

Hands on Science: Science in a Changing Education

13-16 July 2005 at The University of Crete campus in Rethimno-Crete, Greece

The conference program includes:

A. Oral presentations in plenary and in parallel sessions.

- The plenary sessions will take place in the main auditorium of The University of Crete at Rethimno (Room Δ3) during the morning of Wednesday, July 13, 2005 (in sequence of the Opening ceremony) and on Thursday, July 14, 2005 9:00 - 11:00.
- The parallel sessions will take place in the main Conference as follows:
 - in auditorium Δ7 (Group A),
 - in auditorium Δ6 (Group B), and
 - in auditorium B1-29 (Group C)

B. Poster presentations.

They will be on display during the whole period of the Conference on special stands in the atrium of the main Conference area. During the time 15:30 to 17:00 their authors are supposed to be available for discussions.

C. Comenius Contact Seminar.

Auditorium B1-26 is reserved throughout the Conference duration for group discussions and presentation of ideas aiming to form Comenius consortia. Between 15:30 to 17:00 on the days of the Conference, plenary Comenius sessions are planned where experts from National Agencies and from already formed Comenius consortia will present their experience and help participants to the formation of applications. See the **Announcements** page on the web site and the announcements during the Conference period.

D. Science Fair.

It will operate in the atrium of the main Conference area during the whole period of the Conference. Every day of the Conference

duration, from 15:30 to 17:00, responsible persons will be available to demonstrate the 'Hands-on' activities and discuss issues related to their usage in education.

E. Exhibitions.

During the Conference period, exhibitions of computers, apparatuses, instruments and other materials useful to Science and Technology education will be on. Interested Conference participants may get information and details from the persons in charge of the corresponding stands.

F. Visits to schools and the EKFE's (Laboratory Centres for Natural science education) for the interested participants of the Comenius Contact Seminars.

G. Visits to the Region of Crete

(at an extra cost – see announcements during the Conference).

Notes.

- Coffee and lunch during the breaks are included in the Conference fee. Conference dinner in the evening of Friday, July 15, 2005 is included in the Conference fee. All served in the University campus.
- Interested participants may book transportation between the centre of Rethimno city and the University campus. See the Announcement page.
- Maps of the University campus area will be available shortly at the Announcements page to download.

The HSci 2005 Conference Program in brief

HSci 2005	Wednesday, July 13, 2005	Thursday, 14 July 2005	Friday, 15 July 2005	Saturday, 16 July 2005
8:00 - 9:00	Registration			
9:00 – 11:00	Conference Opening	Plenary Session 2	Parallel Sessions 4	
11:00 – 11:30	Coffee	Coffee	Coffee	➤ Conclusion of tasks
11:30 – 13:00	Plenary Session 1	Parallel Sessions 2	Parallel Sessions 5	
13:00 – 15:30	Lunch	Lunch	Lunch	➤ Visits to Schools
	Plenary Comenius Contact Seminar ^(*)	Plenary Comenius Contact Seminar ^(*)	Plenary Comenius Contact Seminar ^(*)	➤ Visits to EKFE's
	Science Fair Demonstrations	Science Fair Demonstrations	Science Fair Demonstrations	
	Poster Sessions	Poster Sessions	Poster Sessions	➤ Visits to the Region
15:30 – 17:00	^(*) Plenary Comenius sessions where experts from National Agencies and from Comenius consortia will present their experience and help participants to the formation of applications. <u>Auditorium B1-26</u> is reserved throughout the Conference duration for group discussions and presentation of ideas aiming to form Comenius consortia (see announcements).			
			General meeting of the 'Hands-on Science' network.	
17:00 – 17:30	Coffee	Coffee	Coffee	
17:30 – 19:00	Parallel Sessions 1	Parallel Sessions 3	Parallel Sessions 6	
20:00- 24:00	Conference Dinner			

The HSci 2005 Conference Program in detail

Wednesday, July 13, 2005	
8:00 – 10:00	Registration
Opening Ceremony	Welcome address by State Officials and University Authorities.
Room Δ3	
10:00 – 11:00	Science in a changing Education: The contribution of the Hands-on Science network to the improvement of science education. Manuel F. M. Costa, mfcosta@fisica.uminho.pt , Universidade do Minho, Braga, Portugal
11:00 – 11:30	Coffee Break
Plenary session	Constructivism 25 years on: Its contribution, missed opportunities? (A Video Conferencing presentation)
Room Δ3	Suzanne Gatt, suzanne.gatt@um.edu.mt University of Malta
11:30 – 13:00	Preparing teachers for cognitive coaching: the case of Physics by Inquiry as an experiential basis for Science learning. C. P. Constantinou, C.P.Constantinou@ucy.ac.cy University of Cyprus
13:00 – 15:30	Lunch Break
15:30 – 17:00	Plenary Comenius Contact Seminar
	Science Fair Demonstrations
	Poster Sessions
17:00 – 17:30	Coffee Break

