International Council of Associations for Science Education

Supporting and promoting science education internationally
The ICASE Newsletter

APRIL 2012

Welcome to the ICASE April 2012 Newsletter !

The ICASE Newsletter is a regularly distributed publication containing current information about topics of interest in the field of science education. The table of contents for this issue is located in the right hand column.

The International Council of Associations for Science Education (ICASE) was established in 1973 to extend and improve science education for chldren and young people throughout the world. Today, ICASE is a huge network of science education associations, institutions, foundations and companies, facilitating communication and cooperation at the regional and international level.

International Council of Associations for Science Education

http://www.icaseonline.net

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Read or Submit a Manuscript to the ICASE Journal:
Science Education International

For information please visit our Journal web page: http://www.icaseonline.net/seiweb

Contents of Newsletter

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ICASE News

Jack Holbrook, ICASE Past President

News from the ENGINEER Project.

An Engineer workshop and consortium meeting was held in Jerusalem/Israel between 20-23/03/2012. ICASE is one of the partners in this project and was representd by Bulent Cavas. Topics in the workshops covered:

-- Engineering in Elementary workshop -- Web page workshop
-- Pilot Unit demonstration -- Teachers' guide template
-- Development of Engineering units

The Engineer Project supports the widespread adoption of innovative methods of science teaching and provide extensive teacher training on inquiry-based methods in Europe. The materials are improved using successful program Engineering is Elementary (EiE) developed by Boston's Museum of Science (BMOS).

FEBS workshop on Biochemistry and Moleculer Biology Education held in Izmir March, 29 and 30.

The main aim of this workshop was to bring scientists together to think and promote biochemistry and biomolecular science education by introducing new trends in undergraduate education as well as presenting tips for the future scientists.

ICASE was represented in the workshop by Dr. Bulent Cavas.

He also made a poster presentation on the European funded project, PROFILES and its process in the last one year with particular reference to its operation in Turkey.

Prof.Dr.Gul Guner (Chair, FEBS Education Committee) and Assoc.Prof.Bulent Cavas (Chair, Publications Com. of ICASE)

UCC-ICASE PROFILES meeting in Cork, Ireland on the 3rd March 212

Group of teachers involved in the PROFILES project attending the ICASE - UCC Continuing Professional Development programme held in the Eureka Centre for Inquiry Based Education in Science and Mathematics, University College Cork on Saturday 3 March 2012. The banner is intended also to be set up at an ICASE-UCC PROFILES stand at the ISTA Annual Conference in Trinity College in Dublin on 21 April.

DEU-ICASE PROFILES meeting in Izmir, Turkey on the 17th March 212

DEU-ICASE 4th meeting was held in Izmir-Turkey on Saturday 17 March 2012. The meeting was hosted by Izmir Fatih College and its teachers. 36 Science and Technology teachers participated to the meeting. The meeting program consisted of lectures and a workshop. The lectures were concentrated on the tips for developing effective teaching and learning modules using Inquiry Based Science Education (IBSE).

The workshop included activities for teachers to prepare and improve their modules using IBSE principles. The teachers from different schools worked together to create a module using a socio-scientific issue. A network system among the teachers was set up to implement their modules in the classroom environments.

ICASE and University College Cork collaborate in PROFILES Project

A highly successful partnership has developed between ICASE and University College Cork (UCC) as part of the PROFILES project. PROFILES stands for Professional Reflection-Oriented Focus on Inquiry-based Learning and Education though Science. This research project is funded by the European Community's Seventh Framework Programme (FP7) of the European Commission. The project involves a consortium of 21 partner institutions from 19 different countries and the entire project is coordinated by the Chemistry Education division of the Free University of Berlin.

The PROFILES project aims at promoting inquiry-based Science Education (IBSE) by raising the self efficacy of teachers by means of an ongoing and long-term continuing professional development (CPD) programme. The project is targeted at second level science teachers and particular attention is paid to student motivation for the learning of science in terms of intrinsic motivation (relevant and meaningful from the point of view of the students) and extrinsic motivation (teacher encouragement and reinforcement).

The CPD programme is based at UCC's Eureka Centre for Inquiry Based Education in Science and Mathematics. This centre has been established in the College of Science, Engineering and Food Science (SEFS) with funding from the government of Ireland as well as funding from the university's own resources and from the pharmachemical industry. The Eureka Centre consists of two state-of-the art and fully equipped science education laboratories, a Science and Mathematics Resource Centre and a seminar room.

