



International Council of Associations for Science Education

Supporting and promoting science education internationally
The ICASE Newsletter

June/July 2020

President's message

Dear ICASE members and friends:

It is my great pleasure to greet you as the new President of ICASE. I hope everyone is safe and healthy during this COVID -19 pandemic as I am. It is not so difficult to stay safe, but it is not a personal matter. For example, wearing a mask appropriately is not only to protect yourself but also to protect others around you.



In the Jan/Feb 2020 ICASE Newsletter, my colleague and I have issued "Be Alerted of the COVID-19." Our organization promotes science and technology education in improving human life and society. GO SCIENCE; it saves lives!

I want to express my sincere gratitude to the leadership of our Past President, Dr./Prof. Bulent Cavas, and the hard work of all the members of the Executive Committee, and members who helped to make ICASE successful. Furthermore, I also welcome our new executive committee members. Thank you so much for your dedication and commitment to work with me to continue the good work accomplished to date and to reforming ICASE to meet the needs of the future. We hope ICASE, with 47 years of history, will continue fulfilling its mission and serves her members' needs better. It certainly takes collective efforts from everyone in the ICASE family.

The electronic ICASE Newsletters and Website are effective and efficient ways to inform members about ICASE news and events. Should you have any questions and suggestions for ICASE work, please feel free to contact the respective person(s) listed on the ICASE Executive Committee page (<http://www.icaseonline.net>). If you have any information about further promoting ICASE's involvement in scientific programs and international events related to science and technology education, we will be grateful to hear from you. We will persistently reach out to look for opportunities to extend our network and to connect members worldwide who share our common interests. I wish you and your organization a successful and productive year.

Sincerely,

President: Dr./Prof. ZHANG BaoHui



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ICASE Annual Membership Update

It's time to renew your organizational ICASE member fees!

We are updating our records, please complete the ICASE member information sheet found on our membership page: <https://www.icaseonline.net/membership.html>

Membership fees are due January 1st each year and three-year options are available at a reduced rate! Membership renewal is easy and can be done totally online on the ICASE Website at: <http://www.icaseonline.net/membership.html> and a receipt will be sent to you. If your organization needs to receive an invoice, please notify us to request an invoice.

ICASE provides opportunities for member organizations and their representatives to promote excellence and innovation in science teaching and learning for all through:

- connections to the members of other science organizations around the world;
- opportunities to serve in ICASE international leadership positions on standing committees and in international research initiatives;
- communication venues to disseminate information internationally to the members of international science organizations through the ICASE listserv, newsletter and peer-reviewed ICASE journal;
- collaborative funding opportunities to promote science education at regional levels; and
- organization of ICASE World Conferences, regional events, and workshops providing opportunities for professional development and networking.

How are your membership fees put in to use?

ICASE membership fees are used for financial support of regional activities. Approval for funding will be considered based on a written submission (request for funding support) to the ICASE secretary, which clearly indicates how the activity meets the following criteria. All financial support for activities will be approved by the ICASE management committee, in consultation with the Executive Committee, and is subject to funds (generated by ICASE membership fees) being available.

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Procedure to request financial support of regional activities

1. The applicant organisation must be a current financial member of ICASE.
2. The activity must promote science education at a regional level.
3. The applicant organisation should provide a description of the activity and the potential benefits (including the extent of benefits - number of beneficiaries, and how it meets the short term and long-term goals of promoting science education in that region).
4. ICASE must be acknowledged as a sponsor on all publicity material including the website advertising the initiative. The ICASE logo must be displayed on all materials associated with the funding.
5. Funding requests will be accepted for the following range: \$500 - \$2,000. These funds are intended to cover special initiatives associated with activities occurring in benefit of each region.
6. The applicant organisation must provide a budget for the activity including other sources of funding.
7. The applicant organisation must have an institutional bank account for the transfer of funds.
8. The applicant organisation must nominate a person in their organisation who will take responsibility for the activity, all expenditures and reporting (in writing) at the subsequent World Conference.

The report may be presented via video conferencing if the organization is unable to fund a member to attend an ICASE World Conference. Please note that the ICASE Management Committee reserves the right to approve funding for second and subsequent applications, from the same region within a three-year period, even when the application may come from a different organisation.

BECOMING A MEMBER ORGANISATION

ICASE invites national, sub-national and multi-national organisations interested in the promotion of science and technology education to join its worldwide network. Organisations eligible to join are Science Teacher Associations (STAs), Science Societies, Institutes, Universities (or University Departments/Faculties), Industries, Companies, Centres and Museums. These organisations may have a sole interest in science education (or in one of its sub-disciplines such as biology, chemistry, physics, Earth sciences, etc.) or have wider interests, one of which is science education. Following the ICASE Constitution, requests for new members, whether full or associate, are approved by the ICASE Executive Committee.



