Health-Promoting Schools: Promoting the World Health Organisation’s concept of health

Today, in thousands of schools throughout the world, school personnel, pupils, parents and community members work together to help their schools become “Health-Promoting Schools”. In doing so, they contribute to two goals: UNESCO’s Education for All and WHO’s Health For All. Their efforts are helping to bring about the vision of health that WHO has fostered for half a century and which gains dimension and relevance as we develop a better understanding of our world and ourselves.

WHO defines “Health” as “a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity”. All too often, efforts to promote health lack such dimension. WHO’s concept of the Health-Promoting School is an example of the kind of effort that promotes health in its fullest sense. This concept embraces a holistic vision of health and gives consideration to positive as well as negative influences on health. It fully incorporates the notion of prevention, the need to focus on priorities and the importance of measurable outcomes while recognizing that prevention alone does not suffice. Health-Promoting Schools go beyond the prevention model, activating the full organizational potential of schools to be healthy places in which to live, learn and work.

The creation of Health-Promoting schools demonstrates that people care about each other’s sense of well-being as they care about reducing important health problems. Such schools reduce the fear of getting to school safely. They encourage boys and girls as well as men and women to treat each other fairly and respectfully. They stop people from bullying others. They ensure that someone is available to hold a child or adolescent who needs to be held. Health-Promoting Schools help pupils, parents, staff and community members work together to set priorities and plan actions. They use information about leading causes of death, disease and disability among young people and adults to generate commitments and support and to adapt evidence-based interventions that prevent the initiation of important health risks, such as tobacco use, unprotected sexual intercourse and sedentary lifestyle. Furthermore, they monitor progress in achieving their health objectives and use the findings to improve their efforts.

Through their actions, Health-Promoting Schools acknowledge the value of promoting physical, mental and social well-being along with efforts to reduce health problems and risks. They serve as models of what many people want our world to be and offer positive qualities that many individuals and groups can support.

Schools and communities can do much on their own, but many schools will need help to model the kind of healthy and caring societies we hope to achieve. While many organizations provide resources for “projects” that address a particular health problem, too few organizations provide resources to support holistic efforts to promote health through schools. Organisations can help schools become Health-Promoting Schools by helping them to:

1. Build an infrastructure to support the development of a Health-Promoting School.
2. Enhance health promotion efforts that enable students, staff, families and community members to: care for themselves and others, make healthy decisions and take control over their health, and create conditions that are conducive to health.
3. Implement integrated efforts to reduce important health problems and prevent risks that result in intentional and unintentional injuries, malnutrition and dietary related diseases; HIV/STD infection and unintended pregnancy; tobacco use; alcohol and substance abuse; and sedentary lifestyle.
4. Monitor the implementation and effectiveness of Health-Promoting Schools and report on their progress.
HEALTH, SCIENCE AND TECHNOLOGY EDUCATION

It is now being increasingly accepted that good health occurs when human beings and their environment are in harmony (UNESCO/UNDP, 1995) and that science and technology can be of significant help to humanity in arriving at such a harmony. Thus, science and technology education comprising key global problems concerning environmental and health issues has the potential to improve the present and future well-being of all and is fundamental to the improvement of economic and life-sustaining activities.

Health education worldwide goes under many different headings - but most often with three related components: school health services, school environment and health education instruction. The last decades have shown signs of change towards a more comprehensive approach to the last component viewing health holistically and addressing the interrelatedness of health problems and the factors that influence health within the context of the human and material environment and other conditions of life.

Likewise, during the last twenty years extensive changes have occurred in many countries in the field of science and technology education at all levels. Broader definitions of science education encompassing health and environmental education and the more frequent appearance of science, society, health and environmental issues figure among the current trends in science and technology education as their importance for the preservation of global balance becomes more apparent.

Health education, like science, technology and environmental education, is concerned with a certain number of current global concerns such as water, energy, pollution, growth and development. All have a similar, dynamic nature consisting of a problem-solving approach based upon observation and questioning and providing knowledge and skills for lifelong learning. Moreover, all are concerned with linking formal education to the social world.

Thus, by launching Project 2000+, which lays emphasis on integrated science and technology teaching, UNESCO has underlined the importance of the awareness of the impact of human interaction with the natural environment. One of the most important reasons for this emphasis is that the natural world is experienced in a holistic manner and not in terms of the disciplines which are the product of centuries of specialization. “Holism” encompasses the person as a whole, in a whole - in other words it means viewing the total individual as related to the total environment.

The objectives of UNESCO in science and technology education therefore include assistance in adapting educational systems so that they can more effectively deliver comprehensive approaches to science, technology, environment and health education. Activities include estimating efforts in school-based integrated science teaching and in promoting scientific and technological literacy for all. The intention is to help evaluate implications for planners, curriculum developers and teacher trainers and to attempt to provide directions and examples on how to cope with the increasing need to understand the way science and technology affect people as individuals. This will also allow in current educational goals, programmes and practices for a shift from the overwhelming emphasis on academic preparation for science careers for a few to an understanding of science and technology by all in their daily life context leading to a conscious participation in science-related decisions concerning not only the environment but their health.

To learn effectively, children need good health and there is growing recognition in many developing countries that under-nutrition and poor health may be important underlying factors for low school enrollment, absenteeism, poor classroom performance and early school dropout, as reflected in the World Declaration on Education for All and Framework of Action adopted by the World Conference on ‘Education for All’ (Jomtien, Thailand, March 1990). Therefore, an important part of UNESCO’s actions in this area, notably in deprived areas where on the one hand environmental health and food security are problematic and on the other, educational participation rates are low, also covers improving the health, nutrition and general well-being of school-age children; public health standards in schools and the conduciveness of classrooms to learning; and in general, promoting the “healthfulness” of schools.

In its co-operative programme with the World Food Programme (WFP), UNESCO assists in the preparation and evaluation of school feeding programmes in the developing world. These programmes address immediate nutritional needs of the children concerned, mostly that of temporary hunger affecting the pupil’s attention span and learning capacity. In several cases, attempts are made to complement the provision of schools meals with health and nutrition education, improvements of sanitary conditions at school or other interventions aimed at improving the health status of students.

For further information contact: Anna-Maria Barthés, ED/SVE/STE; Susann Von der Vynck, ED/BAS; Ute Meiir, ED/EFA (address last page).
**What is a Health-Promoting School?**

Although definitions will vary among regions, countries and schools according to need and circumstance, a Health-Promoting School can be characterized as a school that is **constantly** strengthening its **capacity** as a healthy setting for living, learning and working. A Health-Promoting School:

- **Fosters** health and learning with all the measures at its disposal.
- **Engages** health and education officials, teachers, teachers’ unions, students, parents, health providers and community leaders in efforts to make the school a healthy place.
- **Serves** to provide a healthy environment, school health education, and school health services along with school/community projects and outreach, health promotion programmes for staff, nutrition and food safety programmes, opportunities for physical education and recreation, and programmes for counselling, social support and mental health promotion.
- **Implements** policies and practices that respect an individual’s well-being and dignity, provide multiple opportunities for success, and acknowledge good efforts and intentions as well as persons’ achievements.
- **Serves** to improve the health of school personnel, families and community members as well as pupils; and works with community leaders to help them understand how the community contributes to, or undermines, health and education.

