Welcome to the eleventh issue of the Xplora newsletter!

The spring 2008 brings along numerous interesting science education projects and events! In this newsletter, you can find the latest news on European science education, digital learning resources and upcoming activities and awards. Enjoy exploring more about Xplora and its partners!

Would you like to be featured in our newsletter or send us a contribution?

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XPLORA AT A GLANCE

CALL FOR CONTRIBUTIONS FOR THE NEXT NEWSLETTER
To ensure the diversity and actuality of the next Xplora newsletter, we would like to invite you to send us your contributions! We would be grateful for short references with a link to additional information of news, awards, best practices etc. relating to maths, science, technology and environment education.
Please send you contributions by the 30 April 2008 at johanna.snellman@eun.org

LIBRARY

NEW TECHNOLOGY FOR EXPLORING OUTDOORS
WildKey is a spin off research group from Oxford Brookes University, which works with new technology and outdoor learning space. On a rainy January day, the group went to explore nature, with over 40 intrepid ICT Co-Ordinators and 10 children from Bishop Bronescombe School, using handheld and interactive technology to organise their work. Nearly 200 records of wildlife and points of interest were recorded using GPS technology and PDA’s to record video, sound and photographs. Later in the classroom the WildKey group showed how easily the data could be used across the curriculum, especially in mathematics, or redisplayed as a webpage.

SCHOOL RESOURCES ON DISEASES AND TREATMENTS
The newly redeveloped website, Resources for Schools, offers interactive content linking topics from the school science curriculum to disease and its treatment. The website is free to use in schools and by students and parents at home. A new area of the site allows teachers to download animations to use offline.

CRAYON PHYSICS – TRANSFORM YOUR DRAWINGS INTO PHYSICAL OBJECTS
Teachers Linda Giannini and Carlo Nati from Statal Nursery School in Italy suggested us a Crayon Physics programme, in which the students get to experience what it would be like if their drawings would be magically transformed into real physical objects. Crayon Physics
is physics puzzle game, in which pupils can solve puzzles with their artistic vision and get creative use of physics.


INTERACTIVE ONLINE GAME: WATER ALERT!
Water Alert! is an educational online game produced by Tearfund and WaterAid to highlight issues of EU aid for water and sanitation. Through the game young people are engaged in an adventure of strategy and survival. The facilitation guide attached to the game includes instructions for use of the game as a teaching tool and suggestions for classroom activities relating to water, sanitation and hygiene education with a focus on literacy, mathematics, science and social studies.


EDUCATIONAL BRAIN RESEARCH AND NEUROLOGY RESOURCES
On this web site the Dana Alliance for Brain Initiatives has collected educational resources for scientists, educators, and parents, including brain-related materials and links to organizations with sites offering valuable tools for home and classroom use.


Search for other science resources at:

Visit the Xplora science education library at:

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PRACTICE

SOME TIPS FOR YOUNG SCIENCE TEACHERS
Elena Kyriaki, Physics teacher from Belgium, gives in the article below some advices for young Science teachers to work with the potential scientists of the future.


ELECTROMAGNETS USING JAMES BOND AS A STARTING POINT - LESSON PLAN
Daniel Hannard teaches physics at Woodkirk High Specialist Science School in UK. Below he shares with us one of his favourite lesson plans: Electromagnets using James Bond as a starting point.

ABOUT XPLORA PARTNERS

MAKE SCIENCE EDUCATION A FUN EXPERIENCE WITH XPERIMANIA
Europe is facing a crisis in science education with fewer and fewer students pursuing studies or careers in science. Xperimania (www.xperimania.net) aims to combat students’ bad perception of chemistry by offering fun yet simple hands-on activities to help teachers revitalise their teaching, and raise awareness of petrochemistry among secondary school students. Boosting young people’s interest in science is a priority for Europe to remain a knowledge-based economy fostering innovation.

NEW TECHNOLOGIES – WE’D LIKE TO HEAR YOUR VIEWS!
European Schoolnet is currently working closely with key names in the mobile and internet industry to create an online information centre to guide teachers through the multiple opportunities and challenges that the virtual world brings. A core element of the centre will be the availability of free downloadable curriculum materials covering the latest technologies.

FUTURENERGIA CHATS ON HOW TO TURN A DESERT INTO A FERTILE LAND BY USING PLASTICS
Eleven schools across Europe participated in the fourth online chat of Futurenergia project in January. The chat focused on how to turn a desert into a fertile land by using plastics. The chat guest were Mrs. Antonia Morales Perez, from Spain, Subdirector, Technical Service & Development Laboratory, BU Polyolefins Repsol, President of CIPA (International Committee of Plastics in Agriculture), and President of CEPLA (Spanish Committee of Plastics in Agriculture).