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- collaborative funding opportunities to promote science education at regional levels; and
- organization of ICASE World Conferences, regional events, and workshops providing opportunities for professional development and networking.

In addition, ICASE member organizations and their representatives receive reduced conference registration fees for attendance at all ICASE World Conferences.

<http://www.icaseonline.net/membership.html>



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ASSOCIATION FOR SCIENCE EDUCATION (ASE) CONFERENCE

8-11 January 2020/ University of Reading, England

Dr. Declan Kennedy

The annual Association for Science Education (ASE) conference was held from 8 – 11 January 2020 at the University of Reading, England. The conference was attended by several thousand science teachers from primary, secondary and tertiary level. **ICASE** was well represented and, as usual, we had our own stand in the exhibition area. *The ICASE stand was staffed by Sue Dale Tunnicliffe and Declan Kennedy.* Full marks to Sue Dale Tunnicliffe for taking charge of the setting up of the stand each year at the ASE conference during her time as ICASE Regional Representative for Europe.

We were pleased that a steady stream of conference delegates visited the ICASE stand to learn about the work of ICASE. The ASE Conference is always a good opportunity for ICASE representatives to meet its members and to encourage others organizations to join ICASE. The membership information packs produced by Dr Teresa Kennedy were of enormous benefit to us in our efforts to promote membership of ICASE and, over the four days of the conference, our entire supply of promotional material was completely depleted.

We displayed some posters summarising the modules developed by the ICASE teachers in Ireland who were involved in the PROFILES project. PROFILES stands for *Professional Reflection-Oriented Focus on Inquiry-based Learning and Education though Science*. This research project in which ICASE played a leading role was funded by the European Community's Seventh Framework Programme (FP7) of the European Commission. Whilst the project is now completed, ICASE is still actively involved in disseminating the resource materials prepared.



ICASE stand at the ASE Conference (left to right) Dr Rob Toplis, University College London visiting the stand with Dr Sue Dale Tunnicliffe and Dr Declan Kennedy



Declan Kennedy making a presentation to Sue Dale Tunnicliffe to thank her for all her work during her term as ICASE Regional Representative for Europe

The ICASE stand at the ASE conference is always an ideal opportunity for us to promote membership of ICASE, to introduce teachers to some of the teaching resources that ICASE has created, to carry out networking activities with other organizations involved in science education and to emphasize the important role that ICASE is playing in providing leadership and support to science teachers all over the world.

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UNESCO NEWS



In partnership with
UNESCO

Information compiled by Dr. Teresa Kennedy
ICASE Representative to UNESCO

From the Collective Consultation of NGOs on Education 2030 (CCNGO)

GEM 2020 REPORT LAUNCH



On 23 June the GEM Report will launch its [2020 Report](#) calling for countries to concentrate on those being left behind and move towards inclusion in education. The GEM team has prepared [a pre-launch social media pack](#) to spread the word and build momentum ahead of the launch. The pack includes a [registration link](#) for those wishing to register for the online launch on 23 June.

NEW UN DAY ON PROTECTING EDUCATION FROM ATTACK

The United Nations Secretary-General António Guterres has welcomed the unanimous decision of the UN General Assembly to establish 9 September as the International Day to Protect Education from Attack calling on UNESCO and UNICEF to raise awareness of the plight of millions of children living in countries affected by conflict. More information available [here](#).

NEW DATES FOR ESD CONFERENCE IN BERLIN 2021



The UNESCO World Conference on Education for Sustainable Development (ESD) will be held from 17 to 19 May 2021 in Berlin, Germany. The conference is organized by UNESCO in cooperation with and generously supported by the Federal Ministry of Education and Research of Germany, and with the German Commission for UNESCO as advisory partner. <https://en.unesco.org/events/ESDfor2030>
Through Education for Sustainable Development, UNESCO aims to equip learners with the knowledge, skills, values and attitudes that are needed to contribute to sustainable development. The new framework ESD for 2030 and its Roadmap for Implementation will focus on ESD as a key instrument for achievement of the Sustainable Development Goals.

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UNESCO News Cont.