Wednesday, July 13, 2005

Modeling Tasks for Exploring Topics of High-School Biology in the Computer-Supported Educational Environment ‘Models Creator’

Vassiliki Zogza, zogza@upatras.gr, University of Patras, Greece

Marida Ergazaki, ergazaki@upatras.gr, University of Patras, Greece

Vassilis Komis, komis@upatras.gr, University of Patras, Greece

Innovative ways of combining teaching ICT with teaching science: video taking and editing by students and teachers

S. G. Antonopoulos, spilios@upatras.gr, University of Patras, Greece

D. M. Garyfallidou, d.m.garyfallidou@upatras.gr, University of Patras, Greece

G. S. Ioannidis, gsioann@upatras.gr, University of Patras, Greece

J. A. Sianoudis, jansian@teiath.gr, Faculty of Technological Application, Athens - Greece

D. J. Sotiropoulos, sdimitr@primedu.uoa.gr, University of Athens, Greece

A. C. Tsiokanos, tsiokan@upatras.gr, Faculty of Technological Application, Athens – Greece

Modelling activities with educational software with regard to computer’s operation

Panselinas G., panselin@sch.gr, University of Patras, Greece

Komis V., komis@upatras.gr, University of Patras, Greece

Politis P., ppol@uth.gr, University of Thessaly, Greece

Use of specially designed Haptic Devices in a Virtual Reality environment for Educational Purposes: Requirements, Specifications, and hands-on experience derived from an IST project

S. P. Christodoulou, spc@hpclab.ceid.upatras.gr, University of Patras, Greece

D. M. Garyfallidou, D.M.Garyfallidou@upatras.gr, University of Patras, Greece

G. S. Ioannidis, gsioanni@upatras.gr, University of Patras, Greece

E. A. Stathi, stathie@hpclab.ceid.upatras.gr, University of Patras, Greece

Sessions 1

Group A
(Room Δ7)

Wednesday,
July 13, 2005
17:30 – 19:00

Wednesday, July 13, 2005

The Technology Fair as means for enhancing problem solving skills and interest in Science and Technology

Alexandros C. Mettas, mettas@ucy.ac.cy, University of Cyprus

Constantinos P. Constantinou, c.p.constantinou@ucy.ac.cy, University of Cyprus

The Science Fair as a Means for Developing Children's Graphing Skills in Elementary School

Evaggelia Kyriazi, kyriazi@cytanet.com.cy, University of Cyprus,

Constantinos P. Constantinou, c.p.constantinou@ucy.ac.cy, University of Cyprus,

**Hands-on Experiments Demonstrations Hands-on Educational Hardware / Software in Athens Hands-on quantum physics —
Introducing quantum principles to non-physics major's students**

Vassilis Dimopoulos, bdimo@primedu.uoa.gr, University of Athens, Greece

George Kalkanis, kalkanis@primedu.uoa.gr, University of Athens, Greece

Sessions 1

Complete Interactive Environment for Science Training

Mattheos Patrinos, mpatrin@primedu.uoa.gr, University of Athens, Greece

**Group B
(Room Δ6)**

Emmanouil Kantanos, kantanos@k-consulting.gr, University of Athens, Greece

George Kalkanis, kalkanis@primedu.uoa.gr, University of Athens, Greece

**Wednesday,
July 13, 2005
17:30 – 19:00**

Experiential phenomena as experimental activities in science laboratory based on the human body – Four cases

Dimitrios Sotiropoulos, sotiropoulosdimitris@gmail.com,

Katerina Tsagaroulaki, University of Athens, Greece

Tasos Svarnas, University of Athens, Greece

Aggeliki Metaxa, University of Athens, Greece

George Kalkanis, kalkanis@primedu.uoa.gr, University of Athens, Greece

Investigating air resistance using extractor fan filters and plummet in MBL

Sarantis Oikonomidis, sarecon@otenet.gr, University of Athens, Greece

Dimitrios Sotiropoulos, sotiropoulosdimitris@gmail.com, University of Athens, Greece

