



*Supporting and promoting science education internationally*

## **The ICASE Newsletter      December 2008**

Newsletter of the International Council of Associations for Science Education.

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## **1. The Role of ICASE**

**ICASE is a Non-Governmental Organisation, set up by its members [National STAs, Science societies, Science centres, etc] forming an international science education communication network.**

The ICASE Role is to:

- 1. extend and enhance the quality of formal and non-formal science and technology education for all, with particular reference to the children and youth of the world.*
- 2. provide and support activities and opportunities that will enhance formal and non-formal science and technology education throughout the world.*
- 3. assist and support all members and other organisations throughout the world which are involved in formal and non-formal science and technology education.*
- 4. establish and maintain an international communication network for member organisations and their members involved in formal and non-formal science and technology education.*
- 5. encourage and support the establishment and development of professional science and technology organisations, especially teacher organisations in all countries.*

Is your national STA, or ICASE member organisation receiving this newsletter? Please help ICASE to ensure e-mail contacts are in order so that this newsletter reaches those who have an interest in promoting science and technology education within the country. If you know of someone who should be receiving this newsletter, but is not, please contact the editor (jack@ut.ee).

For more information and knowledge of past issues of this newsletter see [www.icasonline.net](http://www.icasonline.net)

## 2. Science Activities

For a number of years ICASE produced a pre-secondary newsletter which often contained one page of science activities (STEP activities which were designed to allow young children (roughly grades 1-4) to take a *step into science* by direct experience). The newsletter has been disbanded as a publication, but the ideas, strongly supporting inquiry teaching, are still valid.

In this section each month ICASE includes a **STEP activity**, plus an activity for lower secondary level (approximately grades 7-9). Take a look !

### A) STEP ACTIVITY

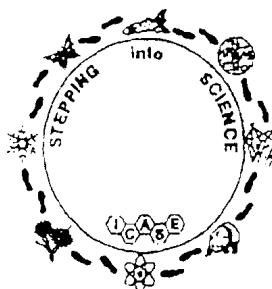
#### STEP ACTIVITY

#### The Indian rope trick

**Challenge:** Can you make the thread stand up?

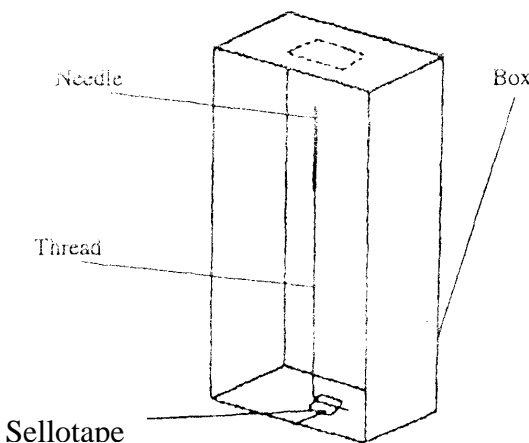
#### What you need:

- a small *box*
- thread - length depends on the size of the box
- sellotape
- magnet
- needle



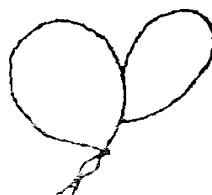
#### What to do:

1. Thread the needle and tie a knot so the needle does not come off.
2. Tape the other end to the inside of the box.
3. Tape the magnet to the inside top of the box.
4. Lift the needle up to the magnet.
5. The thread should be about 1 cm away from the magnet. Adjust the length as necessary so that the needle remains suspended in air.
6. Why does the needle seem to float in air?



#### More to do:

- Put a piece of paper between the needle and the magnet. What happens ?
- Try putting other things like thick card or coins between the needle and the magnet. What happens each time ?



Balloons can be fixed to the needle thread

## **B) LOWER SECONDARY ACTIVITY**

### **Making white from mixing colours together**

#### **What you need:**

- a pencil, scissors, white cardboard or heavy white paper
- crayons or felt pens, a ruler
- a small bowl or a large cup (3 - 4 inch, or 7 - 10 cm diameter rim)
- a paper cup

#### **What to do:**

1. Use the bowl to trace a circle onto a piece of white cardboard and cut it out. With the ruler, divide it into six approximately equal sections.
2. Colour the six sections with the colours in the sequence of the spectrum as shown in the diagram. Make the coloured segments as even as you can.
3. Make a hole through the middle of the circle and push the pencil part of the way through.
4. Make a hole in the bottom of the paper or styrofoam cup, a little bit larger than the diameter of the pencil. Turn the cup upside down on a piece of cardboard, and put the pencil through the hole and allow the point to rest on the cardboard on the table. Adjust the position of the coloured disc by sliding it down on the pencil so that it is about 1 - 2 cm above the cup.
5. Spin the pencil quickly and observe the coloured disc. Adjust as necessary so that the pencil and disc spin easily.

