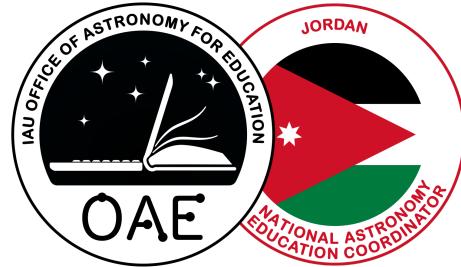


# Astronomy Education in Jordan



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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:** The present structure of the Jordanian educational system comprises formal and non-formal systems. The non-formal system includes preschool education, which is run by private sectors and enrolls children as young as age three. Literacy campaigns, home schooling, and vocational training administered by the ministries of Labor, Industry, and Defense are also part of the non-formal education system.

The formal education system is composed of the following stages:

**Primary Education:** A compulsory stage for children ages 6 to 15 (grades 1-10), consisting of primary school (grades 1-6) and preparatory school (grades 7-10).

**A comprehensive secondary education (academic and vocational) and applied secondary education (training centers and apprenticeship).**

**Secondary Education:** Academic secondary schools are still afflicted by class and gender discrimination. Students study there for 2 years after which they may apply to proceed to university. Subjects include Arabic, biology, chemistry, computer science, earth science, English, mathematics, physics, social science, and Islamic studies (unless Christian).

**Vocational Education:** Those students who prefer that stream may attend two years of vocational training at technical secondary schools. Here, they receive intensive vocational exposure including apprenticeships. Both may open doors at community colleges and at universities too.

Instruction is in Arabic, but English is introduced as a second language from the first grade.

**Education facilities:** In the past twenty years, Jordan's population has doubled to more than 11 million people which include nearly 1.6 million public school students. Jordan needs more schools to meet the intense demands related to the COVID-19 pandemic, immigration, inadequate infrastructure, a growing population, and an influx of refugees from the region. When it comes to school construction, safety standards, schedules, and quality standards had not applied uniformly at construction sites. While the Government of Jordan is making great strides in policy reform and strategy development, challenges remain.

Public schools have typical class sizes of around -30-35 pupils, but usually the number of students is smaller in the villages. The private schools have a better teacher to pupil ratio and host class size of around 25.

Most of the schools in Jordan have internet access.

**Governance and organisation:** According to the most recent data published by the Department of Statistics (DoS) there are 3502 basic schools in Jordan, 2503 of which were run by the Ministry of Education (who also set the curriculum), with other government departments responsible for three other basic schools. The UN Relief and the UNRWA runs 173 basic schools, and there are about 928 private basic schools counted in Jordan (many of which follow foreign curricula).

**Teacher Training:** Teachers should hold a Bachelor's degree at least to enter the teaching profession. There are around 122,000 teachers educating around 2 million children in Jordan. 67% of teachers serve in public schools, 27% in private schools, and 5% in UNRWA and other government schools.

**Astronomy in the curriculum:** Teaching of astronomy is an essential part of the school's curriculum. Students begin familiarization with the solar system from kindergarten (stages 1,2), they can recognize the Moon, planets, Earth and the Sun. Students from grade 1 to grade 6 learn about the motions of the Earth as a planet, the seasons, the geographical coordinates and the bodies of our solar system, their orbits, and relative sizes.

From 7<sup>th</sup> to 12<sup>th</sup> grade, they learn more about advanced concepts like Newtonian gravity, gravitational laws, orbital velocity, Special relativity, Black body radiation respectively, in addition to stars, galaxies, and cosmology.

**Astronomy education outside the classroom:** There are several active science centers, astronomy School clubs and outreach centers in Jordan, like the Jordanian Astronomical Society (JAS), Arab Union for Astronomy and Space Sciences (AUASS), Arab World Office for Astronomy Development-Arab (OAD) which are Located in the capital city (Amman), in addition to many active astronomical School clubs scattering in the different cities. Voluntary youth organizations such as JAS, clubs, AUASS and Arab (OAD) run astronomical events and stargazing nights frequently. Assisting teaching of Astronomy in schools and the periodic publications of JAS & AUASS and their websites represent an important source of astronomical information.

Besides several small telescopes used in teaching and training, there is a planetarium located in Hayya center and another portable one provided by the Astrojo organization. These planetariums offer suitable display centers and presentation halls.

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