In 1995, WHO launched the Global School Health Initiative, a joint effort of the Division of Health Promotion, Education and Communication, an intradivisional Working Group on School Health and WHO Regional Offices working in collaboration with other relevant organizations. This initiative seeks to mobilize and strengthen health promotion and education activities at the local, national, regional and global levels. It is designed to improve the health of students, school personnel, families and other members of the community through schools. Its goal is to increase the number of schools that can truly be called “Health-Promoting Schools”.

The general direction of the Global School Health Initiative is guided by The Ottawa Charter for Health Promotion (1986) and The Declaration of the Fourth International Conference on Health Promotion, (Jakarta, Indonesia, 1997) as well as the recommendations of WHO’s Expert Committee on Comprehensive School Health Education and Promotion (1995). The Expert Committee, having reviewed barriers to the development of school health programmes as identified by national, district and local education and health workers, found five broad barriers commonly identified at each organizational level: inadequate vision and strategic planning; inadequate understanding and acceptance of programmes; lack of responsibility and accountability; inadequate collaboration and coordination among persons addressing health in schools; and lack of programme infrastructure.

Despite these barriers, the Committee concluded that research in both developing and developed countries demonstrates that school health programmes can simultaneously reduce common health problems, increase the efficiency of the education system and advance public health, education and social and economic development in each nation. It notably recommended actions for promoting health through schools, for finding adequate support for schools to enable them in this task and for strengthening each nation’s capacity to improve health as well as education.

The Global School Health Initiative has four broad strategies of action:

1. **Building capacity to advocate for improved school health programmes**
   
   Technical documents are generated that consolidate research and expert opinion about the nature, scope and effectiveness of school health programmes. The materials are designed to help individuals in international, national and local organizations argue effectively for increased support of efforts to promote health through schools and to help policymakers and decision-makers justify decisions to increase support for such efforts (see below).
   
   To help individuals and groups advocate for the development of Health-Promoting Schools, an “Information Series on School Health” is produced. Each document of the series provides arguments for addressing one or more important health issues through schools, describing the concept and qualities of a Health-Promoting School and delineating multiple ways in which the health issue(s) is/are addressed. (see below)

2. **Creating Networks and Alliances for the development of Health-Promoting Schools**

   WHO’s Regional Networks for the Development of Health-Promoting Schools may be the world’s most comprehensive and successful international effort to mobilize support for school health promotion. The first network was initiated by its European Regional Office, the Council of Europe and the Commission of the European Communities in 1991. This network has grown in six years to include 34 countries, 500 core schools and 1,600 affiliated schools, reaching about 400,000 students.

   In conjunction with the Global School Health Initiative, Regional Networks for the Development of Health-Promoting Schools were established in the Western Pacific (1995), Latin America (1996) and Southern Africa (1996). In 1997, meetings were held to develop networks in South East Asia and the northern countries of the Western Pacific. Each network will be composed of public and private organizations interested in planning and working together toward the goal of helping schools become Health-Promoting Schools.

   Additionally, WHO works in alliance with Education International (EI), UNAIDS and UNESCO to enable teachers’ representative organizations throughout the world to use their unique capacities and experience to improve health through schools. Special emphasis has been placed in strengthening policies, curricula and training programmes that can help prevent HIV infection and related discrimination. In 1997, teachers’ representative organizations in Asia and Central Europe were assisted by the WHO-EI-UNAIDS-UNESCO alliance.

3. **Strengthening national capacities**

   As part of the development of its Mega-Countries Health Promotion Network, WHO and the Centers for Disease Control and Prevention (USA) periodically bring together persons responsible for health promotion and school health from countries with the world’s largest populations. Participants exchange strategies and experience and work together to
improve health promotion and school health programmes on a large scale. At the International Conference on Health Promotion (Jakarta, 1997), school health officials from the mega-countries agreed to jointly publish a manuscript describing national strategies for the support of school health promotion in their countries. They called upon WHO to: (i) help generate increased commitment for school health promotion by requesting that the Ministers of Education and Health each designate a policy-maker to work together in coordinating the resources of the two ministries in support of school health promotion; and (ii) convene a meeting of the ministers, representatives of UN agencies and other relevant international organizations to plan concerted actions for national capacity-building in school health promotion in the world’s largest countries.

In 1997, WHO also provided technical support for country-level actions to create Health-Promoting Schools. It worked with China and South Africa to use priority health issues as entry points for the development of Health-Promoting Schools. With the former it worked to strengthen national and local capacities for helminth control and prevention and to strengthen HIV/STD prevention efforts in schools and with the latter to use helminth control and prevention and violence prevention as entry points. Experience gained in these efforts is diffused through the Regional Networks of Health-Promoting Schools.

4. Research to improve school health programmes

Existing research is consolidated to strengthen knowledge about interventions that can improve health through schools. It also fosters the development of ways to: 1) assess national capacity for school health promotion; 2) evaluate the extent to which schools become Health-Promoting Schools; and 3) monitor the health status of children and teachers.

A Rapid Assessment and Action Planning Process is being developed by the WHO Collaborating Centre to Promote Health Through Schools and Communities, Education Development Center, Inc., Newton, Massachusetts, USA, to help countries assess national capacity for school health promotion. Methods are being developed with partner agencies for evaluating the extent to which schools become Health-Promoting Schools and students practise healthy lifestyles. An evaluation of the extent to which helminth interventions could be used to create Health-Promoting Schools in China was completed in 1997. The World Health Report of 1998 will report on the health status and trends among school-age children and adolescents.

The success of the Global School Health Initiative rests on the extent to which partnerships can be formed at local, national and international levels. This will require organizations interested in promoting health through schools to identify individuals with responsibility, time and authority to work in partnerships with others. It will also require them to jointly develop mechanisms that enable their organizations to plan and work together, document their achievements and improve their programmes. The extent to which each nation’s schools become Health-Promoting Schools will play a significant role in determining whether the next generation is educated and healthy. Education and health suppon and enhance each other. Neither is possible alone. Together, they serve as the foundation for a better world.

WHO is taking an active lead to ensure that the health promotion principles of the Ottawa Charter and the health promotion guidelines of the Jakarta Declaration are diffused worldwide and applied in the development of Health-Promoting Schools. The concept of Health-Promoting Schools is a sound vision for a better world. WHO’s Global School Health Initiative invites all governmental and nongovernmental organizations, development banks, organizations of the United Nations system, interregional bodies, bilateral agencies, the labour movement and cooperatives, as well as the private sector to help advance health promotion actions as called for in the Jakarta Declaration by helping all schools become Health-Promoting Schools.

As more schools become Health-Promoting Schools, they will simultaneously reduce common health problems; increase the efficiency of the education system; and thus advance public health, education, social and economic development in all nations. They also will significantly contribute towards achieving the major goals of the Education for All and Health for All movements, as well as the Children’s Summit, The Social Summit and the Fourth World Conference on Women.

Dr Ilona Kickbusch, Director, Division of Health Promotion, Education and Communication, WHO, Geneva.

Mr Jack T Jones, School Health Team Leader; Health Education and Health Promotion Unit, Division of Health Promotion, Education and Communication, WHO, Geneva.