#### **Questions**

1. What did you see?
2. What happens if you spin the pencil in the opposite direction ?
3. Try making further discs with the colours in a different sequence. Does it make a difference when the pencil is spun ?
4. Can you suggest why the ordinary light is not seen as a mixture of colours?

#### **Explanation:**

The colours on the disc are mainly the colours in the rainbow. When the disc spins fast enough, the colours all appear to blend together, and the wheel looks whitish in colour. As the colours are now put, the disc looks a dirty white. The light which allows us to see is made up of waves. Different lengths (wavelengths) give different colours. When they are mixed together we get the familiar light which enables us to see.

## C) USING EXPERIMENTAL IDEAS IN SCIENCE TEACHING

This newsletter contains two experimental ideas. It is hoped that these will be of interest. But how to use these experiments in teaching ? Teachers need to be free to include experimentation as they feel best, but given below is ICASE thinking in putting forward the experiments in this newsletter. Teachers and science educators are welcome comment.

### 1. Who does the experiment ?

Clearly these experiments can be undertaken as a teacher demonstration. However, the intention is that the students are involved, either working individually, or more likely, in small groups. The apparatus is kept as simple as possible and can often be brought from home, or made by the students themselves.

Why is student involvement preferred ? We note the old Confucius saying – I hear and I forget; I see and I remember; I do and I understand. The belief is that the more students are engaged, the more they learn. Teacher demonstrations, or large group experiments, limit student involvement and are thus not preferred.

### 2. Should instructions be given to students ?

The section '*What to do*' and/or '*Procedure*' clearly spell out how to undertake the experiment. But it is not intended that the experiment must be used in this way. By following instructions, a '*cookbook*,' or '*follow a recipe*' situation is created. This highlights the **doing**, but **probably not** the understanding. Where instructions are provided, the student learning can be expected to be the explanation that follows. And the teacher is then focusing on students' explanatory skills. The first experiment is about making a parachute. The explanation about the working of a parachute needs to be kept simple. In the second experiment, the questions have been added to ensure that a '*cookbook*' or '*do-and-forget*' approach is **not intended**. The experiment leads to explaining why the balloon goes into the flask and when in the flask expands.

### 3. Inquiry learning

Can the experiments be used in an inquiry approach, whereby the students **suggest the purpose and procedure themselves** ? This is very much an ICASE recommended approach. It means students put forward the investigatory question, plus the procedure to follow. It promotes science as the seeking of explanations to questions put forward rather than to a '*wondering why*' approach more appropriate for younger students.

So what would be the investigatory question for the second experiment ?

This is a challenge left for you to consider.

## 3. Teaching Goals from US National Science Education Standards

## Needed Changes in Defining Content as Envisioned in the U.S. National Science Education Standards (NSES)

*A series of short articles, written by Robert E. Yager, Professor of Science Education, University of Iowa, USA, summarizing each of the Less/More contrasts in the six NSES chapters.*

Certainly the issue of “Content” received the most scrutiny and caused more debate than any other aspect of the NSES effort in the U.S. Everyone had ideas mostly for adding specific “important” content. This was true even with the general view that the curriculum at every level in the U.S. includes too much material to cover successfully. Most were willing to concede that the U.S. science curriculum was “a mile wide but only an inch deep”.

In the end there were eight facets listed to define content for school science. These eight were:

- 1) unifying science concepts and processes;
- 2) science as inquiry;
- 3) physical science;
- 4) life science;
- 5) earth/space science;
- 6) science and technology;
- 7) science in personal and social perspectives; and
- 8) history and nature of science.

No attempt was made to indicate the relative importance of the eight and/or how to approach the task. To be sure the easiest to grasp were the areas used traditionally for labelling content around the basic concepts categorized as life, physical, and earth/space science.