George Kalkanis, kalkanis@primedu.uoa.gr, University of Athens, Greece

The Didactics of Science Through Polymorphic Self-Made Experimental Apparatus of Quantitative Determinations: An alternative proposal for the teaching of Natural Sciences

Miltiadis Tsigris, mtsigris@edc.uoc.gr, The University of Crete, Greece

Wednesday, July 13, 2005

Science Fair activities in Brief

The Science Fair at the 2nd Primary School of Avgorou as a Means for Developing Investigative Skills

Evaggelia Kyriazi, kyriazi@cytanet.com.cy, University of Cyprus,

The Science Fair at the 1st Primary School of Sotera as a Means for Developing Investigative Skills

Panayiota Kyriazi – Kefala, m_kefalas@hotmail.com, 1st Primary School of Sotera Famagusta - Cyprus

Antonia Kyriazi - Hadjimarkou, 1st Primary School of Sotera Famagusta - Cyprus

Mechanical and Solar Energy Projects ... in Action

Nektarios Tsagliotis, ntsag@edc.uoc.gr, The University of Crete, Greece

**Wednesday,
July 13, 2005
17:30 – 19:00**

Science Fair Experiments and Activities from the Laboratorial Centre of Natural Sciences (EKFE) of Rethymno

Tzianoudakis Leonidas, mail@ekfe.reth.sch.gr, E.K.F.E. of Rethymno,

Siskakis Giannis, E.K.F.E. of Rethymno,

Sessions 1

Papagiannaki Sofia, E.K.F.E. of Rethymno,

Rompogiannaki Valia, E.K.F.E. of Rethymno,

Mantadakis Stelios, E.K.F.E. of Rethymno

Group C

Let's Learn Robotics and Chemistry Together!

Eduardo Pinto, Eduardo.mpinto@netvisao.pt, Center for Investigation and Development of Vocational School Gustave Eiffel, Amadora, Portugal

**Wednesday,
July 13, 2005
17:30 – 19:00**

Technology Fair Projects

Alexandros C. Mettas, mettas@ucy.ac.cy, University of Cyprus

Constantinos P. Constantinou, c.p.constantinou@ucy.ac.cy, University of Cyprus

The Theory of Relativity in Primary Education(*)

Antonis Tsalapakis, Atsalapakis@edusrv.edc.uoc.gr, The University of Crete, Greece

Science Fairs as mechanisms for University – School - Community collaborations in Cyprus

M. Evagorou, University of Cyprus

L. Avraamidou, University of Cyprus

Constantinos P. Constantinou, c.p.constantinou@ucy.ac.cy, University of Cyprus

Wednesday, July 13, 2005

The Science Truck High level research coming into the school

Walburga Bannwarth-Pabst, sekretariat@emg-huerth.de, Ernst-Mach-Gymnasium, Hürth, Germany

“Fun Science Club”

Emilia Păușan, e_pausan2004@yahoo.com, “Tudor Vladimirescu” Theoretical High School, Bucharest, Romania

Monica – Maria Iliescu, “Tudor Vladimirescu” Theoretical High School, Bucharest, Romania

Antonia Nicolescu, “Tudor Vladimirescu” Theoretical High School, Bucharest, Romania

Dănușă Dumitrescu, “Edmond Nicolau” Technical College, Bucharest, Romania

Activities:

Studying per model - LabView simulation

BURADA OANA-RAMONA, BUZILA ADINA IOANA, DRAGHICI CRISTIAN

Studying per model - LabView simulation

BURADA OANA-RAMONA, BOLOC ROBERT, GHIORGHIESCU ADRIAN

Real lab experiments made in “Fun Science Club” using a computerised system

BURADA OANA-RAMONA, URSU IOAN, BUZILA ADINA-IOANA

Real lab experiments made in “Fun Science Club” using a computerised system

URSU IOAN, CIOBANU CLAUDIA-ANDREEA, STEFAN BOGDAN-MIHAI

THE ISOBAR TRANSFORMATION

SIMION VIOLETA-MARIA, BUIU ANDREI

**Science Fair
activities in Brief**

**Wednesday,
July 13, 2005
17:30 – 19:00**

Sessions 1

Global Science

Prof. Luminița Grigorescu, Prof. Maria Enache, Prof. Ovidiu Șerbanescu, Tehn. Lab. Eugenia Bâdrea, Prof. Corina Sibișeanu with the assistance of the following students: Claudiu Armean, Florentina Ungureanu, Mihai Ene, Andreea Panait, Valeria Ciocâlțeu