JUST PUBLISHED AT UNESCO



[Directrices para la elaboración de políticas de recursos educativos abiertos](#)



[Annual report 2019: transforming 21st century learning spaces](#)



[Annual report 2019: UNESCO Institute for Lifelong Learning](#)

UNESCO's COVID-19 Education Response

Issue Notes, are available in French, Spanish and Portuguese:
<https://en.unesco.org/covid19/educationresponse/issuenotes>

UNESCO Education Sector's issue notes cover key topics related to the COVID-19 education response. They provide evidence of good practices, practical tips and links to important reference to mitigate the short- and longer-term impact of school closures. The **Issue Notes** are prepared collectively by UNESCO education colleagues across the world and cover several topics under nine thematic areas, namely: Health and wellbeing; Continuity of learning and teaching; Gender equity and equality; Teaching and learning; Higher education and TVET; Education and culture; Education policy and planning; Vulnerable populations, as well as Global citizenship education and Education for sustainable development.



Share your educational efforts during COVID-19 with UNESCO

The CCNGO is gathering information from States and civil society responses throughout the COVID-19 pandemic in order to protect the right of education. They invite you to complete their survey. Responses will guide future learning opportunities to build capacity for action, advocacy and cooperation. **Deadline for the COVID-19 Education survey (approximately 10 minutes to complete):**

The shared Microsoft Teams platform [SURVEY](#) is available in English, French or Spanish.

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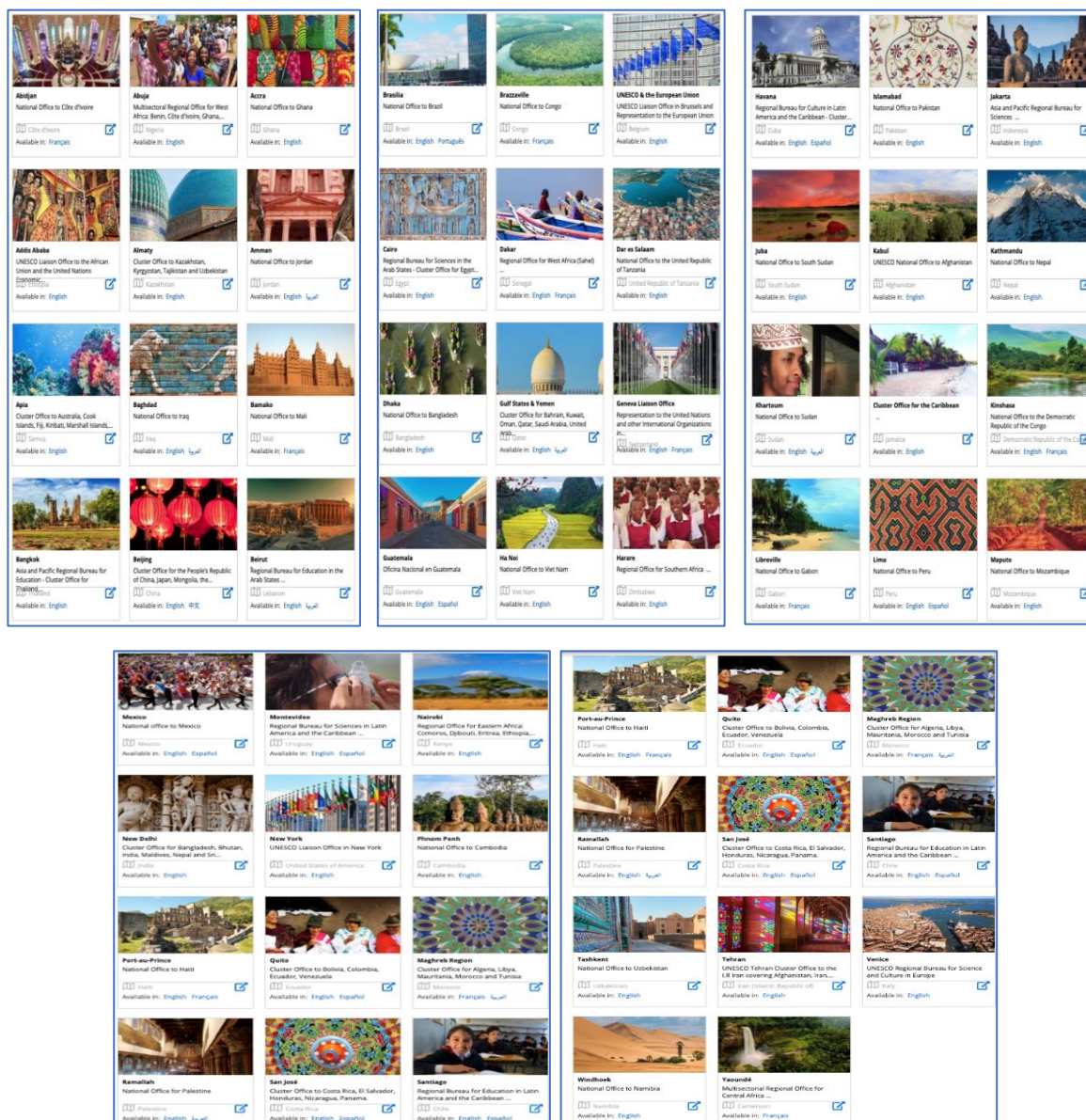
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UNESCO FIELD OFFICES