Dr Desmond O’Byrne, Chief, Health Education and Health Promotion Unit, WHO, Geneva.
EE for Sustainable Development: A Cuban Perspective

The beginnings of EE in Cuba go back to 1977 following the Tbilisi intergovernmental Conference on EE in 1977. Since then, environmental protection and education have gained considerable ground in Cuba and figure in all the major documents on political, social and economic development of the nation. It should be underlined that Cuba was the first nation in the world to incorporate the agreements of UNCED in its new Constitution in July 1992. Indeed, in Article 27 of the Constitution it is stated that the State is protector of the natural environment and resources which are closely related to sustainable social and economic development for present and future generations.

In keeping with the objectives and recommendations of Agenda 21 the State has developed a National Programme for the Protection of the Environment and Development and in view of its implementation a new law has been promulgated pertaining to the Environment and the National Environmental Policy until 2000. The rationale of the programme is that to arrive at sustainable development it is essential to integrate economic and social activity in education. Thus, EE oriented towards sustainable development together with increased public awareness and capacity building are omnipresent in the programme. The expected result is to develop an environment-conscious personality which will permit decision-makers, professionals, workers as well as ordinary citizens to protect the environment.

The development of and changes in school curricula that took place between 1987-91 laid greater emphasis on the incorporation and renovation of environmental protection-related themes than the previous curricular changes made between 1975-81. The success that these changes have met with is based in the presence of explicit environmental themes in science as well as humanities. The classes relate directly with environmental protection and focus on ecological problems, causes and effects, prevention and solution with direct participation of the students. This work is complemented by extra-curricular activities related to the environment which are carried out in a network of specialised institutions.

Since 1990, the Enseñanza Pedagógica Universitaria has been developing a plan for introducing the environmental dimension in higher education which will consist of two stages: firstly in subjects directly related to the environment like biology, chemistry and geography and subsequently in other subjects like history, philosophy and psychology. The importance of teacher training being fundamental, since 1987 the environmental dimension has been incorporated in the teacher training curriculum for junior as well as senior educators.

Since 1977, the Ministry of Education has organised a number of national and provincial workshops on EE resulting in the production of didactic films, videos and slides. A number of varied courses have been developed by specialised institutions for training specialists on environmental topics. The Ministry continues to work on the promotion of non-formal and informal EE in collaboration with various NGOs with the objective of reinforcing their links with the formal education sector for the protection of the environment. Institutions such as the National Botanical Garden, the National Zoological Park as well as Centres of Cultural Heritage all contribute to the spread of environmental awareness among the population.

The Plan of Action and the National EE Policy until 2000 that is being implemented by the Ministry of Education focuses on:

- Training of educators
- General, polytechnical and worker education
- Technical and professional education
- Research
- Awareness spreading through scientific/technical services, events and community participation

In spite of existing difficulties, Cuba is convinced that development and social progress are compatible with environmental conservation; that a global and multifaceted vision is essential to arrive at sustained economic development that is environmentally sustainable and that EE can contribute significantly to this process. Moreover, given the special character of the Cuban state and society as well as the priority given by the State to this sphere, Cuba is well placed to attain the objectives of an economically and socially sustainable development that fulfills the needs of the present and future generations.

Dr Orestes Valdés Valdés, Instituto Central de Ciencias Pedagógicas, Ministerio de Educación, La Habana, Cuba.

Technology 2005

South Africa

Technology 2005, was launched in 1994 by the HEDCOM (Heads of Education Departments Committee) representing all provincial Ministries of Education and chaired by the Director General of the national Ministry of Education. Its purpose was to run a pilot technology programme in selected schools in order to establish key issues related to the implementation of technology in schools and to consider it as a possible learning area. It would also look into the implications that implementation would have on classroom practice; future pre-service and in-service teacher training requirements; school management and the resourcing of schools.

The rationale for the inclusion of technology education in the school curriculum is that it develops:

- an ability to solve technological problems by investigating, designing, developing, evaluating and communicating effectively
- a fundamental understanding of technological knowledge, skills and values in a range of technological contexts
1st Nepal Scientific & Technological Literacy Workshop
Kathmandu, Nepal, 22-26 March 1998

This national level workshop for science teachers/educators of lower secondary/secondary level was organised by the Centre for Enrichment in Environment, Science and Technology (CLEST) with the assistance of Little Angels School, the Royal Society of Chemistry and Cambridge Education Consultants. It was held at Little Angels School, Kathmandu, from 22 - 26 March 1998 and attended by twenty participants.

As Nepal is introducing a new secondary science curriculum with an environmental emphasis this seemed a good time to evaluate regional and other science and technology (ST) materials in the national context and to try and draft local materials for teachers.

The purpose of the workshop was to promote relevant and meaningful environmental and science education in schools and the community by developing locally produced materials with a strong emphasis on social aspects of science and technology in the Nepalese environment.

Participants reviewed recent ST materials from Europe and Asia and then brainstormed their own topics suitable for Nepal. These were then further developed to produce detailed outlines for teachers and educators to use with Nepalese students including possible titles such as “Allow me to Breath Comfortably”, “Improved Kerosene Lamps” and “Pineapple-shaped Waste-bins”.

The materials are currently being edited and made ready for trial in schools. After feedback and further revision they will be disseminated more widely and made available through appropriate outlets depending on the availability of funds. Follow up in the form of local workshops is expected though its extent will depend upon resources available.

More information from:
Dr. Sharada Devi Maharjan,
CLEST, PO Box 7007, Kathmandu, Nepal.

CONEXIONES: An innovative project in education for a sustainable development

CONEXIONES is an educational, computer based research project developed by the EAFIT and the Pontificia Boliviana Universities and supported notably by the Education Secretary of Medellin. UNESCO, the World Bank and the Interamerican Development Bank.

Based in Medellin, Colombia, CONEXIONES seeks to develop collaborative learning environments based on an education for a sustainable future where information and communication technologies are incorporated into basic curricula to improve the quality of education in Colombia. It aims to analyze the effect and use of inter-school networks, communication graphic interfaces, productivity tools, educational software and evaluate the impact on the promotion of human, cultural and ecological values as well as on the systematisation of information and flexibility of cooperative work. Concretely, it proposes to restructure the learning environment by integrating information and communication technologies into the curriculum and thus promote interactivity in the classroom between students, teachers,
World Information Transfer, Inc. (WIT)
USA

World Information Transfer Inc. (WIT) is a not-for-profit NGO in consultative status with the UN promoting environmental health and literacy. It was established in 1987 after the Chernobyl tragedy, in recognition of the pressing need to provide accurate, actionable information about the deteriorating global environment and its effect on human health to opinion leaders and concerned citizens around the world.

WIT exercises its mandate through four major activities:

1. The publication of the World Ecology Report a quarterly digest of critical issues in health and environment (in English, Arabic, Chinese, Russian and Ukrainian) distributed to opinion leaders around the world and cost-free in developing countries.

2. The organisation of an annual conference Health and Environment: Global Partners for Global Solutions (held at UN HQ, New York, since 1992) where the world’s leading authorities in environmental medicine share their latest findings and discuss possible solutions with leaders in governments, businesses, organisations and the media.

3. Providing and promoting humanitarian relief to areas devastated by environmental degradation.

4. Establishing Centers for Sustainability Studies with centralised scientific data pertaining to health and sustainability issues, the objective of the Centers being to provide continuous monitoring, ongoing research, education and implementation of corrective programmes.