Certainly the disciplines of most traditional programs are developed around themes and specific concepts from the various disciplines. When considering typical discipline bound science, only one change in content in the NSES was the combination of physics and chemistry into physical science. But, this has not changed high school nor college programs.

The first in the list (unification of concepts and processes) was included first because of its perceived importance – but, understandingly, it is still often ignored and not understood. It is too easy to view science as basic concepts in the discipline format found in colleges and high schools.

Some would like life, physical, and earth/space to be combined into “major conceptual threads” or a single facet of content. Inquiry was considered important and is offered as the primary focus in the seventeen contrasts listed in the general content category as well as contrasts specifically listed for inquiry per se. Inquiry is sometimes labelled as the process skills used by scientists. For some, inquiry is a synonym for science itself.

The seventeen contrasts related to content are:

<b><i>Less Emphasis On</i></b>
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<b><i>More Emphasis On</i></b>
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1. Knowing scientific facts and information	Understanding scientific concepts and developing abilities of inquiry
2. Studying subject matter disciplines (physical, life, earth sciences) for their own sake	Learning subject matter disciplines in the context of inquiry, technology, science in personal and social perspectives, and history and nature of science
3. Separating science knowledge and science process	Integrating all aspects of science content
4. Covering many science topics	Studying a few fundamental science concepts
5. Implementing inquiry as a set of instructional processes	Implementing inquiry as strategies, abilities, and ideas to be learned
6. Activities that demonstrate and verify science content	Activities that investigate and analyze science questions
7. Investigations confined to one class period	Investigations over extended periods of time
8. Process skills out of context	Process skills in context
9. Emphasis on individual process skills such as observation or inference	Using multiple process skills – manipulation, cognitive, procedural
10. Getting an answer	Using evidence and strategies for developing or revising an explanation
11. Science as exploration and experiment	Science as argument and explanation
12. Providing answers to questions	Communicating science explanations
13. Individuals and groups of students analyzing and synthesizing data without defending a conclusions	Groups of students often analyzing and synthesizing data after defending conclusions
14. Doing few investigations in order to leave time to cover large amounts of content	Doing more investigations in order to develop understanding, ability, values of inquiry, and knowledge of science content
15. Concluding inquiries with the result of the experiment	Applying the results of experiments to scientific arguments and explanations
16. Management of materials and equipment	Management of ideas and information
17. Private communication of student ideas and conclusions to teacher	Public communication of student ideas and work to classmates (NRC, 1996, p. 113)

## 4. SAFE SCI Be Protected

Article provided by Dr. Ken Roy – Chairman of the ICASE Standing Committee on Safety in Science Education. He is also Director of Environmental Health & Safety, Glastonbury (CT), an authorized OSHA instructor and science safety consultant. Email: [Royk@glastonburyus.org](mailto:Royk@glastonburyus.org)

### SAFE SCIENCE: Be Protected!

By Dr. Kenneth Russell Roy

#### The MRSA Panic: More Work To Be Done By Science Education?

##### Part 1

##### I. Germs: They Can Be Good For You!

In its 12 November 2007 issue, *Newsweek* (pg 24) posted a note in “Letters” titled “Can Germs Be Good for You?” It was written by physician Brad Piatt, M.D., Moraga, California (USA) and addressed the overly protective but well-meaning parents of kids relative to the MRSA wars. It noted how parents were demanding schools to provide sterile playgrounds, antibiotic wipe use and more in order to eradicate the existence of MRSA. The more important piece of this letter was the statement that early childhood exposure to germs in fact can provide immunity. The attempt to eliminate natural flora from skin and gut, serves to only foster the development of allergies and autoimmune disease.

Where has science education failed? How can so many well-meaning parents be so misinformed about creating the sterile bubble for their children? How can they be so void of knowledge about the role of bacteria and other microbes in the ecosystem? Hopefully basic biology and life science in primary and secondary schools certainly should have addressed the MRSA type of issues and the need for exposure to good bacteria. May be these parents never got a chance to read H.G. Wells – War of the Worlds?

Bottom-line is – Yes – many germs or flora are not only good but necessary for us. What is really interesting is these same well-meaning parents promote probiotics like Kefir and yogurt for their children’s health. How do you figure?