Group D

The multimedia album MATH’ ON MUSICAL NOTES of the PROFU DE MATE (MATH’ TEACH) band

Dragos Constantinescu, profudemate2004@yahoo.com, dragos@epsilon.ro, profudemate@gmail.com, High School of Art, Valcea, Romania

**Wednesday,
July 13, 2005
17:30 – 19:00**

Arsenic and its compounds,

Anca Adriana Arbune, Class IX-a D, Colegiul National Vasile Alecsandri, Galati, Romania

Carbon,

Elena Miu & Ciocanel Maria Veronica, Guiding teacher Manza Lidia, Colegiul National Vasile Alecsandri, Galati, Romania

Magnesium,

Ciocanel Maria Veronica & Cringanu Ioana Andrea, Guiding teacher Manza Lidia, Colegiul National Vasile Alecsandri, Galati, Romania

‘Intercultural pedagogic perspective on Science Education in a changing Education’ WHAT EFFECTS INTERCULTURAL EDUCATION?

Hans Lorentz, Department of Education at Lund University – Sweden

Sculpting Virtual Reality for Teaching Science History

Radu A. Sporea, “Politehnica” University of Bucharest, Romania

Thursday, July 14, 2005	
Plenary session Room Δ3 Thursday, July 14, 2005 9:00 – 11:00	The Junior Certificate Science –Revised Syllabus Deirdre Knox dmgknox@ireland.com, Irish Science Teachers’ Association Presentation Secondary School, Loughboy, Kilkenny, Ireland Nine Years of Scientific Research Training in Hungary Peter Csermely csermely@puskin.sote.hu Semmelweis University, Hungary Szilárd Kui, szilardkui@nyex.info Network of Youth Excellence, Budapest, Hungary Sixth Framework Programme: Structuring the European Research Area Science and Society – European Science Education Initiative Walter Staveloz wstaveloz@ecsite.net ECSITE, Belgium Demands on an European Teacher Ingrid Hantschk, Hans Fibi fibi@pabw.at, Pädagogische Akademie des Bundes in Wien, Austria
11:00 – 11:30	Coffee Break
Sessions 2 Group A (Room Δ7) Thursday, July 14, 2005 11:30 – 13:00	Web-based Instruction in IT Hardware Iryna Berezovska, iberezov@hotmail.com, Ternopil State Technical University, Ukraine Mykola Berchenko, nberchen@mail.lviv.ua, Lviv Polytechnic National University, Ukraine and Rzeszow University, Poland Conceptual Learning of Science and 3D Simulations Sasa Divjak, sasa.divjak@fri.uni-lj.si, University of Ljubljana, Slovenia A Teaching – Learning Sequence Concerning Dynamic Interactions: The Need for Appropriate Software Petros Kariotoglou, kariotog@eled.auth.gr, University of Western Macedonia - Greece Anna Spyrtou, aspyrtou@eled.auth.gr, University of Western Macedonia - Greece Newton-3 : A Software For Teaching Dynamic Interactions. E. Hatzikraniotis(1,a), evris@physics.auth.gr, Aristotle University of Thessaloniki - Greece A. Theodorakakos(1,b), anaton@the.forthnet.gr, Aristotle University of Thessaloniki - Greece A. Spyrtou, aspyrtou@eled.auth.gr, University of Western Macedonia - Greece P. Kariotoglou, kariotog@eled.auth.gr, University of Western Macedonia -Greece

