secondary schools they use the national curriculum including text books and also have additional text books. These small text books, which are provided by the school with additional topics such as astronomy, are not covered in the national curriculum. In the universities astronomy is taught as an elective course in the physics department, which will be given if majority of the students in the class wanted to take the course.

**Astronomy education outside the classroom:** There are many astronomical outreach programs and events in the central city of Addis Ababa. Ethiopian Space Science & Technology Institute (ESSTI) and Ethiopian Space Science Society (ESSS) are the main actors for hosting space activities for the public. They host events such as stargazing, space camp, astrobus and summer school programs. Moreover, ESSTI welcomes students to visit Entoto observatory. ESSS has been giving summer school training for a week about Basic Astronomy since 2017. International workshops on space education were hosted by Network for Astronomy School Education (NASE), International Astronomical Union (IAU) and European Space Agency (ESA). They gave training to teachers to enhance their knowledge and skill in space activities and awareness. The main objective of these trainings were to teach teachers about Astronomy, to transmit accurate concepts regarding the issues addressed by astronomy, to provide the skills for teachers how to teach astronomy and to facilitate learning tools for teaching astronomy to school teachers.

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### **The International Astronomical Union's National Astronomy Education Coordinator (NAEC)**

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