##### II. The History of MRSA

Methicillin-resistant *Staphylococcus aureus* (MRSA) is a major cause of hospital-acquired infections. These infections have now stepped outside of the hospital environment into the community in places like daycare centers and schools. Current MRSA clones are becoming increasingly difficult to treat because of emerging resistance to all current classes of antibiotics.

The history of MRSA is rather brief dated back to approximately 1959 when Methicillin was first introduced to treat infections caused by penicillin-resistant *Staphylococcus aureus*. As early as 1961, the United Kingdom reported *S. aureus* isolates had acquired resistance to methicillin. Known as MRSA, the bacteria were soon discovered in other European countries, Japan, Australia, and the United States.

The methicillin clones not only are immune to methicillin but also more common antibiotics such as amoxicillin, oxacillin and penicillin. Patients with weakened immune systems were the original targets of MRSA in hospitals and healthcare facilities. More recently, MRSA infections acquired by persons having a medical procedure outpatient or people with skin infections from pimples, boils or even scratches by cat claws are known as CA-MRSA infections or community-associated MRSA.

Normally, staph bacteria (including MRSA) are located on the skin or in the nose of about one-third of the population. People with skin bacteria of this type are identified as “colonized.” They are however not infected with MRSA but are carriers who can pass it on to another person.

### **III. Who Is At Risk and What Are The Symptoms?**

There are several main risk factors for community-associated MRSA, especially relative to school aged children. These risk factors include:

1. Primary School Children – Children tend to be susceptible to infection because their immune systems are not fully developed or they have not had the necessary exposure to bacteria.
2. School Contact Sports – School activities such as contact sports expose students to the bacteria via cuts and abrasions from skin-to-skin contact.
3. Sharing Of Athletic Equipment – Students tend to share equipment such as uniforms and don't use appropriate hygiene in keeping them clean.
4. Weakened Immune System – With confidentiality laws, teachers often do not know if their students are immuned compromised; e.g., AIDS, Hepatitis, etc. People with weakened immune systems are likely to have difficulty fighting off MRSA type infections.
5. Working in Unsanitary Conditions – Gym classes and sports activities today do not require appropriate hygiene practices such as clean uniforms, showers, etc. These kinds of unsanitary conditions can lead to a MRSA playground!

Science teachers, like all teachers, come in contact with many students, including the possible one-third colonizers and also those with active infections. The following symptoms would be a signal to the teacher for a medical consult with the school health care provider:

1. Small red bumps looking like boils, pimples or spider bites in an open skin scratch or cut.
2. The red bumps over a short period of time become deep, painful abscesses with the formation of pus.
3. The bacteria can burrow deep into the body, causing life-threatening infections in other organs.

(Part 2 will appear in the January issue of the newsletter)



## **5. ICASE African Regional Conference**

**International Council of Associations for Science Education**

**NIGERIA 2009**

**AFRICA REGIONAL CONFERENCE**

**On**

**Challenges to Sustainable Development in Africa  
through Science and Technology Education**

**Abuja, Nigeria, May 24 - 28, 2009**

### **Conference Partners**

- Federal Ministry of Education
- Federal Ministry of Science & Technology
- United Nations Educational, Scientific and Cultural Organisation
- International Council of Scientific Unions, Africa Regional Office
- Science & Technology Education Post-Basic Project
- Nigerian Educational Research & Development Council
- International Council of Associations for Science Education
- Science Teachers Association of Nigeria

**<http://www.stanonline.org/ICASE-2009>**

**Conference Theme -** Meeting the Challenges of Sustainable Development in Africa through Science and Technology Education.

### **Sub-Themes**

1. Meeting the challenges of food security
2. Poverty alleviation through science and technology education
3. Enhancing relevance of science and technology curriculum and curriculum delivery
4. The role of the teacher and teacher professional development
5. Strengthening peace building through science and technology education
6. Combating HIV and AIDS through education, prevention, care and support
7. Strengthening partnerships
8. Nanotechnology for sustainable development

**Date:** May 24 - 28, 2009

**Venue:** Abuja Sheraton Hotel and Towers, Abuja, Nigeria

**Conference Registration Fee:** ₦35,000 or U.S. \$300 payable by bank draft issued in favour of “Science Teachers Association of Nigeria” and forwarded to:

**ICASE African Representative  
Science Teachers Association of Nigeria  
The STAN Place, Kwali  
P.M.B. 777, Garki  
Abuja, Nigeria**

**Preamble** Africa entered the 21<sup>st</sup> Century with both promise and challenges. There were high hopes as increasing number of countries adopted democratic governance and collectively insisted that it was unacceptable to be perceived as a continent prone to endemic violence, and where peace, security, stability, and development are but a distant possibility. However, the low level of investment in the development of human capital, distortions in the institutional framework for economic management are some critical factors that have handicapped harnessing of the rich resource potential in the continent, and also forestalled economic development.

