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## Science Olympiad

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The Olympiads are like the Olympics, but for academics, not sports. Unlike the Olympics which are held every 4 years, the Olympiads are annual events held in a different country each year. Further, the participation is limited to preuniversity students. These annual international Olympiads are held in a number of subjects: physics, chemistry, biology, junior science, astronomy and astrophysics, and mathematics, among others.

The Olympiads were initiated by teachers and academicians in USSR and the erstwhile east European nations about 50 years ago, in the late 1950s and 1960s. The Mathematics Olympiad was the first to be organized in 1959. Physics and Chemistry followed a decade later, in 1967 and 1968, respectively. Each of these began with half a dozen or less east European nations bringing together about five of their brightest students to a single location and posing a series of challenging tests. This trend has continued with the students being accompanied by two teachers who are called leaders and sometimes an additional observer teacher.

The theoretical tests are spare in nature. The number of questions is about 3–5 and the student is given 5 h to attempt them. Either one or two experimental tasks are assigned, and once again, the student is given ample time to complete them. The purpose is to test the student's creativity and innovation. The tests are designed by the host country. The leaders form the "jury" and vet the questions before these are presented to the students. To ensure confidentiality the leaders and the students stay in separate locations and are not allowed to meet during the testing period. The leaders are provided with the photocopies of their students' answer scripts and grade them independently of the host country. They are given an opportunity to discuss their evaluation vis-à-vis the host country's evaluation team during a moderation session. In other words the tests are ability and not speed tests and the process of evaluation is made as fair as possible.

Students who do well are awarded medals. Usually the top 10 % of the students are awarded gold medals, the next 12–15 % are given silver medals, and then those in the next 15 % slot are given bronze medals. In some of the older Olympiads, there is an additional category called honorable mention for those who did reasonably well but did not bag medals. The detailed scheme for each Olympiad is quite involved and the above percentages for medals are approximate. The overriding concern is to promote goodwill, and hence, there is no official ranking of nations.

The Olympiads have impacted the educational curricula of several nations. Numerous textbooks and problem books based on national selection tests have been published. Several of the problems have been published in leading peer-reviewed science journals. Special journals devoted to problems and competitions are currently published. Teachers and resource persons associated with the Olympiads have been invited to serve on panels to design school tests and to improve the course content.

There has been a steady increase in the number of Olympiads. The Biology Olympiad was started in 1990, the Astronomy and Astrophysics Olympiad in 2007, the Informatics in 1989, and the Earth Science Olympiad in 2007, to name a few. Regional Olympiads have gained popularity. The Asian

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Physics Olympiad was started in 1999 and now has over 20 participating nations. Many of these are “official” in the sense that there are carefully laid out rules and statutes and that the host nation routes its invitation through the nodal agency responsible for the selection of the team via a high-ranking government functionary, such as the minister of education. In contrast there are a host of private Olympiads.

The Olympiads are held in different countries from year to year. They have grown in size. The Mathematics and Physics Olympiads boast of close to a 100 nations. Each participating country pays a modest “entry” fee and pays for its travel. The expenses for the stay and excursions are borne by the host country. The Olympiad serves as an occasion to showcase the culture and educational strength of the host nation to teenage students who would become the future scientific leaders of their nation. Every attempt is made to maintain bonhomie, cheer, and goodwill. The Science Olympiads are a celebration of the best in preuniversity science.

Listed below are some helpful Olympiad websites:

[www.Olympiads.hbcse.tifr.res.in](http://www.Olympiads.hbcse.tifr.res.in) for Olympiads  
[ipho.phy.ntnu.edu.tw](http://ipho.phy.ntnu.edu.tw), [www.jyu.fi/ipho](http://www.jyu.fi/ipho) for International Physics Olympiad  
[www.icho.sk](http://www.icho.sk) for International Chemistry Olympiad  
[www.ibo-info.org](http://www.ibo-info.org) for International Biology Olympiad  
[www.ioaa2010.cn](http://www.ioaa2010.cn) for International Olympiad on Astronomy and Astrophysics  
[www.ijso-official.org](http://www.ijso-official.org) for International Junior Science Olympiad  
[www.imo-official.org/](http://www.imo-official.org/) for International Mathematical Olympiad

## Cross-References

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