The Eureka Centre has not yet been officially opened but already it has hosted a number of conferences and a long list of CPD courses. The biggest conference held to date was the ChemEd Ireland conference held in the Eureka Centre in October 2011. This conference was officially opened by Professor Patrick Fitzpatrick, Head of College of SEFS, and broke all previous attendance records with 200 second level chemistry teachers from all over Ireland travelling to the Eureka Centre. In addition, the Eureka Centre is providing CPD courses for science teachers on an ongoing basis through its involvement with the Irish Science Teachers' Association and with the Professional Development Service for Teachers (PDST) of the Department of Education of Ireland.

The fact that UCC is one of the partners in the PROFILES project and that Dr Declan Kennedy, senior lecturer in science education in UCC, is the ICASE European representative enabled the partnership between ICASE and UCC to be easily established. At the heart of the PROFILES project is the provision of top class continuing professional development for science teachers.

A series of PROFILES CPD courses under the ICASE – UCC banner has been ongoing in the Eureka Centre since September 2011. Among the topics covered during these CPD courses were:

- What is Inquiry Based Science Education?
- The role of datalogging in promoting Inquiry Based Science Education.
- Assessment in science education.
- Designing and writing PROFILES intervention modules.
- What every science teacher should know about Multiple Intelligences Theory.

- Teaching difficult ideas in science.
- The role of Science, Technology and Society in Science Education.
- Planning investigations using Inquiry Based Science Education.
- Laboratory workshops on promoting Inquiry Based Science Education.
- Action Research in the Classroom.
- The role of practical work in science education, etc.

The CPD sessions are being presented by a team consisting of Noel Brett, Rory Geoghegan, Declan Kennedy, John Lucey and Marian McCarthy. A total of forty science teachers are involved in the ICASE - UCC group undertaking the CPD programme. This group is working on trialling the implementation of ten intervention modules to promote IBSE in the classroom. These ten ICASE-UCC intervention module have been developed by a lead group of ten teachers from the group. The ten teachers are all full time second-level science teachers and are currently undertaking the Masters in Science programme in UCC. The ten intervention modules will be finalised in the light of feedback received from the classroom experiences and will be available for dissemination through the PROFILES and ICASE websites.

ICASE is currently working on a system to establish a series of ICASE Science and Technology Education Centres around the world. It is hoped that the Eureka Centre in Ireland and similar centres in Turkey, Thailand and China will be the first to be formally established under the ICASE banner. Further details of this development will be given in subsequent Newsletters.

Call for papers: Special edition of Science Education International (SEI): Future Directions for Inquiry based Science Education (IBSE)

Guest Editor: Dr Peter Gray, Norwegian University of Science & Technology and the S-TEAM project

Deadline for abstracts: 15th May 2012

Inquiry-based science education (IBSE) has been the focus of several EU-funded projects in recent years, and is also visible in national education policy, and elsewhere. It is seen as the answer to problems of student disengagement from science and to possible shortages of science graduates in the future.

These projects and policies are now at a crossroads. Much has been learned about implementing IBSE, there has been positive feedback about its results and acknowledgement of the role of systemic change in making better use of IBSE. This special edition of SEI will focus on future directions in IBSE. Some possible themes might be:

- Creating coherent policies for IBSE – how can pedagogy, curriculum and assessment work together to promote inquiry based methods?
- Research in IBSE – is it possible to produce definitive answers as to its effectiveness, is further research required or do we know enough? If we need further research, what would such studies look like?
- Teacher professional development vs. teacher professional learning – how should the principles of inquiry be applied to/by teachers themselves, in their own development activities?
- Resources for IBSE – has a European focus on resources for teachers been at the expense of the empowerment of teachers to create their own?
- What are the possibilities for using vicarious learning with rich media to support inquiry in future science classrooms?
- Moving from closed to open inquiry – what are the limits?
- Is IBSE the answer and if so, what was the question?

We invite contributions not only from IBSE projects and their coordinators but also from teachers, teacher educators and policymakers involved in implementation. Articles should not be descriptive reports of IBSE implementations but should critically reflect on the opportunities for, and barriers to, effective implementation of IBSE. Current references to research literature would be useful, but it is not necessary for articles to report research studies themselves, unless these are exceptionally significant.