The first Center was opened in Kiev in 1992 (moved to Lviv in 1996) and the second in 1997. WIT is located in New York with regional representative offices in Australia, Austria, Canada, China, Colombia, Egypt, France, Germany, Honduras, Hong Kong, India, Iran, Israel, Lebanon, The Netherlands, Nigeria, Pakistan, Philippines, Russia, Switzerland and Ukraine.

For further information contact:
World Information Transfer Inc.,
444 Park Avenue South, #1202,
New York, NY 10016, USA.
Fax: 212-686.2 172
E-mail: wit@igc.apc.org

The Institute for Global Environmental Strategies (IGES)
Japan

The Institute for Global Environmental Strategies (IGES) was officially established as a non-profit organization under the Civil Code of Japan on March 31, 1998. Among the signatories of its Charter of Establishment figure national administrative organizations from 10 countries: Australia, Canada, China, India, Indonesia, Japan, Mongolia, New Zealand, the Philippines and Thailand; 4 UN agencies including UNEP and UNITAR and 21 research and academic institutions.

The objectives of IGES are to bring together the knowledge, experience and creativity of talented individuals around the world to help create a new paradigm, to formulate new policy measures and to develop strategies to deal with specific regional environmental issues. To this end IGES will encourage national and local governments, international organizations and industry to adopt and actively implement these strategies in their policies and practices.

IGES aims to become a leading centre of environmental strategies in the Asia-Pacific region where it hopes to create a network of environmental policy research and work in collaboration with other networks in Europe, America and other parts of the world.

IGES’s action concentrates notably on:

1. Conducting strategic research on the global environment
2. Applying results to policy decisions and actions
3. Fomenting education and training through participation
4. Information Center on policies and action

IGES has set the period 1998-2000 as the first stage of its research activities for which it has identified the following six research themes:

1. Climate Change
2. Urban Environmental Management

Organizations, Centres, . . .
3. Forest Conservation
4. International Cooperation on Environmental Education
5. Environmental Governance
6. A New Development Pattern

The results of the first stage are expected to contribute to ‘Rio + 10’ in the year 2002.

Based on the experiences and achievements of this stage and before its end, research areas for the second and later stages will be discussed and decided.

For further information contact:
Mr Ko Nomura, Research Associate.

E-mail: nomura@iges.or.jp
http://www.iges.or.jp

International Society for Ecological Economics (ISEE)
U.S.A.

The International Society for Ecological Economics (ISEE) was established in 1989 on the conviction that a sustainable future needs both a healthy economy and a healthy environment. That there was an increasing awareness that our global ecological life-support system is endangered and that decisions made on local, short-term criteria can produce disastrous results globally in the long run. Critical research in conjunction with active discussion is needed to facilitate the transition to a sustainable global economy. To be effective, this research must be integrated into policy at a local, regional and international level.

ISEE currently has members from over 80 countries and 6 continents and active International Society for Ecological Economics chapters in Australia/New Zealand, Canada, Russia, Brazil and various European countries. This global perspective allows the ISEE to present a world view of developments in ecological economics without focusing on one particular country or region. By diversifying the focus ISEE provides a universal dialogue for its members to expand their views on the integration of both ecology and economics. Some of the primary research topics that ISEE members are currently engaged in exploring are:

- Sustainable agriculture
- Ecological/economic modelling
- Ecotourism
- Ecotax reform
- Biodiversity
- Valuation of natural capital

ISEE also organizes conferences (v.p.13), produces videos and publications. Its membership magazine, Ecological Economics Bulletin, featuring articles as well as institution profiles, job postings, meeting announcements and publication updates allows its members to keep in touch with current issues and policy decisions. Each year ISEE sponsors membership for interested students, professors, policy makers and others in developing countries around the world.

For further information contact: International Society for Ecological Economics (ISEE), PO Box 1589, Solomons, MD 20688, USA.
Fax: 1-410-326.7354.
E-mail: beckman@cbi.umces.edu
http://kabir.umd.edu/ISEE/ISEEhome.html

Centre d’Estudis d’Informació Ambiental (CEIA)
Spain

The Centre d’Estudis d’Informació Ambiental (Research Centre for Environmental Communication) is an independent body within the Instituto Catalán de Tecnología, located in Barcelona, Spain. It is managed by a governing body consisting of private and public sponsoring bodies, collaborating organisations and institutions as well as environment and communication specialists.

Its principal objective is to increase the quantity and quality of environmental information seen from an integrated, global and horizontal perspective that is produced and made available to the communication media -in the largest sense of the term. The Centre does not mean to limit itself to the function of a notice board of environmental news. Its ambition is to promote objective environmental information for the use of the communication media in order to design creative and imaginative forms of presenting and preparing training activities for media professionals. Its true function, thus, is that of an instrument in the service of the media.

The activities of the Centre focus on the following:

- Information
- Continued training
- Research
- Motivation
- Dissemination and cooperation

For further information contact: Joaquina Díaz, Director.
Centre d’Estudis d’Informació Ambiental (CEIA), Institut Català de Tecnologia, Ciutat de Granada, 131. 08018 Barcelona, Spain.
Fax: 485.85.88
E-mail: ceia@ictnet.es
Doing it & Telling It

Experiencing biodiversity through the rainforest

Canada

Place: Lynn Canyon Ecology Centre in North Vancouver, British Columbia, Canada.

Target Groups: Elementary school and high school children and the general public.

Introduction: The Ecology Centre is situated in Lynn Canyon Park, a protected area of temperate rainforest and dramatic canyons. It opened in 1971 as a facility for EE and as a visitor centre for tourists. It organizes programmes for elementary and high school, community groups and the general public; hosts special events like Wildlife Week and coordinates local stewardship activities.

Objectives: To provide children a memorable, first-hand experience of the temperate rainforest. To instill in them a sense of its beauty and complexity while making them aware of simple ways to protect it.

Resources: Funds are provided by the district of North Vancouver Parks Dept. As the Centre is located in a natural park setting, park trails and Lynn creek are used as a venue for outdoor activities. The Centre provides a small theatre/classroom space for indoor activities. Interpretive displays in the Centre allow for self-guided learning.

Methodology: Classes of about 30 students arrive at the Centre for a two-hour programme. Teachers can choose from a variety of themes. A popular programme for primary grades is ‘The Great Slug Hunt’. Intermediate grades and high schools often choose themes like ‘British Columbian Biodiversity’ or ‘Stream Ecology’. After a brief look around the displays, students begin their programme in the theatre. Programme leaders use a magnetic storyboard with colourful stick-on pictures to help introduce the concepts and vocabulary. Outside on a guided walk, young children discover why banana slugs are an important part of the rainforest. Older students take part in field studies measuring forest biodiversity or stream health. Rain or shine, there is always a hands-on activity outside.

Evaluation: Teachers fill out an evaluation form after the programme. The comments are used to improve the programmes which are revised regularly. Many teachers bring their classes back year after year.

Results: The enthusiasm of students and teachers is our greatest reward and proof of the effectiveness of the programmes. In a rapidly growing city like Vancouver, there is no shortage of children who have never been to the rainforest. However, once children get to see, touch and smell the wonders of the rainforest, they will go home excited to learn more and will hopefully get their families involved. This is the first step to developing a sustainable lifestyle amidst pressures of population growth and development in the region.

Sent by:
Marlee St. Pierre,
Education Programmer,
Lynn Canyon Ecology Centre,
3663 Park Rd, North Vancouver,
BC, Canada V7J 3G3
Tel: (604)981-3101
Fax: 981-3-154.

