Astronomy Education in Armenia



This overview is part of the project "Astronomy Education Worldwide" of the International Astronomical Union's Office of Astronomy for Education. More information: <u>https://astro4edu.org/worldwide</u>

Structure of education: Astronomy Education in Armenia traces back thousands of years. Currently, Armenia implements twelve-year education, which includes three levels: elementary, middle and high. Elementary level education is four years (1–4 grades), middle school is five years (5–9 grades), and high school is three years (10–12 grades). There are public, specialized and special state schools, as well as private schools in Armenia.

Education facilities: Classes are comprised of up to 30–35 students. Schools are equipped with running water. Internet is available mostly in computer rooms. Private schools are well equipped in terms of internet and classroom facilities.

Governance and organisation:

The Ministry of Education, Science, Culture and Sports sets education strategy and state programs.

Teacher Training: Teachers hold either pedagogical degree or diploma, or have higher education with at least five years working experience in school during last ten years. Teacher trainings are both compulsory and voluntary. Trainings are carried out by private and state organizations. Trainings are approved by the Municipality (for Yerevan), and by regional governments (for regions) for teachers in middle and secondary schools. For high schools, the responsible agency is the Ministry of Education, Science, Culture and Sports.

Astronomy in the curriculum: Astronomy is not a separate subject in school curriculum; rather it is included in science subjects. Students first encounter astronomy in elementary grades, where they explore planets, the Sun and the Moon. In middle grades, astronomy topics are part of nature sciences subject, where students explore the Solar System, rotation of planets, the Earth, and gravity. The main part of astronomy is included in physics subject in the 9th grade, including topics like history of astronomy, telescopes, solar system, planets, Moon, asteroids, sun, stars, galaxy, and cosmology.

Astronomy education outside the classroom: Byurakan Astrophysical Observatory is considered to be one of the most visited *Educational Center in Armenia*. The observatory is also very active by organizing School Lectures in remote villages of Armenia, 35 such lectures are organized annually. It is already 7 years that the observatory organizes *Byurakan Science Camps* with the participation of 12-15 years old students interested in science. Since 2015 *"My Universe" essay contest* is being held with the participation of thousands of teenagers. BAO is also involved in *Galileo Teacher Training Program* (GTTP) and twice organized trainings for local teachers. In 2018, 20 teachers from 10 local schools were trained for running *Astronomy Clubs* (using telescope, stellarium, sky map and so on), the program was organized jointly by BAO and "Under the Common Sky" Polish NGO. In

2018, another educational program was fulfilled with the same NGO, here 20 schools established **Young Explorers Clubs**. For 7 times **Byurakan International Summer Schools** were organized and each year attracted dozens of students from all over the world and in 2010 ISYA was organized. And finally, since 1996 the team of Armenian pupils take part in **International Astronomical Olympiads** (IAO), due to which the Armenian pupils singled out by their gold, silver and bronze medals.

Armenia accomplishes the following Astronomy Education activities:

- International Summer School for Young Astronomers (every even year)
- Summer School for Local Young Astronomers (every odd year)
- Preparing participants for International Astronomical Olympiad (annually)
- Science Camp (annually)
- "My Universe" Essay Contest (annually)
- Galileo Teacher Training Program (once in 5 years)
- Teachers training by Network for Astronomy School Education-NASE (once in 5 years)
- Running Astro Clubs (annually)
- Running Junior Researchers Clubs (annually)
- Organizing School visit and lectures by professional astronomers (annually)
- Organizing visits of schools to BAO (annually)
- One or two ongoing Astronomy education programs that are run globally (annually)

Some schools have special astronomy clubs as part of extracurricular activities. Armenian Youth Aerospace Society organizes two-year astronomy education program for schoolchildren.

We believe that joining to IAU OAE will largely promote Astronomy and Science in Armenia. It will strengthen the local Astronomical community by connecting them to the global network of astronomy educators and giving them access to ongoing projects. Finally, it will facilitate exchange of ideas and best practices in the field of informal education.

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For specific information about astronomy education in Armenia or on this document please contact the Office of Astronomy for Education (<u>oae@astro4edu.org</u>).