Abstracts of between 400-600 words should be sent to Dr Peter Gray graypb@gmail.com by 15th May. Authors will receive comments and a decision by 15th June, and the deadline for draft articles of between 4-6000 words will be 15th September 2012. A template and submission guidelines will be sent to successful authors with editorial comments.

Detailed information about Science Education International can be found on the: www.icaseonline.net/seiweb

General Safety Practices for the Science Classroom

James A. Kaufman, Ph.D. Chair, ICASE Committee on Safety in Science Education
International Council for Associations of Science Education

The committee on safety in science education would like to ask the ICASE Newsletter readers for their Top Ten Health and Safety Precautions in elementary science education from two perspectives: the students and teachers. We would like to invite readers to submit their lists to the committee chair. Consider the list below.

40 Steps for Laboratory Safety

Steps Requiring Minimal Expense

1. Have a written health, safety and environmental affairs (HS&E) policy statement.
2. Organize a school HS&E committee of teachers, administrators and staff to meet regularly to discuss HS&E issues.
3. Develop an HS&E orientation for all new teachers, staff, administrators and students.
4. Encourage teachers, staff, administrators and students to care about their health and safety and that of others.
5. Involve every teacher, staff member, administrator and student in some aspect of the safety programme and give each specific responsibility.
6. Provide incentives to teachers, staff, administrators and students for safety performance.
7. Require all teachers, staff and administrators to create and read the science safety manual. Require students to read the school's science safety rules. Have both groups sign a statement that they have read, understood, and agree to follow the procedures and practices. Keep these statements on file in the school office.
8. Conduct periodic, science classroom/lab inspections to identify and correct hazardous conditions and unsafe practices. Involve students, teachers, staff, and administrators in simulated OSHA inspections.
9. Make learning how to be safe an integral and important part of science education, your work, and your life.
10. Schedule regular safety meetings for all staff, teachers and administrators to discuss the results of inspections and aspects of laboratory safety.
11. When conducting experiments, demonstrations or activities with hazards or potential hazards, ask yourself these questions:

    What are the hazards? What are the worst possible things that could go wrong?
    How will I deal with them? What are the prudent practices, protective facilities and equipment necessary to minimize the risk of exposure to the hazards?
12. Require that all accidents (incidents) be reported, evaluated by the school safety committee, and discussed at school safety meetings.
13. Require every pre-lab/pre-experiment discussion to include consideration of the health and safety aspects.

14. Don't allow experiments to run unattended unless they are failsafe.
15. Forbid working alone in any laboratory and working without prior knowledge of a staff member.
16. Extend the safety program beyond the laboratory to the automobile and the home.
17. Allow only minimum amounts of flammable liquids in each science classroom.
18. Forbid smoking, eating and drinking in the science classroom/laboratory.
19. Do not allow food to be stored in chemical refrigerators.
20. Develop plans and conduct drills for dealing with emergencies such as fire, explosion, poisoning, chemical spill or vapor release, electric shock, bleeding and personal contamination.
21. Require good housekeeping practices in all work areas.
22. Display the phone numbers of the fire department, police department, and local ambulance either on or immediately next to every phone.
23. Store acids and bases separately. Store fuels and oxidizers separately.
24. Maintain a chemical inventory to avoid purchasing unnecessary quantities of chemicals.
25. Use warning signs to designate particular hazards.
26. Develop specific work practices for individual experiments, such as those that should be conducted only in a ventilated hood or involve particularly hazardous. When possible most hazardous experiments should be done in a hood or eliminated.

Steps Requiring Moderate Expense

27. Allocate a portion of the school budget to safety.
28. Require the use of appropriate eye protection at all times in science classrooms and areas where chemicals are transported.
29. Provide adequate supplies of personal protective equipment - safety glasses, goggles, face shields, gloves, lab coats, and bench top shields.
30. Provide fire extinguishers, safety showers, eye wash fountains, first aid kits, fire blankets and fume hoods in each science classroom. Activate showers and eyewashes weekly.
31. Provide guards on all vacuum pumps and secure all compressed gas cylinders.
32. Provide an appropriate supply of first aid equipment and instruction on its proper use.
33. Provide fireproof cabinets for storage of flammable chemicals.
34. Maintain a centrally located science safety library.
35. Remove all electrical connections from inside chemical refrigerators and require magnetic closures.
36. Require grounded plugs on all electrical equipment and install ground fault interrupters (GFI's) where appropriate.
37. Label all chemicals to show the name of the material, the nature and degree of hazard, the appropriate precautions, and the name of the person responsible for the container.
38. Develop a programme for dating stored chemicals and for recertifying or discarding them after predetermined maximum periods of storage.
39. Develop a system for the legal, safe and ecologically acceptable disposal of chemical wastes.
40. Provide secure, adequately spaced, well ventilated storage of chemicals.