The Perth Declaration of the ICASE 2007 World Conference on Science and Technology Education suggests a ray of hope for Africa through quality science and technology education. The Declaration accented to by delegates from over 50 countries recommends that governments should adopt science and technology education as the main lever for sustainable development. The overarching goals are to place African countries, both individually and collectively, on a path of sustainable growth and development; eradicate poverty; halt the marginalisation of Africa in the globalisation process and enhance its full and beneficial integration into the global economy.

An earlier ICASE conference recognized the need for partnership if science education is to be relevant for both responsible citizenship and for careers. This partnership is seen as essential for sustainable development to be a serious component of science and technology education for future partnerships. The challenges facing sustainable development in Africa cannot be handled by Government alone. They require all segments of the African community to be involved. The recent PISA international study has highlighted concerns in the few African countries which participated and hence this conference is a timely attempt to bring together science educators in Africa to consider how relevant science and technology education for all can move forward and play its role in providing future citizens with knowledge, skills and values for sustainable development.

## Objectives

The ICASE-2009 Africa Conference will

- review development in Africa in all its facets with a view to identifying key challenges that can be addressed through science and technology education;
- examine the role of science and technology education for relevance in meeting the challenges facing the region especially in agriculture/food security, poverty alleviation, HIV and AIDS, and peace building;
- suggest effective science and technology education/methodologies especially in curriculum development, the role of the teacher and teacher development, and bridging the digital divide.
- propose strategies for strengthening sub-regional and regional partnerships in supporting the delivery of quality science and technology education;
- specify the role of science and technology education in promoting sustainable development through sub-regional (e.g. ECOWAS and SADC) and regional (e.g. NEPAD) networks; and
- develop an Action Plan on science and technology education for sustainable development in Africa.

## Call for papers

Participants are invited to submit **summaries** and **full** text of papers, and proposals for poster sessions and workshops. The organizers intend to publish the conference proceedings ahead of the conference. Therefore, all papers intended for presentation during the conference have to be submitted in full including summary. The full paper should not be longer than 10 pages, A4 size. The paper should be typed single spaced using Times New Roman font size point 12. All presentation should conform to the formats prescribed below for the conference.

### Format of the Summary

The summary of a typical paper intended for oral presentation should contain a description of the paper in not more than one A4 page. This will be used to describe the paper in the conference programme. The summary should include the title, author's name, institutional affiliation, country, specialization and a maximum of five (5) key-terms. The key-terms are designed to provide a guide to the issues raised or discussed in the paper. The summary should also include the purpose of the paper, issues addressed/research methodology, proposed solutions/major findings and conclusion(s).

### Format of the full paper

The full paper should be structured as follows:

1. Introduction
2. Objectives/Research questions
3. Conceptual framework/Theory
4. Issues addressed/Design and Procedure
5. Proposed solutions/Findings
6. Conclusion(s)

### Posters

Poster size should not exceed 1.0 x1.5 metres

### Deadline

The deadline for online submission of papers and proposals is **31 December 2008**.

Please submit directly through the following e-mail address: [eniayeju@stanonline.org](mailto:eniayeju@stanonline.org) with copy to [jack@ut.ee](mailto:jack@ut.ee)

## 6. Calendar of Events

### 2nd ASCC Conference

On **18-21 February 2009**, the 2nd African Science Communications Conference (ASCC) will convene in Gauteng, South Africa. The theme of the 2nd ASCC will be “Shaping Africa’s Future: Science Communication’s contribution to Science, Technology and Innovation, and the development of democracy in Africa”. With an emphasis on integrating academic research with policy-decision making and industry, the meeting will address important issues in the development and advancement of Science Communication.

Anchored by a highly successful 1st ASCC in 2006, thematic sessions will address:

- The translation of research for:
  - policy,
  - economically viable products or initiatives,
  - the facilitation of trans- and inter-disciplinary research; and
  - an informed society through the mass media.
- Science, engineering and technology human skills development, education and learning;
- Science and the media
- International benchmark activities in Science Communication;
- Research and development in Science Communication.