Thursday, July 14, 2005	
Sessions 2 Group B (Room Δ6) 11:30 – 13:00	Techno-Sciences and Mathematics: Vehicles for a Sustainable Future and Global Understanding Vasilios Makrakis, makrakis@edc.uoc.gr, The University of Crete - Greece Nelly Kostoulas-Makrakis, kostoulas@rhodes.aegean.gr, University of Aegean – Greece Optics and Pool: Play the Game Carlos Filipe S. Lima, Fillima@portugalmail.pt, Escola Secundária Carlos Amarante, Braga, Portugal Manuel F. M. Costa, mfcosta@fisica.uminho.pt, Universidade do Minho, Braga, Portugal Robots at School. The Eurobotice project Manuel F. M. Costa, mfcosta@fisica.uminho.pt, Universidade do Minho, Braga, Portugal José F. Fernandes, filipeflemos@hotmail.com, Escola EB 2,3 João de Meira, Guimarães, Using Physics to Innovate Practices in Family Type Firms Carlos Jorge Leite Oliveira Teixeira, carlucci@sapo.pt, Escola Básica 2,3 de São Torcato, Portugal
Sessions 2 Group C (Room B1-29) Thursday, July 14, 2005 11:30 – 13:00	Hands-on Science in Romania, Act II Dan Sporea, sporea@ifin.nipne.ro, National Institute for Lasers, Plasma and Radiation Physics, Romania Methods Used in Romanian Schools to Increase Students' Interest in Learning Physics Liliana-Violeta Constantin, liliana29@yahoo.com, “Elena Cuza” National College, Bucharest, Romania Introducing Concepts of Physics into Primary School Marinela Ruset, rusetcristian@yahoo.co.uk, High School “Stefan Odobleja”, Romania Mariana Mogos, High School “Stefan Odobleja”, Romania Appliances of First Degree and Second Degree Mathematical Equations in Solving of Some Physics Problems Constantin Lucian Vladescu, lucconstvl@yahoo.com, The school with I-VIII classes, Romania
13:00 – 15:30	Lunch Break
Thursday, July 14, 2005 15:30 – 17:00	Plenary Comenius Contact Seminar Science Fair Demonstrations Poster Sessions
17:00 – 17:30	Coffee Break

Thursday, July 14, 2005	
Sessions 3 Group A (Room Δ7) Thursday, July 14, 2005 17:30 – 19:00	Hands-on science activities for the teaching and learning of mechanical energy with 6th grade primary school children in Greece Nektarios Tsagliotis, ntsag@edc.uoc.gr, The University of Crete - Greece Boring but Vital – How Should We Teach Our Students About Chemical Safety? Hugh M. Cartwright, Hugh.Cartwright@chem.ox.ac.uk, University of Oxford, UK Science with a Difference – Organising Planet Walk in Malta Joan Borg Marks, joan.borg-marks@um.edu.mt, University of Malta Junior College, Malta Mathematics and Technology: Infinity through a WebQuest Patrícia Alexandra S. R. Sampaio, patisampaio@iol.pt, Escola Básica 2.3 de Freixo, Portugal
Sessions 3 Group B (Room Δ6) Thursday, July 14, 2005 17:30 – 19:00	Van de Graaff Generator A. J. Martins, anajoaom@gmail.com, University of Minho, Braga, Portugal H. M. Pinto, University of Minho, Braga, Portugal Motivation and Hands-on Experiments Josef TRNA, trna@ped.muni.cz, Masaryk University in Brno, Czech Republic Teaching Ninth-Grade Genetics Through Inquiry M. I. Hadjimarcou, hadjim@ucy.ac.cy, University of Cyprus C. P. Constantinou, c.p.constantinou@ucy.ac.cy, University of Cyprus Z. Zacharia, zach@ucy.ac.cy, University of Cyprus “Teaching Science by Experimentation: Hands-on method”. Carlos Filipe S. Lima, Fillima@sapo.pt, Escola Secundária Carlos Amarante, Braga, Portugal

Thursday, July 14, 2005

Sessions 3

**Group C
(Room B1-29)**

**Thursday,
July 14, 2005
17:30 – 19:00**

Science interpretation in high school

R. Villar Quinteiro, rosavillarq@yahoo.es, Instituto de Estudos Miñoranos, Spain

B. Vázquez Dorrió, bvazquez@uvigo.es, Universidade de Vigo, Spain

An informal interactive science and technology centre

S. Rodríguez Muñoz, I.E.S. Escolas Proval, Spain

J. Fernández Rodríguez, I.E.S. Escolas Proval, Spain

J.A. Ansín Agis, I.E.S. Escolas Proval, Spain

A. Lago Rodríguez, Instituto de Estudos Miñoranos, Spain

B. Vázquez Dorrió, bvazquez@uvigo.es, Universidade de Vigo, Spain

Environmental Education in Greek Schools: The Viewpoint of the Local Coordinators

Georgios Kimionis*, geokim@edc.uoc.gr, The University of Crete,

P. G. Michaelides, michail@edc.uoc.gr, The University of Crete,

The Promotion of Scientific Literacy with Alternative Methods and Activities. The experience of the Laboratorial Centre of Natural Sciences (EKFE) of Rethymnon