Through its field offices, UNESCO develops strategies, programmes and activities in consultation with national authorities and other partners. UNESCO also operates a number of specialized institutes and centres. Check the list below to see the location of the UNESCO Field Offices.

For more information see:

https://en.unesco.org/fieldoffice?field_country_reference_target_id=All



For all UNESCO Offices by Region see: <http://www.unesco.org/new/bfc/all-offices/>

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UNESCO International Literacy Prizes



The 2020 call for nominations is [now open](#).

2020 thematic focus: *"Teaching and learning literacy: The role of educators and changing pedagogies"*. Since 1967, UNESCO International Literacy Prizes have rewarded excellence and innovation in the field of literacy. Over 485 projects and programmes undertaken by governments, non-governmental organizations and individuals around the world have been recognized. Through these prestigious Prizes, UNESCO seeks to support effective literacy practices and encourages the promotion of dynamic literate societies. **For more information see:** <https://en.unesco.org/themes/literacy/prizes>



UNESCO King Sejong Literacy Prize

Supported by the Government of the Republic of Korea, the Prize rewards activities that promote the development and use of mother-tongue literacy education and training.



UNESCO Confucius Prize For Literacy

Supported by the Government of the People's Republic of China, the Prize rewards activities that promote literacy amongst adults in rural areas and out-of-school youth, particularly girls and women.

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The Heartbeats of the Earth

Merve Özateş, Yağmur Nil Türkmen and İlke Semin Yaşarbaş, ALKEV High School İstanbul-Turkey

Have you ever dreamed about visiting the Andes or climbing to the top of the Himalayas? How has the world had such gorgeous picturesque landscapes? The answer is obvious to all of us; Earthquakes. So here comes the question: Are the earthquakes disasters or blessings for our planet? The answer is quite simple. It is impossible to prevent earthquakes or predict when they are going to happen, yet it is always possible to take necessary precautions and reduce the damage to the minimum. Bearing that in mind, we set out our journey to raise awareness about earthquakes in this project.

As ALKEV High Schools, we came up with a project called ALKEV SNAC Project to increase the awareness of people about earthquakes; first, in our country -which is in the earthquake zone and has been exposed to major earthquakes many times- and then as many countries as we can reach. Under this aim, we embraced the SNAC Project as our guide on our journey. SNAC (School Networks Alert Citizens) is an Erasmus+ project that is coordinated by Gerasimos Choularas from the National Observatory of Athens (NOA). It provides young people with a platform in the fields of science, technology, engineering and mathematics and helps students get into an international platform with open data and thousands of available seismic waveforms collected through the School Network of Seismometers.

In the first step of our project, we aimed to reach out to high school and middle schoolers in our school, and also the students in the schools we get in touch with. Thereupon, we set up a volunteer earthquake team in our school and we all divided into certain fields of work. In line with our goals, we provided certain training to students at primary, secondary and high school levels in our own school, and we received their ideas and opinions by introducing our project. In these training sessions, we primarily informed our friends about the earthquake and talked about what they should do before, during and after the earthquake. Apart from these, we introduced our seismogram in our school to our friends in order to make our training sessions more interactive and talked about the data we obtained. After that, we had some fun and instructive activities with them. In the other parts of the project, we obtained some data by capturing earthquakes in places far from the region we live with the seismogram we installed in our school.



We shared this data with certain schools within the scope of the SNAC Project and we wanted to create a product from these data by exchanging ideas. In addition, we analyzed the big earthquakes we caught from the moment we established the seismogram at our school, and we created a database by finding their locations and magnitudes. Thereupon, we held some online meetings with a school in Greece and exchanged ideas. They also told us that we could create the sound of our own earthquakes by using the data we obtained. On top of that, we gathered the ideas they gave us and created our own product. Using these databases, we created a product under the name of "The Sound of the Earth" and we captured a beautiful rhythm and melody by combining the earthquakes. Finally, we have created a video by combining it with our previous work.

We had to manage this project online because of the Covid 19 pandemic. The irony is we experienced a natural disease while we were designing a project about another one. It was pretty challenging in the beginning, but we made good cooperation with the school in Greece and the members of this project in our school. In conclusion, we believe we came up with a successful product in the end.