Environmental awareness through tree adoption

India

Place: Petrochemical Vidyalaya (school), IPCL-MGCC, Nagothane.

Target group: School children (Lower secondary).

Introduction: This project involving plantation, adoption and caring of trees was undertaken to spread environmental awareness among school children. It is meant to inculcate an understanding of the role of the flora in environmental upgradation by means of systematic protection of trees and plants.

Objectives:
- To spread awareness of the environment in general and the importance of trees in particular
- To develop a sense of being part of the ‘natural’ environment, particularly in an age of increasingly ‘built’ environment
- To develop a sense of dedication for an environmental cause - which could extend to other areas later on
- To keep the school green as well as to make children realise the time and effort required to grow/keep alive trees

Resources: Material resources such as saplings, name tags and token gifts were given/funded by MADER, a trust sponsored by Indian Petrochemicals Corporation Limited.

Methodology: The project was started on the eve of the Spring Festival with a lecture session consisting of a scientific explanation of the role of trees in environmental conservation. This was followed by plantation of 285 saplings. Each pupil had his/her name affixed to the sapling planted by him/her and he/she was responsible for nurturing and caring for that tree. A token gift will reward meritorious pupils after a year (following four inspections).

Evaluation: The survival and growth of the saplings is inspected jointly by MADER and the School. The mortality of only 6 saplings (i.e. 2%) testifies to the fact that pupils are taking their work of nurturing the plants seriously.

Results: The activity has certainly helped in developing environmental consciousness among pupils. Many pupils have developed innovative techniques for watering the saplings and some parents have remarked upon the change in attitude of their children towards plants.

Sent by:
A. H. Selukar (Dy general manager), Rajive Bansal (Sr Engineer-Env.), HSE Dept.
IPCL-MGCC, Nagothane - 402125, India.
Fax: (91)021442-2261/23/4/5
**RSPB Education Scheme on a RAMSAR*site**

**U.K.**

**Place:** Ribble Estuary, Lytham St Annes.

**Target Groups:** School children and teachers, general public, local politicians, decision makers, tourist boards.

**Introduction:** The Royal Society for the Protection of Birds (RSPB) runs field education programmes on 35 sites in U.K. In 1993, it started an education scheme on the Ribble estuary. The Ribble is of international importance for its birdlife as it holds more migratory wildfowl and wading birds than any other estuary in U.K. and is designated a Special Protection Area and a RAMSAR site.

**Objectives:**
- To gain the support of local decision-makers for the future conservation of the estuary as well as that of the local tourist board and to demonstrate the economic benefits of conserving the Ribble Estuary.
- To establish a permanent visitor centre on the estuary with an integrated education and awareness programme.
- To increase awareness of the importance of the Ribble Estuary with local school children and teachers, the local population and visitors to the area.

**Resources:** Financial: RSPB has funded some staffing and other costs. The local administration have funded the maintenance of the building. A local water company has funded some of the staffing costs and donated $80,000 for the refurbishment of the building. Human: Two RSPB staff, supported by over 30 RSPB volunteers, run the centre and teach the education programmes.

**Methodology:** Initially, RSPB had to get the cooperation of the local administration which appeared to consider nature conservation as an obstacle to economic development. To begin a schools field education programme on the estuary in a building provided by them for classroom use. Education programmes linked to the National Curriculum in science and geography were developed and promoted in primary and secondary schools. Subsequently, RSPB opened the building as a visitor centre aimed at educating the general public. Thanks to its immediate success, the centre has been completely refurbished and has popular interactive displays on the wildlife of the estuary.

**Evaluation:**
- The change of attitude of the local administration towards the estuary and nature conservation was an important criterion for evaluation.
- North West Water company (NWW) became a partner in the project offering their programmes to schools.
- The very positive feedback from the schools and the general public was critical for the continuation of the project.

**Results:** Every year the project has been opened by the local Member of Parliament, which serves to underline its importance in the eyes of the public. The local administration and tourist board now regard the estuary and the project as an asset to the region and feature them prominently in the tourist brochure. The project is now used on an annual basis by over 70 schools (counting over 3,000 children), many of whom return, and the centre attracts over 30,000 annually. NWW, very satisfied with the partnership, intend providing funds for additional staffing and displays.

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**Readers are invited to send us their FIELD experiences in Science, Technology, Environmental Education activities involving the teaching/learning process - but not necessarily limited to students and teachers. They should be as brief as possible and set under the following headings:**

**Place:** Locality where the activity was carried out.

**Target Groups:** For whom the activity was intended.

**Introduction:** Background information - reasons for initiating the activity.

**Objectives:** What was the activity expected to achieve?

**Resources:** Materials/funds needed for the activity.

**Methodology:** The way in which the activity was carried out.

**Evaluation:** How was the activity judged? By whom?

**Results:** Did the activity produce any concrete changes in the target group(s)?

**Selected experiences will be published with the name and address of the author. Please address your contributions to: Doing it and Telling it (address on last page).**

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*The RAMSAR convention adopted in 1971 is the Convention on Wetlands of International Importance especially as Waterbird Habitat. Its aim is to prevent the progressive loss of wetlands around the world. By end 1997, it counted 102 Contracting Parties and 888 listed sites across the world.*
NEWS & PUBLICATIONS

News & Publications

Tyler Prize 1999

The World Prize for Environmental Achievement

The University of Southern California is administrator of the John and Alice Tyler prize (US$200,000 for 1999) which is awarded for environmental science and leadership conferring great benefit upon mankind. It is awarded for any one of the following:

- the protection, maintenance, improvement or understanding of ecological and environmental conditions anywhere in the world;
- or
- the discovery, further development, improvement or understanding of known or new sources of energy

Nominees may be individuals or institutions of any nation. Self-nominations are not accepted. Deadline for receipt of nominations: 15 September 1998. For further information contact: Dr Jerome B. Walker, Executive Director, The Tyler prize, Office of the Provost, University of Southern California, Los Angeles, CA 90089-4097 Tel: 12 31740-6559 Fax: 740-1313 E-mail: tylerpriz@usc.edu

http://www.usc.edu/go/Tylerprize/

In observance of the International Year of the Ocean 1998, the UNESCO Associated Schools Caribbean Sea Project will hold its first EE Workshop/Camp for teachers and students: The Caribbean Sea - A vital resource in Tobago from 20-26 July 1998. Participants from the following 17 Caribbean territories: Aruba, Bahamas, Barbados, Cayman Islands. Colombia, Costa Rica, Cuba, Dominica, Granada, Guyana, Jamaica, The Netherlands Antilles, St Kitts and Nevis, St Lucia, St Vincent and the Grenadines, Trinidad and Tobago and Venezuela are expected to attend this workshop aimed towards achieving the sensitisation and mobilisation of young people. Hosted by the Trinidad and Tobago National Commission for UNESCO, the workshop will include plenary sessions as well as field trips to facilitate hands-on learning opportunities and cultural sessions for inter-cultural learning and sharing. A more extensive report of this workshop will appear in the next issue of Connect. Contact: Ms Sandra Gift, Sub-regional Coordinator (ASP)/Regional Coordinator ASP Caribbean Sea Project, 8, Elizabeth Street, St Clair, Trinidad. Fax: 628-4827/622-8909