Tzianoudakis Leonidas, mail@ekfe.reth.sch.gr, Person in charge of the E.K.F.E. of Rethymno

Friday, July 15, 2005

Sessions 4

**Group A
(Room Δ7)**

**Friday,
July 15, 2005
9:00 – 11:00**

Computer-Aided Simulations for Hands-on Physics Experiments

G. Demirjian, dega@web.am, Gyumri State Pedagogical Institute, Armenia

V. Harutyunyan, volhar@mail.ru , sashar@rambler.ru, State Engineering University of Armenia, Armenia

S. Harutyunyan, State Engineering University of Armenia, Armenia

A Web Site about Historic Experiments (HE) The Galileo Free Fall Experiment The Topics – The Structure

L. Papatsimpa, lpap@pi-school.gr, Greece

P. Dimitriadis, Greece

E. Kyriaki, ekyriaki@tiscali.be, Belgium

Teacher's Role in a Changing Education. A Case Study of Asynchronous Education at Technological Education Institute (TEI) of Crete

Kalogiannakis Michail, mkalogian@laposte.net, University Paris 5- René Descartes, France

Psarros Michail, psarros@telecom.tuc.gr, TEI of Crete, Greece

Vassilakis Kostas, kostas@cs.teiher.gr, TEI of Crete, Greece

The New Technologies in the Teaching of Geometric Optics

G. ANAGNOSTAKIS, The University of Crete, Greece

V. MANTADAKIS, The University of Crete, Greece

V. PAPAVALIIOU, vpapav@edc.uoc.gr, The University of Crete, Greece

Entertaining Experiments in Electrostatics

Chung-chih Chen, sc121@mail.fy.edu.tw, Fooyin University, Taiwan

Sessions 4

**Group B
(Room Δ6)**

**Friday,
July 15, 2005
9:00 – 11:00**

The Effect Of Using Simple Equipment On The Acquisition Of Plan Map Concepts In The Vocational Schools

Eskandar Fathi-Azar, e-fathiazar@tabrizu.ac.ir, University of Tabriz, Iran

Modern teaching methods in physics

Mircea Rusu, mvrusu@yahoo.com, mrusu@dnt.ro, Faculty of physics – Bucharest - Romania

Diana Melnic, dz_diana@yahoo.com, “ Teacher Training Center”- Bucharest- Romania

Stefan Grigorescu, grigorescu_stefan2003@yahoo.com, “ Teacher Training Center”- Bucharest –Romania

The curriculum reform and the schools' ability to innovate

Lomos Catalina, lomoscatalina@yahoo.com lomos_alina@yahoo.com, RUG University, Netherlands

Science, Technology and Society in Chemistry Learning

Cristina Carvalhinho, c.carvalhinho@clix.pt, Escola Secundária Manuel de Arriaga,Horta,Açores

Environmental Issues on the Newspapers of HERAKLION - CRETE

Theodore Antoniou(*), antoniou@edc.uoc.gr, TheUniversity of Crete

Friday, July 15, 2005

Sessions 4	Technologies in School Marisa Andrade, marisa_andrade11@hotmail.com , Escola Secundária Manuel de Arriaga, Faial Açores
Group C (Room B1-29)	Learning science towards a sustainable development Rui M. Vila-Chã Baptista, ruibaptista@prof.min-edu.pt , Escola Secundária C/ 3º Ciclo de Vieira do Minho, Portugal Paula Silva, pcmsilva@sapo.pt , Escola Secundária C/ 3º Ciclo de Vieira do Minho, Portugal Manuel F. M. Costa, mfcosta@hsci-pt.com , mfcosta@fisica.uminho.pt , Universidade do Minho, Braga, Portugal
Friday, July 15, 2005 9:00 – 11:00	Chemistry and Robots Eduardo Manuel F.M.Pinto, eduardo.mpinto@netvisao.pt , Escola Profissional Gustave Eiffel, Portugal Paulo Jorge C. R. Ernesto, paulo.ernesto@cooptecnica.pt , Escola Profissional Gustave Eiffel, Portugal
	Potenciality of an integrated approach to teach the topic Improving Life on Earth to 9th grade students of Physical and Natural Sciences Manuel Sequeira, msequeira@iep.uminho.pt , Universidade do Minho, Braga, Portugal Luísa Ferraz, lferraz@iep.uminho.pt , Universidade do Minho, Braga, Portugal
	Practical Work to Promote Interdisciplinarity Between Physical and Natural Sciences: A Teaching Experiment with 7th Grade Portuguese Students Maria da Conceição Duarte, cduarte@iep.uminho.pt , University of Minho, Braga, Portugal Manuel Sequeira, msequeira@iep.uminho.pt , University of Minho, Braga, Portugal Paula Barbosa, pbarbosa@quimica.uminho.pt , University of Minho, Braga, Portugal
11:00 – 11:30	Coffee Break