EUROPEAN SCIENCE EDUCATION PROJECTS

EXPLORE MATERIALS IN TWO EASY AND FUNNY XPERIMANIA COMPETITIONS
All schools in the European Union, candidate countries and EFTA countries are invited to join in two attractive competitions exploring the world of materials. Students can participate in composing the historical timeline of material discoveries by exploring the current timeline or providing their own findings. They can also set up an easy and fun scientific experiment related to petrochemistry and materials, based either on a suggested experiment or on one of their own. Participating students must be aged 10-20 years old. The deadline for both activities is 7 April 2008.
http://www.xperimania.net/ww/en/pub/xperimania/competition.cfm
http://www.xperimania.net/ww/en/pub/xperimania/timeline.cfm

TAKE YOUR CLASSROOM INTO SPACE
The European Space Agency (ESA) has launched a Call for Education Ideas, which invites European educators to propose a scientific demonstration that would behave differently in the weightlessness of the International Space Station (ISS) than on Earth. The participants should identify the objectives, the expected results, the materials required, and any other features to be considered for such an activity.
http://www.xplora.org/ww/en/pub/xplora/events/awards_and_prizes/take_your_classroom_into_space.htm
TAKE PART IN THE DEVELOPMENT YOUTH PRIZE 2007 AND WIN A TRIP TO AFRICA!
Young people aged 16-18 from around Europe are invited to participate by submitting a piece of artwork which for them best highlights the impact of environmental change on developing countries. Their creative vision can help raise awareness among fellow pupils, teachers, families and others.

ENERGY IS OUR FUTURE COMPETITION FOR SCHOOLS
The Futurenergia – Energy is our Future-project has launched three interesting competitions for schools: “Profile the FuturEnergia Hero”, “The Adventures of FuturEnergia Hero”, and “Wanna be a Hero?” The competitions provide teachers and students with the opportunity to work on energy-related themes that are complemented by a relevant collection of online resources. The deadline for submissions is 27 April 2008.

LAUNCH OF INSPIRE PROJECT
A new project, under the European Commission’s Lifelong Learning Programme, INSPIRE, has been launched! INSPIRE (Innovative Science Pedagogy in Research and Education) will set up a validation observatory where 60 schools in Europe will test and analyse the use of new didactical tools, a digital Learning Resource Exchange service, in the field of MST. The goal is to observe the impact of these new teaching methods on pupils and on their motivation, analyse the pre-requisites to be defined for enabling teachers to integrate these new techniques in their pedagogy and also the critical success factors to be mastered at the level of the teacher and the school for the generalization of such practices.

LAUNCH OF STELLA – SCIENCE TEACHING IN LIFELONG LEARNING APPROACH
Started in January 2008, STELLA will aim to contribute to the improvement of science teaching in European schools, in particular in order to stimulate young people to undertake science studies and carriers, with a special focus also on girls. The Project has been funded with support from the European Commission within the Lifelong Learning Programme and it will run till the end of 2009.

AWARDS AND NEWS

INDUSTRY STAKEHOLDERS DISCUSSED MST EDUCATION
European Schoolnet organised 6 December 2007 a maths, science and technology (MST) education meeting with high-level participants from the industry. The purpose of the meeting was to exchange knowledge about industrial cooperation with education in the field of MST. In their statements representatives of companies like IBM, Microsoft, Volvo and Siveco agreed that more cooperation is needed between industry and MST education.

EMINENT CONFERENCE ON POLITICAL PRIORITIES FOR EDUCATION AND THE ROLE OF TECHNOLOGY
230 participants from all over Europe and beyond met on 6-7 December 2007 in Brussels for the seventh edition of European Schoolnet’s EMINENT (Experts' Meeting in Education
Networking) conference. The conference theme was “Political priorities for education and the role of technology”. The two-day discussions involved policy-makers from European Educational Authorities, as well as high profile politicians.


MALTESE PROJECT WINS 2007 EUN ELEARNING AWARD
The project “Rescue La Vallette: An Adventure in Time” from the Dun Anton Manche school in Malta won the Young Digital Planet Award for the best use of ICT at the 7th eLearning Awards. As the Jury points out: “This site introduces young learners to the e-skills of the European Computer Driving Licence through an engaging storyline mixing fun and learning at the right dosage for beginners. High production values, innovative format and clever didactics make this project the best in all categories.”

http://www.xplora.org/ww/en/pub/xplora/events/awards_and_prizes/maltese_project_wins_elearning.htm

REPORT ON TEACHING AND LEARNING OF MATHEMATICS IN EUROPE – INDUSTRIAL INITIATIVE PROPOSALS
This recently published report from the National Center for Mathematics Education in Göteborg, Sweden gives an overview of the trends in interest and knowledge of mathematics among European pupils and students, examples of industrial efforts to increase young people’s interest in mathematics, and recommendations to the European Round Table of Industrialists (ERT) on action by industry needed to increase young people’s interest in mathematics. As a result the report shows that there are very few nation wide, long-term examples of industrial efforts to increase young people’s interest in mathematics as a subject of its own.


