## Astronomy Education in



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:** The educational system in Israel is highly centralized, and is governed by the ministry of education. There are a set of laws specifying what are the core subjects to be taught in schools, with a gradual degree of autonomy for schools and local authorities based on the school grades.

Children's education is considered mandatory from the age of 3 till the 10th grade out of 12, and parents reluctant to send their kids to the public education system need to get special permits to educate their kids at home.

Having said all that, there are different streams of education within the public system, for the different religions groups, ethnic groups and minorities living in Israel. The main languages of education in Israel are Hebrew and Arabic with Yiddish also being used in some orthodox schools.

The ministry also allows a certain degree of independent schools to operate within the system, especially at the high-school level, and a small number of chains operate dozens of schools all across Israel. There's also a certain percentage of experimental schools operating, with support from the ministry of education.

**Education facilities:** All schools in Israel are operating with infrastructure provided by the state, ensuring the safety and health of students and teachers alike. All schools have running water, electricity, and most have internet connection, computers and other technological accessories in the classrooms. The ones that don't are either conservative streams of education (like the ultra orthodox Jewish), or in certain rural schools, where low socioeconomic factors are in play. In these cases though, it would not mean no tech infrastructure at all - but rather of lower levels and numbers.

The number of students in a classroom varies from 20 to 40, depending mainly on educational stream, grade level and socioeconomic factors.

**Governance and organisation:** Israeli Education system is centralized though there are differences between the Jewish – Hebrew - Secular education system, Arab sector, Jewish -Hebrew- religious and Jewish orthodox. The first three sectors are forward looking, open and appreciative towards science, Math and English, while the orthodox sector is more defensive with regards to these subjects including science (especially historical sciences). Space science poses a great opportunity to overcome these barriers.

**Teacher Training:** Teachers in Israel need a teaching certificate which requires 2 year training and a university degree. The ministry of education certifies different organizations to conduct teacher in-service training courses and encourages teachers to participate. Teacher communities are another important agent for change and innovation.

**Astronomy in the curriculum:** Astronomy appears as a separate subject for infancy, and at school it is part of physics courses. At age 8 children encounter certain topics in astronomy, learn about the Solar system also topics like Satellites ISS Space mission, space Studies and some are participating in the National Space Olympics.

**Astronomy education outside the classroom:** Astronomy is available also through online courses such as IAA and you can visit places such as Planetariums and Educational observatories. There are also private courses such as World of Astronomy or The Big Dipper for children of various ages.

The International Astronomical Union's National Astronomy Education Coordinator (NAEC) Team for Israel: Victor Bar, Itai Levy, Erel Morris, Majd Thabit

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