The Kawi/Science for Africa energy project was launched recently in Maputo, Mozambique, in a move to cater for Portuguese-speaking countries in Africa. The project is aimed at increasing the understanding and appreciation of science in Africa. Dubbed Kawi (‘Energy’ in Swahili), this UNESCO/African Publishers Network project is designed to transform the current thinking in science education in Africa through the publication of popular science books. It is also meant to enhance Africa’s capacity to produce, market and distribute popular science material. The expected outcome of the project is the production of popular science reading material aimed at enabling the average reader to appreciate the progress of science and learn about the role that science and technology play in everyday life with special emphasis on Africa’s contribution and application of science and technology. A writer workshop was held earlier this year from 9-15 February in Nairobi, Kenya, to develop materials that will form the basis of the publications. At the workshop it was agreed that the materials should be simultaneously developed in French and Portuguese together with English for widest coverage. Once the whole Kawi series is published, it is expected to make a significant contribution to education and to the development of curricula in Africa. For further information contact: UNESCO Sub-regional Office in Harare, PO. Box HG435, Highlands, Harare, Zimbabwe. Fax: +263-776.055 E-mail: uhhar@unesco.org

Tune into the National Oceanic and Atmospheric Administration’s International Year of the Ocean Web site (www.yoto98.noaa.gov) to sample one of the newest and best examples of Web teaching at ‘Kid’s and Teacher’s Corner’. NOAA has set up this site to inform, enlighten and educate in order to deliver marine and ocean related information to students and teachers. The main page is a platform from which to explore various types of ocean-related information like ‘25 things you can do to save a Coral Reef’. The ‘Adopt a Buoy Activity Book’ provides a description of the buoys operated by NOAA and explanation of how they are used to predict weather. It invites kids to ‘adopt’ a buoy so that they can then spend the year monitoring and charting the hourly observations from it.

The Network Montana Project (NMP) was founded by the National Infrastructure for Education programme of the National Science foundation in October 1995. In its first year NMP developed a collection of materials on the theme Earth System Science as well as a distance learning course entitled Internet-based Earth System Science Instruction to train teachers in their use. The materials contain activities where learners explore online resources that provide current scientific data and information. The emphasis is on using information to investigate scientific questions, creating models and making predictions. Many activities require learners to record electronic information over several days, share data with learners at remote locations and conduct analysis using image processing technology. The science units are structured in four levels that refer more to computer experience and general mathematical and scientific knowledge than cognitive levels. The materials can be explored at: http://www.math.montana.edu/nmp/ Those interested in translating them in other languages, developing new materials with regional, scientific themes or interacting with the project coordinators should contact: David A. Thomas, Co-Director, Network Montana Project, Dept of Mathematical Sciences, Montana State University, Bozeman, MT 59717, USA. Fax: (406)794-1789 E-mail: dave@math.montana.edu

http://www.math.montana.edu/~dave/

TOURFOR: Tourism, Forestry and the Environment, is a part-
The International Organisation for Science and Technology Education (IOSTE) will hold its 9th Symposium: Science and Technology Education for Sustainable Development in Changing and Diverse Societies and Environments in Durban, South Africa, 26 June -2 July 1999. The aims and goals of the symposium are notably to:

- investigate the role of science and technology (S&T) education in contributing to sustainable development
- recognize the right & potential of all sectors of the population to participate in S&T and seek ways in which this may be encouraged
- build upon the increasing impact of information technology on education as also on closer working relationships between the education and economic sectors

The symposium programme will include keynote papers and paper presentations in concurrent sessions, workshops, seminars and poster sessions. Visits to local places of educational and cultural interest are also foreseen.

For further information contact: Mr A/an Pillay, faculty of Education, University of Durban Westville, Private Bag X54007, Durban 4000, South Africa. Fax: (27-31)204-4866. E-mail: spillay@pixie.udw.ac.za http://www.udw.ac.za/IOSTE

Note: The IOSTE Newsletter is henceforth available on the IOSTE Homepage and can be downloaded for paper copies in the following formats: Word for windows, RTF and MCW (for Macintosh).

The Office International de l’Eau has published its 1998 Catalogue of Training courses for engineers/technicians in hydrology containing 150 courses grouped under 17 thematic headings. For more information: http://www.oieau.fr or contact Nicole Treillard, Office International de l’Eau - Limoges, Service national d’Information et de documentation sur l’Eau, Rue Edouard-Chamberand, 87065 Limoges Cedex, fax: (33)-5155.77.72.24 E-mail: did@oieau.fr

First International Scientific Conference in Polish and English: Forms of Environmental Education, Szczecin, Poland, 2-5 September 1998. For more information contact: Dr Ewa Fleszar, Pracownia Dydaktyki Biologii, Uniwersytet Szczecinski, ul. Waska 73., rm 302, PL 77-475 Szczecin, Poland. Fax(4891) 4553-120

First International Symposium of Eco-Biology for Children: Touch of Nature - 98, Kiev, Ukraine, 14-18 September 1998. Further information from: Vladimir Verbitsky, Ukrainian State Youth Centre of Ecology & Nature, Ministry of Education, vul. Vishgorodskaya 79, Kiev-74, Ukraine. Tel/Fax: 8-10-(38044)-430.02.60 E-mail: udecn@mail.kar.net

From Exploration of the Solar System to Earth Observation is the title of the 7th Information Forum for Young Europeans to be held in Graz, Austria, 17 - 20 September 1998. Colloquium on Space Techniques for Environmental Management in the Mediterranean, Athens, Greece 19-20 October 1998. Further information from: Eunisia Association, Residence Seine Zola, 77/21 rue de Javel, 75075 Paris, France. Fax: (33)-1)45.79.90.08 E-mail: eunis@microne.fr

A Training course on Applied Ethnopharmacology has been organised by the University of Metz and the Société Française d’Ethnopharmacologie, in Metz. France from 21 - 26 September 1998. Contact: Centre des Sciences de l’Environnement-SFE, 7, rue des Récollets, 57000 Metz, Tel/Fax: (33-3) 87.74.88.89 E-mail: iee@pub.mairie-metz.fr
Learning in Protected Areas - How to Assess Quality. Austria/Hungary, 25-28 September 1998, is a conference organised by the IUCN Commission on Education and Communication. Contact: Monica Lischke. ARGE Umwelterziehung, Alsersrasse 21. A-1080 Vienna, Austria. Fax: (43-1) 402.47.05 E-mail: arge.unwbild@bmuvie.gv.at

Jornadas sobre Matemáticas y su enseñanza (Seminar on Mathematics teaching), San Sebastian, Spain, 26-27 October 1998. Further information from: Departamento de Matemáticas, Escuela Universitaria del Profesorado de Guipúzcoa, Plaza Oñati, 3, 20009 Donostia-San Sebastian, Spain. Fax: 943-44.84.57 E-mail: tepsilae@sc.ehu.es


The Kamataka Environment Research Foundation and Parisara Vijnana Parishat is organising an International Conference on Environment and Health in Bangalore, India from 14-16 December 1998. Themes: Air, Water, Noise and Soil pollutions and their impact on human health. Contact: Dr H. Paramesh, Chairman, ICEH, c/o Lakeside Medical Centre and Hospital, 33/4 Meanea avenue Road, Bangalore 560 042, India. Fax: 91-80-226.96.79. E-mail: ashok.enney@access.net.in