Friday, July 15, 2005

Sessions 5

**Group A
(Room Δ7)**

**Friday,
July 15, 2005
11:30 – 13:00**

Kolb's Experiential Learning Model: Enlivening Physics Courses in Primary Education

Evangelos I. Manolas, emanolas@fmenr.duth.gr, Democritus University of Thrace, Greece.

Theodoros I. Kehagias, , 6th Primary School of Argyproupolis, Athens, Greece.

Forms of Energy: Cooperative Learning in the University Classroom

Evangelos I. Manolas, emanolas@fmenr.duth.gr, Democritus University of Thrace, Greece.

Walter Leal Filho, leal@tu-harburg.de, Department of Environment and Biotechnology, TuTech, Germany

CONNECT: Designing the Classroom of Tomorrow by using Advanced Technologies to connect formal and informal learning environments

Sofoklis Sotiriou, sotiriou@ellinogermaniki.gr, Ellinogermaniki Agogi, Greece

Stavros Savas, Ellinogermaniki Agogi, Greece

Elias Vagenas, Ellinogermaniki Agogi, Greece

Nikolaos Ouzounoglou, National Technical University of Athens, Greece

Michael Gargalakos, National Technical University of Athens, Greece

Rodoula Makri, National Technical University of Athens, Greece

Petros Tsenes, National Technical University of Athens, Greece

Lynn D. Dierking, Institute for Learning Innovation, Annapolis, USA

Salmi Hannu Sakari, HEUREKA – The Finnish Science Center, Finland

Avi Hoffstein, Weizman Institute of Science, Israel

Sherman Rosenfeld, Weizman Institute of Science, Israel

Teaching for Conceptual Change in Science Laboratory

Grigoris Epitropakis, grigorise@acn.gr, Second Laboratorial Center of Natural Sciences of Heraklion, Greece

Friday, July 15, 2005

Sessions 5	Effects of Hands and Minds on Activities Accompanied with Computer Simulation on Students' Biology Achievement and Attitudes Toward Science Hilal AKTAMIŞ, hilal.askar@deu.edu.tr , Dokuz Eylül University, Izmir, Turkey Ercan AKPINAR, ercan.akpinar@deu.edu.tr , Dokuz Eylül University, Izmir, Turkey Yasemin GÜNAY, yasemin.gunay@deu.edu.tr , Dokuz Eylül University, Izmir, Turkey Ömer ERGİN, omer.ergin@deu.edu.tr , Dokuz Eylül University, Izmir, Turkey
Group B (Room Δ6)	Developing Scientific Creativity Test Hilal AKTAMIŞ, hilal.askar@deu.edu.tr , Dokuz Eylül University, Izmir, Turkey E. Şahin Pekmez, esin.pekmez@deu.edu.tr , Dokuz Eylül University, Izmir, Turkey B. Taşkın Can, bilge.can@deu.edu.tr , Dokuz Eylül University, Izmir, Turkey Ö. Ergin, omer.ergin@deu.edu.tr , Dokuz Eylül University, Izmir, Turkey
Friday, July 15, 2005 11:30 – 13:00	Science Process Skills in Hands-on Science Activities Ela Ayse Koksall, ela@metu.edu.tr , Middle East Technical University, Ankara, Turkey Fulya Oner, fulyaner@yahoo.com , Erciyes University, Kayseri, Turkey
	The Effect of Inquiry-based Chemistry Course on Students' Understanding of Atom Concept, Learning Approaches, Motivation, Self-efficacy and Epistemological Beliefs İ. Sevilay Caliskan, Middle East Technical University, Ankara, Turkey Esme Hacieminoglu, hesme@metu.edu.tr , Middle East Technical University, Ankara, Turkey Hamide Ertepinar, hamide@metu.edu.tr , Middle East Technical University, Ankara, Turkey Ömer Geban, Middle East Technical University, Ancara, Turkey
	Contemporary Scientific Concepts in Primary Schools: A Test Case on the concept of Systems. N. Kountourakis, koudya2000@yahoo.com , Primary School Teacher, Souda, Greece P. G. Michaelides, michail@edc.uoc.gr , The University of Crete, Greece