Calendar of Events

21st Symposium on Chemistry and Science Education to be held at the TU Dortmund University, 17-19 May 2012

Issues of Heterogeneity and Cultural Diversity in Science Education and Science Education Research

The 21st Symposium on Chemistry and Science Education will continue the long tradition begun in 1981 with the first symposium on chemical education organized by Hans-Jürgen Schmidt. The 2012 symposium is titled **"Issues of Heterogeneity and Cultural Diversity in Science Education and Science Education Research"**. Heterogeneity and cultural diversity are becoming increasingly important challenges for educational systems worldwide. Growing rates of migration and higher numbers of multi-cultural societies mean that educators must achieve a broader spectrum of competencies among their young people. Science and chemistry teaching are not untouched by these developments, challenging the practices and methodologies in these areas. Answers are demanded from science education research in the areas of understanding potential problems and providing impulses towards more effective practices.

The symposium's main questions will address:

- Which science teaching problems are connected to different areas of heterogeneity in science classrooms? How can they be overcome?
- Which influences do learners' multi-cultural backgrounds have concerning the learning of science?
- What types of problems arise due to different linguistic abilities or a background including a different native language? How can we best deal with linguistic heterogeneity in science classrooms?
- How can we teach the domain-specific language of science in classes containing students with different native languages?
- How do we cope with students with special needs in science, e.g. in lab environments?
- What are the challenges in and potential innovations involved with teaching gifted children in science classes?

Which changes can examples of good teaching practices in different countries suggest for bettering science teaching with respect to issues of heterogeneity and cultural diversity?

All contributions will be presented by invited lecturers. There will be key-note lectures and short presentations. Please contact Dr. Silvija Markic, University of Bremen for details: *smarkic@uni-bremen.de*.

Conference chairs: Prof. Dr. Bernd Ralle, TU Dortmund University, *bernd.ralle@tu-dortmund.de;* Prof. Dr. Ingo Eilks, University of Bremen, *ingo.eilks@uni-bremen.de;* Dr. Silvija Markic, University of Bremen, *smarkic@uni-bremen.de;* Prof. Dr. David Di Fuccia, University of Kassel, *difuccia@uni-kassel.de*

Further information: *http://www.chemiedidaktik.uni-bremen.de/symp2012/index.html*.
Conference fees: None. Travel costs, accommodation and social events are the responsibility of the participants.

We are looking forward to seeing physics educators, teachers, researchers, and policy makers from around the world at this very first World Conference on Physics Education

Date: July 1-6, 2012

Venue: Bahçeşehir Üniversitesi, İstanbul / Turkey
Çırağan Caddesi, Osmanpaşa Mektebi Sokak, No: 4 - 6
34353 Beşiktaş, ISTANBUL, TURKEY

The conference was initiated by Groupe International de Recherche sur l'Enseignement de la Physique (GIREP) and the International Commission on Physics Education (ICPE) – Commission 14 of the International Union for Pure and Applied Physics (IUPAP). It is being sponsored by GIREP, ICPE and the Multimedia in Physics Teaching and Learning (MPTL) group and endorsed by American Association of Physics Teachers (AAPT), Latin American Physics Education Network (LAPEN) and the Asian Physics Education Network (AsPEN).

The vision for 2012 World Conference on Physics Education is to follow a global participative process before, during and after the conference. The Conference will be structured to help foster collaborations on physics education research and development which can transcend national boundaries. The goal will be reached through working sessions which will develop actions plans that strengthen the teaching and learning of physics at all levels and in many countries.

The 2012 World Conference on Physics Education will be a concrete step forward in global cooperation. Envisaged as a series of conferences with a four year periodicity, it would be a working conference with follow-up actions that presumably would carry over to the following conference.

http://www.wcpe2012.org/

XV IOSTE INTERNATIONAL SYMPOSIUM

Yasmine Hammamet – Tunisia – 29 October – 3 November, 2012

We are pleased to invite you to participate in the XV IOSTE International Symposium on **Science & Technology Education for Development, Citizenship and Social Justice** to be held at Yasmine Hammamet (29 October – 3 November, 2012).

