



United Nations
Educational, Scientific and
Cultural Organization

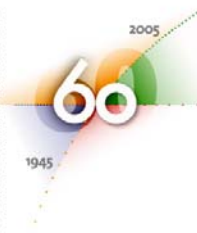
Organisation
des Nations Unies
pour l'éducation,
la science et la culture

Organización
de las Naciones Unidas
para la Educación,
la Ciencia y la Cultura

Организация
Объединенных Наций по
вопросам образования,
науки и культуры

منظمة الأمم المتحدة
للتربية والعلم والثقافة

联合国教育、
科学及文化组织



Promoting Advancement of Scientific Knowledge

The world is undergoing a fundamental transformation driven by science and science-based technologies. Most far-reaching innovations originate from advances in the basic sciences.

Although the basic sciences provide the foundation and reveal exceptional opportunities to meet the needs of society, many developing countries find themselves excluded in one way or another from the endeavour to create, and, consequently, fully benefit from scientific knowledge. The welfare of an emerging-knowledge society and the future of humanity have become more dependent on an equitable production, distribution and use of knowledge than ever before. Therefore, the divide in the basic sciences can only deepen the gap in the fields of technology, agriculture, health care,



Science class in Malaysia
(J.Ling © UNESCO)

information and communication technologies, science education and finally between the North and South.

UNESCO strives to promote vital worldwide action and regional co-operation in the basic sciences to ensure that science becomes a truly shared asset, benefiting all people.

In responding to the expectations of Member States, the UNESCO programme promotes national capacity-building in the basic sciences, and excellence of basic research in areas of national priority. The science capacity-building project stresses the renewal, expansion and diversification of education in the basic sciences for all, with emphasis on knowledge and skills necessary to educate highly qualified specialists and responsible citizens able to meaningfully participate in the society

of the future. This strategy focuses on sustained aid to improve the quality of science education in developing and least developed countries, to foster the use of information and communication technologies, to create and develop a world-class university in each developing country, and to attract, nurture, and maintain young talents.

International and regional co-operation in basic research is promoted within the UNESCO programme in order to ensure high scientific standards. As of today, the programme is implemented through developing the services

of a wide range of networks and centres of excellence,

consolidated in the framework of the International Basic Sciences Programme (IBSP) launched, in 2004, by UNESCO. The IBSP seeks new partnerships with non-governmental and intergovernmental scientific organizations in order to pool intellectual and material resources to attain the United Nations Millennium Development Goals.

Specific activities and projects that comprise the existing basic sciences programme and are implemented with partners include:

- **Promotion of SESAME** (Synchrotron-light for Experimental Science and Applications in the Middle East), an international independent laboratory created under the auspices

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UNESCO-L'OREAL Partnership 'For Women and Science'

Within the framework of an agreement signed September 29, 1999 between UNESCO and l'Oréal, five exceptional women researchers, one per continent (Africa, Latin America, North America, Asia, Europe) working in life sciences or in the material sciences are awarded the annual l'Oréal-UNESCO Prize of US\$100 000. The international jury is presided by professors Christian de Duve, 1974 Nobel Prize winner for Medicine, Günter Blobel, 1999 Nobel Prize winner for Medicine, and Pierre-Gilles-de Gennes, 1991 Nobel Prize winner for Physics. Fifteen UNESCO-L'OREAL fellowships of US\$20 000 are granted to young women scientists at the doctorate or post-doctorate level. Three are distributed per region (Africa, Arab States, Asia-Pacific, Europe/North America and Latin America) to aid local research on projects often also of interest to major laboratories based elsewhere. Forty national projects, including fellowships, conferences, and classes, are organized by l'Oréal in accord with the UNESCO National Commissions and draw on the network of prize laureates and fellowship beneficiaries. Of all the major scientific prizes, the UNESCO-l'Oréal prize is the only one dedicated to women.

of UNESCO following the model of CERN (European Organization for Nuclear Research). Current members of the Centre, which is to be located in Alan (Jordan), are Bahrain, Egypt, Israel, Jordan, Palestinian Authority, Pakistan and Turkey. Observers include Germany, Greece, Italy, Kuwait, Russian Federation, Sweden, U.K. and U.S.A. Based on a gift from Germany of the 0.8 GeV BESSY I storage ring and injector system which stopped operation in Berlin at the end of November 1999 and is being up-graded to 2.5GeV, SESAME will provide a first-class, fully competitive source for synchrotron-light which can be used for research and development in many areas, e.g. material research, nanotechnology, biology, environmental problems, medical applications, archaeology, etc. The SESAME facility is expected to be fully operational in 2009.

- **Teaching and Learning Materials** in Chemistry for secondary school level such as a) the low-cost experimental equipment of The Global Project on Microscience Experiments launched by UNESCO and IUPAC (International Union of Pure and Applied Chemistry) in 1996 answer a demand for cost-effective and safe laboratory experiments. In aid of the project, Associate Centres for Microscience Experiments were established in a number of regions; and b) the DIDAC set of teaching materials for a variety of topics in Chemistry produced in cooperation with IUPAC and with AGFA

Gevaert in CD ROM, book, poster and transparency form.

- **Support for networks of scientists** including the Microbial Resource Centres Network, the Trace Element Institute for UNESCO and its network of satellite centres, the Molecular and Cell Biology Network.

- **Support for training workshops**, conference participation and research fellowships for young scientists in collaboration with partner organisations in Life Sciences and Biotechnology.

- **Promote information dissemination** in the biological sciences by facilitating access to peer-reviewed specialized journals through free subscriptions and online reference materials.

- **Support for activities** in advanced training and research in physics and mathematics in cooperation with the Abdus Salam International Centre for Theoretical Physics and the International Centre for Pure and Applied Mathematics, as well as action in collaboration with the International Union for Pure and Applied Physics, regional and national physical societies in celebration of the International Year of Physics 2005.

- **Support for teacher-training** workshops in innovative modes of physics teaching, as well as an international mathematics exhibition that seeks to inspire the youth and the public at large to appreciate and experience mathematics.

To Find Out More

Basic and Engineering Sciences Web site :
<http://www.unesco.org/science/bes>

Women and Sciences:
http://www.loreal.com/_en/_ww/loreal-women-in-science/

Contact :

Division of Basic and Engineering Sciences
Natural Sciences Sector