You are invited to submit abstracts for consideration at the conference. Please use the enclosed abstract form as your guide. **The deadline for abstract submission is October 16 2008.**

### NSTA Annual Conference

March 19–22, 2009 New Orleans

Celebrate science in magical New Orleans, one of our most beloved cities. Conference registration and exhibits will be at the Ernest N. Morial Convention Center. Most sessions and events have been scheduled at the Convention Center and the conference headquarters hotels—Hilton New Orleans Riverside, New Orleans Marriott, and Sheraton New Orleans Hotel.

[Register now](#) for the New Orleans conference and take advantage of special earlybird rates.

Instructions on making housing reservations will be available by September 15. Please check back for updated information. Starting in September, information on conference sessions and other events will be added to the website as events are confirmed.

**Theme** Celebrating the Year of Science ... Laissez les Bons Temps Rouler!

#### Program Strands

- Science and the Human Spirit
- Research to Practice: The Science Teacher Professional Continuum
- Energy and the Environment: The Natural and Human-designed World
- ISTE: Meeting the Needs of the Digital Student

For more details see <http://www.nsta.org/conferences/2009new/>

### **FISER'09 May 22-24 2009, Famagusta, Northern Cyprus**

A forthcoming international conference on Science and Mathematics education research; [\*Frontiers in Science Education Research 2009\*](#) (FISER'09) will be held May 22-24 2009. The official website of FISER'09 could be accessed via <http://fiser.emu.edu.tr>.

The conference is organised by the Eastern Mediterranean University, Faculty of Arts and Sciences. Further information can be obtained from Mehmet Garip, Ph.D. Chair, Organising Committee ([fiser@emu.edu.tr](mailto:fiser@emu.edu.tr))

### **ICASE African Regional Symposium**

**24-28 May 2009, Abuja, Nigeria**

This African regional symposium is being organised under the auspices of STAN (Science Teacher Association of Nigeria)

The theme of the conference is - Meeting the Challenges of Sustainable Development in Africa through Science and Technology Education.

The Venue is the Abuja Sheraton Hotel and Towers

The Conference Conveners are Dr. Ben B. Akpan, ICASE African Representative and Executive Director, Science Teachers Association of Nigeria

Email: [ben.akpan@stan.org.ng](mailto:ben.akpan@stan.org.ng) and Professor Peter Okebukola, Faculty of Education, Lagos State University, Ojo, Lagos, Nigeria. Email: [peter@okebukola.com](mailto:peter@okebukola.com)

For more details please visit the website <http://www.stan.org.ng/ICASE-2009>

**See also pages 9-11 this newsletter**

### **CONASTA 58 – The Conference of the Australian Science Teachers Association**

**4-7 July 2009 at the Hotel Grand Chancellor in Launceston, Tasmania, Australia**

The theme for the conference - A Bridge to the Future. Within the theme will be highlighted Science – future problem solver

Educational change and the national curriculum

Science in a rural context

Science and literacy

You are invited too submit an overview of a presentation for the CONASTA 58 conference. Presentation summaries are due by Friday 20 February 2009. Abstracts can be submitted through the website via the Speaker's Zone ([www.cdesign.com.au/conasta58](http://www.cdesign.com.au/conasta58)).

Registration fees Full registration before April 2009 (member A\$450; non member A\$650). After April (member A\$550, non member A\$750). More details on the website.

Contact details – For all enquiries contact - Conference Design Pty Ltd, 228 Liverpool Street, Hobart, Tasmania 7000. E-mail [Info@cdesign.com](mailto:Info@cdesign.com). Tel (international) +61 3 6231 2999

**See also pages 15 and 16 this newsletter.**

**International Congress of Science Education, 10 years of the Journal of Science Education (Cartagena, Colombia, 15- 18 July 2009).** <http://www.colciencias.gov.co/rec/cong>

The main aim on this Congress is to discuss international experience in science education. The venue in Latin America presents a special opportunity for our community, and your participation would create a high interest and impact for this international event.

The Journal of Science Education, JSE, has an international character and publishes articles about the science education (Physics, Chemistry, Biology, Mathematics, etc.) for the university and secondary or high school levels. Authors from 53 countries have published more than 320 full peer evaluated articles in previous issues, various authors are from your country. Our authors are: from Europe (47%), America (45%), Asia (7%), Africa (1%). About 46% of published works have been about research in science education.