Friday, July 15, 2005	
Sessions 5 Group C (Room B1-29) Friday, July 15, 2005 11:30 – 13:00	Applying Concept Map to develop a new Technical Writing technique for enhancing Reading Comprehension performance Hung Ha, hmh61@uow.edu.au, Wollongong University, Australia Interdisciplinarity in the Curriculum of the nursery school: An example of thematic approach of the key concepts ‘evolution’ Nicoletta Gliaros - Christodoulos, Pedagogical Institute of Athens Effy Gourgios, egourg@yahoo.gr, Pedagogical Institute of Athens Landscapes for Learning – Rediscovering the Mediterranean Landscapes – & the Case of University of Crete’s woodland in Rethymnon. Sophie Nikolakaki – Hajaje, snikol@edc.uoc.gr, The University of Crete, Greece Review the changing role of intellectual property in the microelectronics sector Qazi Moinuddin Abro, qaziabro@yahoo.co.uk, Mehran University of Engineering and Technology, Pakistan Zahid Ali Memon, memonzahid2000@yahoo.com, Mehran University of Engineering and Technology, Pakistan Arabella Bhutto, rbll_bhutto@yahoo.com, Mehran University of Engineering and Technology, Pakistan Qazi Ali Muhammad, mehranian@hotmail.com, National Rural Support Program, , Pakistan
13:00 – 15:30	Lunch Break
Friday, July 15, 2005 15:30 – 17:00	Plenary Comenius Contact Seminar Science Fair Demonstrations Poster Sessions General meeting of the ‘Hands-on Science’ network.
17:00 – 17:30	Coffee Break
Sessions 6 (Room Δ7) Friday, July 15, 2005 17:30 – 19:00	Available for Group Discussions. Ask the Conference secretariat.

Friday, July 15, 2005	
Sessions 6 Group B (Room Δ6) Friday, July 15, 2005 17:30 – 19:00	The Experimental Approach of Physics in Secondary School Elena Vladescu, elenavladescu@yahoo.com , National Vocational College “Nicolae Titulescu”, Romania Data acquisition and analyzis of real signals experiments Elena-Mihaela Garabet, mihaela_garabet@yahoo.com , Liceul Teoretic “Grigore Moisil”-București, Romania Ion Neacșu, iv_neacsu@yahoo.com , Liceul Teoretic “Grigore Moisil”-București, Romania Data aquisition experiments for Science Lessons Elena-Mihaela Garabet, mihaela_garabet@yahoo.com , Liceul Teoretic “Grigore Moisil”-București, Romania Ion Neacșu, iv_neacsu@yahoo.com , Liceul Teoretic “Grigore Moisil”-București, Romania A LabVIEW Simulation of the Ideal Gas Transformations Marinela Ruset, rusetcristian@yahoo.co.uk , High School “Stefan Odobleja”, Bucharest, Romania George Bleaja, george_bleaja@gmail.com , SC Nova System SRL, Bucharest, Romania
Sessions 6 (Room B1-29) Friday, July 15, 2005 17:30 – 19:00	Available for Group Discussions. Ask the Conference secretariat.
20:00 – 24:00	Conference Dinner at The University campus with traditional Greek food, music and dances

Saturday, July 16, 2005

**Saturday,
July 16, 2005**
The whole day

- Conclusion of tasks. Groups from the Comenius Contact Seminar may have this day to conclude, approve and finalise their applications. Ask the Conference secretariat for support.
- Visits to Schools. Interested Conference participants may visit schools of the region. State your interest to the Conference secretariat.
- Visits to EKFE's. Interested Conference participants may visit the 2 EKFEs (Laboratory Centre for Natural Sciences) that support the schools of the region in relation to the Laboratory work in the teaching of Natural Sciences. There is one EKFE for secondary education (middle and high school) and one for primary education (established in 2004). State your interest to the Conference secretariat.
- Visits to the Region. Interested Conference participants may join, at an extra cost, special guided tours to the region of Crete. See the Announcements page of the Conference web site and the announcements during the Conference.