The Australian Association for Environmental Education will be hosting an international conference Southern Crossings: Pointers for Change in Sydney, Australia, from 14 - 18 January 1999. Themes: Building Sustainable Communities; Educating for Environmental Citizenship; Developing sustainable industries; Relating to land; and Communicating for the environment. Expressions of interest are sought for papers, workshops and posters on environmental education/training/communication covering research, policy and practice. Contact: AAEE International Group, c/o The Organizing Group, Suite 7, 470 Sydney Road, Balgowlah 2093, NSW, Australia. Tel: (61-2) 9949 4933 Fax: 9949 3905 Email: orggroup@orggroup.aust.com

The British Council have announced an International Seminar entitled New learning technologies: vision, policy and implementation to be held in Reading, U.K., 17-22 January 1999. Further information from: International Seminars, The British Council, 1 Beaumont Place, Oxford OX1 2PJ, U.K. Fax: 44(0)1865-557368 E-mail: international.seminars@britcoun.org/seminars/

R99- Recovery, Recycling, Re-integration, Fourth World Congress with company displays, Geneva, Switzerland, 2 - 5 February 1999. More information from: PEAK Ltd., Ms Maria Bühler, R'99 Project Manager, Seefeldstr. 224, CH-8008 Zurich, Switzerland. Fax: 14 1-7385.44.45 E-mail: buehler@peak.ch

18th ICRA Training Programme in Interdisciplinary Team Research for Agricultural Development: 11 January – 22 July 1999 (English), 1 March – 9 September 1999 (French). Requirements: PhD/MSc; 2 yrs developing country experience; age 40. More information from: Jon Daane, ICRA, PO. Box 88, 6700 AB Wageningen, The Netherlands. Tel: (31)(0)317 422938 Fax: 427046 E-mail: icra@ia.ac.agro.nl

9th International Conference on Gender and Science and Technology GASAT 9, Accra, Ghana, 4-9 July 1999. Further information from: Mrs Juliana Dogbe, Secretary, GASAT 9, Accra Polytechnic, PO. Box 567, Accra, Ghana. Fax: 233-21-232602 E-mail: gquisiaf@africaonline.com.gh

Publications

Biodiversity Conservation in Mozambique and Brazil, by Maria Teresa Rufai Mendes. Working Paper No.23. 1997. The Working Papers series of the South-South Cooperation Programme for Environmentally Sound Socioeconomic Development in the Humid Tropics aims to disseminate the results of research on Biosphere Reserves notably on prevailing conservation and resource-use patterns as well as for improving traditional practices and research for more sustainable use of biodiversity in the interests of local populations. Available from: UNESCO, Division of Ecological Sciences, South South Cooperation Programme, 1 rue Miollis, 75732 Paris 15, France. Fax: (33-1) 45.68.58.04 E-mail: m.clusener-godt@unesco.org

Helping Children in the Humid Tropics: Water Education. (IHP Humid Tropics Programme Series No.1 1, 1997, 64p.) Every year, 250 million new cases of water associated diseases are reported of which 75% occur in tropical countries. The aim of this practical booklet is thus to illustrate that early water education can benefit the entire community. It can be considered a tool to help people at risk to help themselves and to inform decision makers of real and felt needs. Available from: UNESCO, Division of Water Sciences, International Hydrological Programme, 1 rue Miollis, 75732 Paris 15, France. Fax: (33-1) 45.67.58.69.
The Major Project of Education in Latin America and the Caribbean, Bulletin no.44, December 1997, 86 p. Focuses on Science and Technology Education in the region and contains articles on various aspects of science teaching, such as methodology, popularisation, teacher training, representation and citizen formation. Price: 3 issues yearly US$20 (Latin America and Caribbean) US$30 (Rest of the world). Available in English and Spanish from: UNESCO/Chile, Enrique De/piano 2058, Casilla 3787, Santiago, Chile.

Technología audiovisual en la clase de ciencias (Audiovisual Technology for the (Natural) Science Class). 1997, 175p. This kit produced by the Ministry of Education and Culture of Spain comprises a Teaching Manual; Teaching Units and Projects. The objective is to help secondary school natural science teachers to understand how to make the best use of audiovisual technology - slides.

Third International Mathematics & Science Study (TIMSS)

Since its inception in 1959, the International Association for the Evaluation of Educational Achievement (IEA) has conducted a series of international comparative studies designed to provide information to policy-makers, educators, researchers and practitioners on educational achievement and learning contexts. The international direction of TIMSS is funded by the National Center for Education Statistics of the U.S. Department of Education, the U.S. National Science Foundation and the Canadian Government.

TIMSS is the largest and most ambitious of these studies, its success being attributable in a large measure to the collaboration of research centres around the world. Overall, the TIMSS achievement testing in mathematics and science included: • forty-five countries • five grade levels • over 500,000 students • more than 15,000 participating schools • questionnaires from students, teachers and school principals containing about 1,500 questions • many thousand individuals to give tests and process the data TIMSS was conducted with attention to quality at every step. Rigorous procedures were designed to translate the tests and numerous regional training sessions were held in data collection and scoring procedures. The samples of students selected for testing were specially scrutinized to prevent bias and ensure comparability.

The results of these studies have been compiled according to level: Primary (grade 3-4). Middle (grade 7-8) and subject: Science or Mathematics. A performance assessment report for grade 4 and 8 students in practical tasks in mathematics and science has also been published. The latest to be published in the series is the Mathematics and Science Achievement in the Final Year of Secondary School. Prices: Primary level US$20 each; Middle & Secondary level US$30 each; Performance Assessment US$10.

Order from:
TIMSS International Study Center,
CSTEEE, Campion Hall 323, Boston College, Chestnut Hill, MA 02167, USA.
Fax: +1 (617) 552-8479
E-mail: timss@bc.edu

Interdisciplinary Training for the Energy, Environment, Society Relationship, Teacher and Trainer Pedagogical Guide, 757 p., 1997. This guide is the result of a collaborative effort of 5 universities - from Belgium, France, Greece, Portugal and Spain - within the framework of the FIREES project supported by the DG XI of the European Commission. It focuses notably on Pollution, The Greenhouse effect, Waste, Renewable energies and Sustainable Development and is divided in two main parts: one consisting of a comparison of different pedagogical approaches to a common subject and the other containing a resume of work on energy-environment-society related subjects. Available in English and French. Contact: Ms Martine Vertez, FIREES Project coordinator, CIFFUL, Université d’Liége, Sart Tilman, B5, 4000-Liége, Belgium. Fax: (32) 4366-20-67 E-mail: cifful@gw.unipculg.ac.be
Iowa State University's International Institute of Theoretical and Applied Physics (IITAP) has put a full-text version of a physics textbook, Physics — the Root Science, on the World Wide Web. The textbook is designed for a one-year precalculus course at the advanced high school, community college or undergraduate general physics level. An interactive experiment combining traditional textbook-based learning methods with new information technology, the book is presented on-line along with applications in industry and every day consumer products in order to help motivate a broader spectrum of students to learn physics. The full text is available for browsing at http://www.physics.iastate.edu/prs/prs.html. For hard copies (404p., US$48+$3) and further information contact: IITAP, Iowa State University, 123 Office and Laboratory, Ames, IA 500 7 7-3 7 60 USA. Fax: (515) 294-9933 E-mail: iitap-cd@iastate.edu