The conference is organized by EDIPS / ISEFC in cooperation with **UVT, DISEMEF, FSB, CENAFFE, ATDSVT, ATDM**, and other institutions and associations *(see below the meaning of these acronyms).*

IOSTE XV is an International Symposium for researchers to present research papers, workshops, posters and explore collaboration with other researchers in the fields of Education and Research. Our aim is to inspire and provoke meaningful discussions and debates.

IOSTE XV will include a diverse and comprehensive program covering a number of areas of science and technology education (teaching, learning, practice, development, innovations, evaluation,..). The program will also include a wide range of activities designed to facilitate the exchange of expertise, experience, and resources amongst researchers, educators and trainers.

The IOSTE XV will be held in **Yasmine Hammamet**, a city in the North-East part of Tunisia. The event will bring together scientists, technologists, teachers, trainers, education inspectors, policy makers and graduate students from across the globe to promote discussion of issues relating to the theme and sub-themes.

Early Registration Fees	**Late Registration Fees**	**Symposium dates**
Before July 31, 2012	After July 31, 2012	October 29 - November 3, 2012

SUBMISSION:
You can propose:
A single oral communication (a slot of 30 minutes, including 10 minutes of discussion)
Coordinated interventions during a slot of 90 minutes: mini-symposium or round-table, with authors coming from at least two countries
A poster, which will be visible during all the symposium; it will be orally presented and discussed during the posters' sessions

- Each participant can be first author for only one proposal (one oral communication, or round table / mini-symposium, or poster). He / she can be co-author of several other proposals.
- Each first author must present the communication (or the poster).
- **For each proposal, you have to choose one of the nine strands, and to submit an abstract and a 3 pages synopsis only, or an abstract plus the full paper**.
- Each proposal will be pair-reviewed. The proposal's originality, its relationship to the conference theme and the clarity of its objectives, organization and approach are factors considered in selection.

The form for abstract can be uploaded from http://www.inedp.org/ioste-XV and will be sent by email (iosteXV@gmail.com) or through the online submission system by March 1, 2012. **Please note that submissions must be made through the online submission system and by email at the same time.** (To facilitate file management, please use the following system to name your file: YourSurname_Country.doc or YourSurname_Country.docx or YourSurname_Country.rtf)
Accepted proposals will be included in the Symposium Proceedings, only after reception of the registration fees of the first author.
The deadline for the full paper submissions is July 1, 2012. It will be peer reviewed. The guideline for the presentation of the full papers is joined below.
For further details on the symposium, please visit our website: http://www.inedp.org/ioste-XV

I, on behalf of **IOSTE / EDIPS / DISEMEF / ISEFC / UVT** and cooperating partners, feel honored to be hosting the conference in Tunisia. We look forward to seeing you at the conference.
IOSTE *(International Organization for Science and Technology Education);* ***EDIPS*** *(Research Laboratory of education, didactics and psychology: Laboratoire de recherche en éducation,* didactique *et psychologie));* ***ISEFC*** *(Higher Institute of Education and Continuous Training*: *Institut Supérieur de l'Education et de la Formation Continue);* ***UVT*** *(University Virtual of Tunis: Université Virtuelle de Tunis);* ***DISEMEF*** *(Ecole doctorale "Didactiques, Sciences de l'enseignement, Métiers de l'Education et de la Formation");* ***FSB*** *(Faculty of Sciences, Bizerte) ;* ***CENAFFE (****Centre National de Formation des Formateurs en Éducation de* Tunisie*);* ***ATDSVT (****Association Tunisienne de Didactique des Sciences de la Vie et de la Terre);* ***ATDM*** *(Association Tunisienne de Didactique des Mathématiques).*
Kind regards,
*Mondher****ABROUGUI,***
Contact: *abrouguimondher@yahoo.fr*
EDIPS - ISEFC - University Virtual of Tunis Chair, Local XV IOSTE Symposium Organizing Committee
Website URL: *http://www.inedp.org* ***Direct URL:*** http://www.inedp.org/?conference=ioste-XV
Organizing Committee Email: iosteXV@gmail.com

The THEME: "Science & Technology Education for development, citizenship and social justice" is expressed through **9 Strands (S1 to S9):**

S1: **Education for Sustainable Development, Human Rights and Health**.
Suggested topics
- Education for all. - Citizenship education. - ESD (Education for Sustainable Development) / Environmental education.
- Health education/ health promotion/Sex education. - Ethics in STE

S2: Cultural, social and gender issues in STE
Suggested topics
- Gender issues. - Values and Ethics in STE. - International comparisons. - Student diversity and inclusive education.
- Political issues in STE. - Indigenous Knowledge and Intercultural Education. - Language problems / linguistic diversity
- Conceptions, science, justice and citizenship - Science, Technology and Society.