NUFFIELD FOUNDATION’S REPORT ON SCIENCE EDUCATION IN EUROPE
Why in recent times do fewer young people seem to be interested in science and technical subjects? Does this problem lie in wider socio-cultural changes or within science education itself? Is the issue common across Europe, or are there differences between countries? The Nuffield Foundation organised in 2006 two seminars investigating these questions and the results are summarised in the recently published report “Science Education in Europe”.


ONLINE COURSE “EARTH IN THE UNIVERSE” AWARDED
The online course “Earth in the Universe” was awarded with the Telefonica 02 award for mathematics and science in the 2007 eLearning Awards contest. The course has been designed as a way of delivering the astronomy content within a Science course to be used with students 10-14 years old. The course is a result from the research and development carried out in the ISSUE project.


EVENTS

2008 EPF CONFERENCE ON SHOW PHYSICS
8-12 April
Tartu, Estonia
The late registration round for the annual conference of EuroPhysicsFun from 8-12 April 2008 in Tartu, Estonia has opened. The Show Physics conference covers physics shows: groups of science communicators who visit schools and science events to demonstrate experiments and communicate about physics. These physics shows will exchange experiences in discussions, lectures and experimental sessions.

http://www.fyysika.ee/EPFconference/

**2008 GIFT WORKSHOP: CARBON CYCLE**

13-15 April
Vienna, Austria

The 6th edition of the GIFT (Geosciences Information for Teachers) workshop will be held in Vienna, Austria, from 13-15 April 2008 during the General Assembly of the European Geosciences Union. The conference is a unique opportunity for teachers to meet scientists from all over the world. The theme of this year’s workshop is “The Carbon Cycle”, providing latest scientific information on the carbon cycle in general and the diffusion of carbon compounds in the different reservoirs, like atmosphere, oceans, biomass, sediments and rocks.


**SCIFEST – SCIENCE, TECHNOLOGY AND ENVIRONMENT FESTIVAL FOR KIDS AND YOUNGSTERS**

ENO CONFERENCE - TOGETHER WE LEARN BETTER
16 – 19 April, 2008
Joensuu, Finland

SciFest Finland, ENO Programme and the University of Joensuu will arrange this spring a global festival for schools on science, technology and environment. The festival consists of two simultaneous events: ENO conference (14-19 April) and SciFest 2008 Finland (16-19 April). SciFest is a festival of science and technology, featuring popular lectures, game drives, workshops, robotics competitions and interactive exhibitions. Organised simultaneously with the ENO (Environment Online) Conference, participating schools are invited to arrange English workshops in SciFest event concerning science, technology or environment. The ENO Conference is only for schools in ENO network but SciFest event is a public event for any schools interested.


**CHELTENHAM SCIENCE FESTIVAL**

4-8 June 2008
Cheltenham, UK

At the 7th Cheltenham Science Festival, events for school students of all ages include many interactive workshops and activities which bring the science curriculum alive.

http://www.cheltenhamfestivals.com/

**20TH ANNUAL MEETING OF TEACHERS OF PHYSICS IN SCHOOLS AND COLLEGES**

5 June 2008
Rugby School, Rugby, UK

The day consists of three lectures, one each on research physics, physics education and both education and entertainment, plus a series of six parallel workshops and a discussion session. The discoverer of the first Dario pulsars, Dame Professor Jocelyn Bell Burnell will speak about astrophysics and the director of education and science at the Institute of
Physics, Professor Peter Main will talk about the future of physics education in schools. [http://www.iop.org/activity/education/Events/Events%20for%20Teachers/Schools%20Physics%20Group/page_5736.html](http://www.iop.org/activity/education/Events/Events%20for%20Teachers/Schools%20Physics%20Group/page_5736.html)

**5TH SCIENCE CENTRE WORLD CONGRESS: SCIENCE CENTRES AS AGENTS OF CHANGE**
15-20 June
Toronto, Canada

Science centres worldwide are preparing to convene in Toronto, June 15–20, for the 5th Science Centre World Congress, Science Centres as Agents of Change, hosted by the Ontario Science Centre. Global environmental sustainability and science centers’ social responsibility are key conference themes. The advance registration deadline is March 30. [http://www.astc.org/blog/2008/02/08/agents-of-change-5th-science-centre-world-congress/](http://www.astc.org/blog/2008/02/08/agents-of-change-5th-science-centre-world-congress/)