We invite you to take part in this International Congress.. We are very interesting in if you can organize a symposium or workshop about one of the several topics to be talked about at the congress.

\*The two important dates:\*

\*Preliminary registration: 15 December 2008\*

\*Sending the abstracts: 10 February 2009\*

**ICASE World Conference 28 June - 2 July, 2010 Tartu, Estonia**

The 3<sup>rd</sup> World Science and Technology Education Conference on Innovations in Science and Technology Education: Research, Policy Practice. The venue will be the University of Tartu, the oldest University in Estonia dating back to 1632.

The 3<sup>rd</sup> World Conference will follow on from the previous World Conferences held in Malaysia, 2003 and Australia, 2007 by bringing together policy makers, curriculum developers, scientists, science teacher educators, science teacher association personnel and of course science teachers to consider research developments, policy implications and innovative practices in the field of science and technology education. Estonia has a strong tradition in science, stemming from its former USSR days and today is a widely recognised centre for gene technology.

The Perth, Australia conference (2007) led to the Perth declaration showing concern for the current state of Science Education, especially related to its popularity among students.

*Further information on the declarations can be seen on the ICASE website - [www.icaseonline.com](http://www.icaseonline.com).*



### Invitation to Participate

The CONASTA 58 Convenor and Organising Committee are pleased to invite your participation in the 2009 conference of the Australian Science Teachers Association. CONASTA 58 offers excellent targeted professional learning opportunities for Science teachers, Science educators, preservice teachers and the scientific community.

Between 350 and 500 delegates from around Australia as well as some international delegates will gather in Launceston for what will be an exciting CONASTA 58. The Conference theme is 'Science Education: A bridge to the future', and the program includes keynote speakers, seminars, workshops, field trips, highlighted sessions, trade displays, happy hours and social functions as well as post-conference excursions.

We look forward to your participation.

### Who should attend

- Primary Teachers
- Secondary Teachers
- Lab Technicians
- Tertiary Science Educators
- Undergraduate Science Teachers
- Pre-Service Teachers

### Hosts

CONASTA 58 is organised by The Science Teachers Association of Tasmania on behalf of the Australian Science Teachers Association



### Contact details

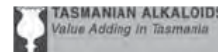
For all enquiries please contact the team at Conference Design for assistance

Conference Design Pty Ltd  
228 Liverpool Street  
Hobart Tasmania 7000  
Australia



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Facsimile: 03 6231 1522  
Telephone: +61 3 6231 2999 (International)  
Facsimile: +61 3 6231 1522 (International)

### Sponsors



**2** [www.cdesign.com.au/conasta58](http://www.cdesign.com.au/conasta58)



## Launceston, Tasmania

Launceston, Tasmania's second oldest and second largest city, sits at the junction of the North and South Esk rivers. The city is compact and pretty with colourful Victorian and Edwardian homes lining the hillsides along the river banks.

The Cataract Gorge Reserve, which includes the first Basin and the Cliff Grounds, form extensive recreation spots just 15 minutes walk from the heart of Launceston. The reserve is ideal for walking, viewing historic gardens and exotic plants or simply relaxing in the restaurant or tearooms.

Launceston is a good base for exploring the vineyards of the Tamar Valley and from Launceston you can also explore national parks such as Narawntapu (known for wildlife spotting) and Cradle Mountain-Lake St Clair, or the historic colonial villages of Evandale and Longford.

It is also worth spending time in the Queen Victoria Museum and Art Gallery, and Launceston's first-class arts and crafts outlets, including the Design Centre and the Ritchies Mill complex.

### Theme

The main theme is Science Education: A Bridge to the Future. Within this theme we will highlight:

- Science – future problem solver
- Educational change and the national curriculum
- Science in a rural context
- Science and literacy

### Call for Presentations

You are invited to submit an overview of a presentation for the CONASTA 58 Conference. Presentation summaries are due by Friday 20 February 2009. Abstracts can be submitted through the website via the Speaker's Zone [www.cdesign.com.au/conasta58](http://www.cdesign.com.au/conasta58)

Authors are invited to submit abstracts for:

- Seminars (30-60 minutes, including question time)
- Workshops (75 minutes or 160 minutes)
- Poster displays (1-metre wide x 2-metres high board)

The 200-word summary should outline the aims and content of the presentation. All presentation summaries are to be submitted electronically via the Conference website's Speakers' Zone. You will be asked to indicate your target audience: early childhood, primary, secondary, pre-tertiary (11–12), all (K–12), or lab technicians. Whilst you will be asked to indicate your preferred presentation format the Conference Committee may request an alternative format be considered.