S3: STE and religion.
Suggested topics
- Nature of science, nature of religion. - Science education versus religious education
- Science and religion: strategies for learning and teaching, teachers training, curriculum design.
- Science and Belief: alternative conceptions. - Teaching religions or enrolling in a religion? Inside or outside school?

S4: ICT for equity and democracy in STE.
Suggested topics
- Digital divide. - ICT and e-learning in teacher development. - Smart school and ICT-based education.
- Distance learning and blended learning. - ICT learning and instructional design.
- Perspectives and educational programs beyond ICT

S5: Epistemology, History and Philosophy in STE.
Suggested topics
- History and epistemology in mathematics, fundamental and applied sciences
- History and Philosophy of Biomedical and Health Education. - Philosophy of Science: Modeling, complexity, prediction

S6: Socio-scientific issues in STE.
Suggested topics
- Socio-scientific issues and cognitive process in formal and nonformal learning - Using Socio-scientific issues for STE
- Education in science centres and museums - Positioning arguments and controversies in STE

S7: **Teacher training and teaching practices**
Suggested topics
- Teachers and trainers in science and technology: Policy, missions, training, roles, values and perspectives. - Teaching STE versus conception and competence - STE: Practices and didactic design

S8: Curricula, textbooks and media in STE
Suggested topics
- Critical analysis of official programs and textbooks. - Curriculum design and development in STE.
- Inter/intra / trans-disciplinary topics. - Science, Media and Society

S9: Evaluation in STE.
Suggested topics
- Assessment and ranking of schools and universities. - Assessment dealing with learning, training and citizenship education
- Competency assessment. - Social impact of assessment. - Theory and practice of Assessment, Evaluation, Testing and Measurement. - Evaluation of Educational Research. - Educational Assessment Policies and System Monitoring.
- International comparative evaluations (PISA, TIMMS, ROSE,…)

ICASE World Conference 2013

Following similar conferences in 2003, 2007 and 2010, the International Council of Associations of Science Education holds the next World Conference on Science and Technology Education

Sunday 29 September - Thursday 3 October, 2013.
in the Borneo Convention Centre, Kuching, Sarawak. See: http://www.icase2013.org/

The theme of the conference, ***'Live Science, Love Learning, Create Change'***, addresses contemporary issues of importance to Science Teacher Associations, Science Centres, science teacher educators as well as both students and teachers as we move into the second decade after the millennium.

"Live Science" – encourages ICASE member Science Teacher Associations and Science and Technology Education Centres to recognize that science is more than just a subject at school, to impact knowledge and skills adopted from yesterday's approaches. The promotion of science education as interdisciplinary learning is a vital step toward promoting students' acquisition of 21st Century skills not only for sustainable and responsibly citizenship but for a career in an increasing science and technology driven world society.

"Love Learning" – focusses on the role of the teacher, and hence considerations for Science Teacher Associations and Science and Technology Education Centres, not only to guide students to want to participate and acquire the knowledge and skills for tomorrow's society, but that students' own self-motivation is a necessary and key factor in embracing science education as a crucial component of learning.

"Create Change" - deals with the role of Science Teacher Associations, Science and Technology Education Centres as well as teachers themselves in using science education at every level as a way of shifting the mindset on meaningful sustainability, from merely 'talking about' best pedagogical practices to 'undertaking' them, creating a generational change in student attitudes and values towards science and school and the role of leanring through science lessons in shaping their future lives.

ICASE Executive Committee 2011-2013

The ICASE Executive Committee is persons who make decisions on behalf of the ICASE Governing Body. The ICASE Governing Body is the **ICASE member organisations**.

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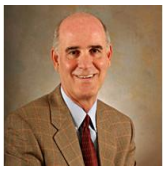

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For more information about ICASE Executive Committee, please visit the ICASE Website www.icaseonline.net