**CERN PROGRAMME FOR HIGH SCHOOL PHYSIC TEACHERS**
29 June – 19 July
Geneva, Switzerland

CERN is now accepting applications from Physics High School Teachers to attend its spring 3-day weekend and 3-week summer residential programmes. The programmes are open to teachers from all CERN member and observer states, as well as from other countries subject to funding availability. [http://www.xplora.org/ww/en/pub/xplora/news/latestnews/cern_programmes.htm](http://www.xplora.org/ww/en/pub/xplora/news/latestnews/cern_programmes.htm)

**EUROPEAN MOLECULAR BIOLOGY LABORATORY: TRAINING COURSE: ELLS LEARNINGLAB**
9-11 July 2008
29 September - 1 October 2008
Heidelberg, Germany

The European Learning Laboratory for the Life Sciences (ELLS) is an education facility to bring secondary school teachers into the research lab for a unique hands-on encounter with state-of-the-art molecular biology techniques. ELLS also gives scientists a chance to work with teachers, helping to bridge the widening gap between research and schools. The three-day courses are designed to enable the participating teachers to explore a range of activities, which they can practice in the lab and then take back to the classroom. [http://www.embl.de/ells](http://www.embl.de/ells)

**STUDENT COURSE: EUROPEAN SPACE CAMP**
July-August 2008
Andøya Rocket Range, Andenes, Norway

The European Space Camp is a summer camp in English for high-school students, aged 17-20, interested in space and science, and having a background in physics and mathematics. The participants will spend a week doing technical experiments involved in a rocket campaign, working as real rocket scientists, learning how to exploit knowledge they already possess, and broadening their understanding of applied science. Working in groups, they have to use their creativity and learn to cooperate. The programme includes hands-on activities related to the rocket launch, lectures and social activities. [http://www.spacecamp.no/](http://www.spacecamp.no/)
COMENIUS COURSE: DESIGN OF ON-LINE/BLENDED LEARNING SEQUENCES FOR INTEGRATED TEACHING OF SCIENCE, MATHEMATICS AND CLIL
14-18 July
Alicante, Spain

Recent EU reports show an alarming decline in the interest and recruitment of young people into Science and Mathematics studies at a European level. On the other hand, the Rocard report stresses the need to change the way in which science teachers are working. Finally, more educational centres are moving towards open-source software and collaborative IT tools and CLIL based approaches. Taking into account this context, ISSUE Comenius 2.1 project is organising a European course “Design of on-line/blended learning sequences for integrated teaching of Science, Mathematics and CLIL” in Alicante, Spain on 14 -18 July.

ESOF 2008 - SCIENCE FOR A BETTER LIFE
18-22 July
Barcelona, Spain

The mission of the EuroScience Open Forum (ESOF) is to provide both the European and the international science communities with an open platform for debate and communication. It presents and profiles Europe’s leading research trends in the sciences, humanities and social sciences giving an opportunity to discuss and influence the future of research and innovation in Europe.
http://www.esof2008.org/

SCIENCE ON STAGE GERMANY FESTIVAL 2008
23-26 October
Berlin, Germany

The German Science on Stage festival taking place in Berlin 23-26 October 2008 brings together teachers and education experts from across Europe presenting scientific experiments, on-stage performances, lectures, exhibitions and workshops on current education topics. All science teachers, pedagogues and people working in teacher training programmes are invited to apply for the participation to Science on Stage Deutschland until the 25th of May 2008.
http://www.science-on-stage.de/

CALL FOR PARTNERS

CALL FOR PILOT SCHOOLS – "SURVEY ON ENVIRONMENTAL WEBSITE FOR KIDS"
To raise awareness on environmental issues with youth, the DG Environment of the European Commission wishes to review its website for young Europeans. To carry out this mission at local level, Gellis Communications and European Schoolnet seek to recruit Pilot Schools in Denmark, Lithuania, Cyprus, Spain, Slovenia, Romania, France and Czech Republic.

SEEKING PARTNERS – “THE SEA - A CONNECTING AND SEPARATING ELEMENT”
Moisio School in southern Finland is starting a Comenius project in 2009 with a working title “The Sea - a connecting and separating element?” They are looking for partner
schools from similar surroundings i.e. by the sea. The suggested theme is the sea as an ecological (from the scientific and historic aspect, climate and environmental change) and cultural (arts, science, history, leisure) element.
http://www.europeanschoolnet.org/eun_org_pforum/index.cfm?fuseaction=x_list&pid=27655