Visit the website for full details regarding the submission of presentation.

### Venue

#### The Hotel Grand Chancellor

32 Cameron Street Launceston

Hotel Grand Chancellor Launceston is the city's premier 4½ star hotel. Hotel Grand Chancellor Launceston is only a short stroll from the main central business district, shopping mall in Brisbane Street and Yorktown Square. It is the ideal base from which to explore the beauty and variety of the north east – the handsome Georgian architecture of the municipal buildings of Launceston, the heritage homesteads, the serenity of a cruise up the Cataract Gorge, or driving the beautiful Tamar Valley with its numerous vineyards including Tamar Ridge, Iron Pot Bay, Holm Oak, Rosevears Estate, St Matthias and Providence Vineyards.

### Important Dates

Abstracts due 20 Feb 2009  
Provisional program available Mar 2009

Abstract submission opens **OPEN NOW**  
Abstract acceptance emailed 6 Mar 2009  
Early-bird registration closes 24 Apr 2009

[www.cdesign.com.au/conasta58](http://www.cdesign.com.au/conasta58)

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## 7. ICASE Executive Committee 2008-2011

Based on the ICASE constitution, the ICASE Management committee as well as Regional Representatives are elected by member organisations. These elected members, in turn, nominate chairs of relevant standing committees. Together these persons form the ICASE Executive Committee and are the persons who make decisions on behalf of the ICASE Governing Body. The ICASE Governing Body is the **ICASE member organisations**.

### *The Executive Committee (the decision making body working for the Governing Body)*

#### **President**

Prof Jack Holbrook

E-mail [jack@ut.ee](mailto:jack@ut.ee)

#### **Past President**

Dr Janchai Yingprayoon

E-mail [janchai@loxinfor.co.th](mailto:janchai@loxinfor.co.th)

#### **Secretary**

Prof Miia Rannikmae

E-mail [miia@ut.ee](mailto:miia@ut.ee)

#### **Treasurer**

Adrian Fenton

E-mail [Adrianfentonicase@yahoo.co.uk](mailto:Adrianfentonicase@yahoo.co.uk)

#### **Regional Representative for Africa**

Dr Ben Akpan

Executive Director of STAN, Nigeria

E-mail: [ben.akpan@stan.org.ng](mailto:ben.akpan@stan.org.ng)

(Member Organisation – Science Teachers Association of Nigeria)

#### **Regional Representative for Asia**

Dr Azian Abdullah

Director, RECSAM, Malaysia

E-mail: [azian@recsam.edu.my](mailto:azian@recsam.edu.my)

(Member Organisation – RECSAM)

#### **Regional Representative for Australia/Pacific**

Dr Beverley Cooper

E-mail: [bcooper@waikato.ac.nz](mailto:bcooper@waikato.ac.nz)

(Member Organisation – NZASE, New Zealand)

#### **Regional Representative for Europe**

Dr Declan Kennedy

E-mail: [d.kennedy@ucc.ie](mailto:d.kennedy@ucc.ie)

(Member Organisation – Irish Science Teachers Association (ISTA))

#### **Regional Representative for Latin America**

Gabriela Inigo

E-mail: [gabrela\\_inigo@hotmail.com](mailto:gabrela_inigo@hotmail.com)

(Member Organisation – Albert Einstein Club, Mar del Plata, Argentina)

#### **Regional Representative for North America**

Prof Norman Lederman

E-mail: [ledermann@iit.edu](mailto:ledermann@iit.edu)

(Member Organisation - Council of Elementary Science International (CESI))

#### *Chairs of Standing Committees*

#### **Safety in Science Education**

Dr Ken Roy

E-mail: [Royk@glastonburyus.org](mailto:Royk@glastonburyus.org)

#### **World Conference**

Dr Robin Groves

E-mail [grovesr@ozemail.com.au](mailto:grovesr@ozemail.com.au)