Saving our soils is a new publication of the Environment Liaison Centre International (ELCI). Produced jointly with both ENDS, an NGO based in the Netherlands, this is a practical, fundraising manual for NGOs and community based organisations involved in fighting dryland degradation around the world. The first section gives tips on designing projects and programmes, writing concept papers and proposals as well as finding, contacting and negotiating with appropriate donors. The second section of the book presents a comprehensive list of multilateral, government and private funding agencies interested in desertification issues, complete with contacts and descriptions of amounts and types of funding offered. US$12. Order from: Environment Liaison Centre International (ELCI), PO. Box 72467, Nairobi, Kenya. fax: (254-2) 25627 7 75 E-mail: eic@elci.org

Enabling Technology (1998, 176p., f14.99 pb) by Alan Roulstone, Programme Director for Social Sciences, University of Sunderland, addresses the role of new technology in reducing the environmental and attitude barriers disabled people have commonly faced in the field of employment. This work is critical of established writings on disability and new technology and suggests that by adopting a medical model of disability such analyses have misrepresented the benefits of new technology for disabled people. The book addresses the urgent need to reframe policies on technology access away from a libertarian 'eligibility' model to a 'social rights' approach where disabled people are centrally involved in the framing, operation and review of technology access policy. Order from: Open University Press, Celtic Court, 22 Ballmoor, Buckingham, MK78 1XW, U.K. Fax: 44(0)1280-823233 E-mail: enquiries@openup.co.uk

Educating for Life: Guidelines for Biodiversity Education (1997, 28p., £9) is an attractively illustrated colour booklet published by the Council for Environmental Education. It highlights findings of the research carried out by the CEE Biodiversity Education Working Group into biodiversity education at a range of sites throughout England. Using a range of case study examples to illustrate issues related to the provision of biodiversity education, it identifies nine hallmarks of successful biodiversity education and makes recommendations for biodiversity education providers and policy-makers. Contact: Council for Environmental Education, University of Reading, Longdon Road, Reading RG7 5AQ, U.K. Fax: 07 7 78-975.6264 E-mail: info@cee.i-way.co.uk

Government Institutes have announced the following titles: Environmental Science and Technology Handbook (1994, 389p. $79); Principles of Environmental, Health and Safety Management (1995, 335p, $69); Environmental Engineering and Science (1997. 498p. $79); Contact: Government Institutes, 4 Research Place, Suite 200, Rockville, MD 20850-3226, USA. http://www.govinst.com E-mail: ginfo@govinst.com

Views of the World is a catalogue of audio-visual resources on the environment, development and human rights. It contains a selection of programmes produced as part of an educational package containing printed support materials for primary, secondary, 16+ and adult education. In the case of school resources, the videos are accompanied by guides for teachers, photocopiable student activity booklets and other material for classroom use. For a free copy of the catalogue contact: International Broadcasting Trust, 2 Ferdinand Place, London NW7 8EE, U.K.

The Report of the First meeting of the GRECEL Project (Geological Heritage Research in Environmental Education and Cooperation at the European Level) held in Thessaloniki, Greece, 7-13 December 1997, has been published. For copies contact: Irene Theodossiou-Dandraki, Institute of Geology and Mineral Exploration, 70 Messogion Sreer, Athens 7 7527, Greece. Fax: (717) 552.27 7 E-mail: ren@igme.gr

The 8th edition of the catalogue Dans la nature contains 64 pages of information on environmental camps, workshops and training courses organised by 83 associations who agreed to abide by the objectives of the Ecole et Nature network (v, Connect, vol. xxi, no.2, 79977. Contact: Ecole et Nature, Maison de l'environnement, 76 rue Ferdinand Fabre, 34090 Montpellier, France. Tel: (33-4) 67.02.25.70 Fax: (33-4) 67.72.45.00 E-mail: 707502.106 @CompuServe.com http://www.educ-envir.com/Ecole_et_nature

Israel Environment Bulletin. Autumn, 7997, is a special Biodiversity issue containing notably an overview of the conservation of biological diversity in Israel. For copies contact: Israel Environment Bulletin, PO. B, 34033, Jerusalem 95464, Israel. Fax: 972-2-6553934.

ICIMOD Newsletter, No.29. winter 7997 focuses on Gender and Mountain Development. For copies contact: International Centre for Integrated Mountain Development (ICIMOD), 4/80 Jawalakhel, GPO Box 3226, Kathmandu, Nepal. Fax: 197771524509 E-mail: dits@icimod.org, rp http://www.southasia/icimod.htm

Ecologue XXI, No.6, March-April 7998, focuses on Wind energy with a bilingual (English-French) section. It has also published a 64-page Special Issue on the same topic with a directory of over 250 professionals worldwide and a cultural audio CD on wind (120FF. French only). Contact: Ecologue XXI, BP 8, 7 7200 Fabrezan, France. Fax: (33-4) 68.90.22.49.

La Garance Voyageuse, No.41, Spring 7998, is devoted to Peat moors and Carnivorous plants. Price 40FF. French only. Contact: La Garance Voyageuse, Revue du monde végétal, 48370 St Germain de Calberte, France. Fax: (33-4) 66.45.97.84 E-mail: garance@wanadoo.fr
Dear Sir,

I am currently working as Director in the Nuestra Señora de Lourdes school located in La María Oriente district. I graduated with History and am currently working for specialization in EE. I am interested in developing a small EE project for children on recycling in order to clean up the school and the vicinity and should like to get materials or hear of other experiences to help me with the project. Also, I should like to establish a contact with some educational institution interested in corresponding with our school children whose scant economic resources are nonetheless rich on the human level.

Sincerely,

Martha N. Gallego, Cra 1 E12-75, Popayan, Cauca, Colombia.

Dear Editor,

I am a Peace Corps Volunteer working at Sampakaruma Secondary School in rural Zimbabwe as English teacher and Librarian. Thus, my interest in developing the school library as well as the library skills of my students. The current stock of the library is not very high.

Does Connect donate books or materials to needy schools? Any donation would be much appreciated. Donations should be addressed to Sally Collier, Peace Corps/Zimbabwe Director, Box 4760, Harare, Zimbabwe, with a letter stating that the books are a donation (for customs clearance). Thank you for your support.

Sincerely,

Samuel Gannon, Sampakaruma Secondary School, Box 780, Karoi, Zimbabwe.

(Would Connect readers be interested in helping out? - Editor)

If you have something concerning STEE to communicate to us - information, suggestions, opinions, ideas - on events or even the articles in Connect, write to us briefly. The most interesting letter(s) will be published, in substance, with the sender’s name. Send your letters to Viewpoint, address below.

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VIEWPOINT

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CONNECT is also available on the Science & Technology Education homepage:

http://www.education.unesco.org/educprog/ste/index.html

Unless otherwise stated, all correspondence concerning Connect should be addressed to:

Editor, Connect, UNESCO/ED/SVE/STE, 7 Place de Fontenoy, 75352 Paris Cedex 07, France. Fax: (33-1) 45.68.56.26
E-mail: d.bhagwut@unesco.org
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Published by UNESCO
Education Sector
7, place de Fontenoy
75352 Paris 07 SP
France.
Tel: (33-1) 45.68.08.09
Fax: (33-1) 45.68.56.26
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(Opinions expressed in the newsletter are those of the authors and do not necessarily reflect those of UNESCO)