In this project, while we were raising awareness about earthquakes in our environment, we also collected information about this topic and started to use this information in our daily life. With a view, while we were raising awareness about earthquakes in our environment, we also became conscious ourselves. Apart from that, we also learned a lot of technical information thanks to this project. We learned the development of the earthquake; the working principle, reading the recorded data and the structure of the seismograph. Furthermore, this project brought us a new perspective. In this perspective we see earthquakes not a disaster. They happen at any moment and if we get precautions it is not a disaster, it is just the heartbeat of the earth. Since this project is an international one, it improved our language skills and gave us the ability to collaborate with people both nationally and internationally.

What is more, we believe this project will hold a very important and valuable role for our future education and career since we had a chance to improve many 21st century skills like critical/ creative thinking, problem solving, researching and analyzing data. We all tried to do the best we can. In point of fact, we all had fun and learned a lot of valuable new information. For this reason, we are proud to be a part of this project and happy to add lots of assets to ourselves and the environment, as well.



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Let's Listen to the Heartbeats of the Earth with SNAC project: <https://youtu.be/jDiFr6jfRPs>



Erasmus+

The project "School Networks Alert Citizens protection (SNAC)" has been funded with support from the European Commission under the Erasmus+ programme (Grant agreement number 2018-1-EL01-KA201-047847)

by Merve Özateş, Yağmur Nil Türkmen and İlke Semin Yaşarbaş, ALKEV High School İstanbul-Turkey.



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EARTHQUAKES AS A LEARNING TOOL: SNAC PROJECT IMPLEMENTATIONS

Gerasimos Chouliaras (NOA), Gregory Milopoulos (EA), Bulent Cavas (DEU) SNAC Project Implementators



School Network Alerts Citizens Protection (SNAC) is a European Union project funded by Erasmus Plus programme. The main aim of this project is to perform an extended proof of concept experiment to a) transform schools in South Eastern Mediterranean basin countries to local hubs of education, innovation and information about earthquakes and disaster prevention, connecting them with local authorities, local civilian protection agencies, local business, research and science centres and other local stakeholders in the process and b) engage students in real-life projects that are proposing innovative solutions adopted to the local conditions by employing real-problem solving skills, handling and studying situations, and participating in meaningful and motivating science inquiry activities on earthquake disaster prevention and mitigation.

The objective of this combination is on one hand to increase students' interest in science and how it affects everyday life and on the other to stimulate teacher motivation on up-taking innovative teaching methods, subjects and practices to enrich and renew the science curriculum.

The SNAC Project includes innovative science education materials for teachers who want to enhance and support their science teaching on earthquakes topics.

The main project web page is located at: <http://snac-project.ea.gr/>

and the SNAC Platform at: <https://snac.gein.noa.gr/>

The SNAC Erasmus+ Project is coordinated by Dr. Gerasimos Chouliaras from the National Observatory of Athens (NOA) with Grant agreement number 2018-1-EL01-KA201-047847. Other partners include Ellinogermaniki Agogi (EA) from Greece, Dokuz Eylul Universitesi (DEU) from Turkey, Fondazione IDIS-Città della Scienza (IDIS) from Italy, National Research Network Association (NRNA) from Bulgaria and University of Cyprus (UCY) from Cyprus.

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The Australian Science Teachers Association (ASTA)

ASTA National Science Week

Dr. Steven Sexton

The Australian Science Teachers Association (ASTA) is a federation of eight state and territory science teacher associations.

School theme 2020: *Deep Blue: innovation for the future of our oceans*

This is an important theme for teachers and their students to focus on the oceans. They are always out there, creating climates, absorbing carbon dioxide, lapping away at the shoreline, and it is impossible to ignore, as the Earth's oceans cover more than two-thirds of the Earth's total surface area. The ocean theme also enables teachers and students to discover and investigate Australia's world-renowned contributions to marine science, marine based industries, marine technologies, and marine innovations.

The 2020 Resource Book of Ideas for National Science Week will offer teachers and students the opportunity to investigate the people, space agencies, universities, and science organisations that are all delivering solutions in space science.

The National Science Week teacher resource book "Deep Blue: Innovation for the future of our oceans" and the National Science Week school poster are available [here](#).

What is National Science Week?

National Science Week is an annual festival of science that takes place in August each year. This celebration aims to raise the profile and increase the public understanding and public appreciation of science, innovation, engineering and technology, and their role in maintaining and improving our society, economy and environment. National Science Week 2020 will run 15–23 August.

In schools around the nation, thousands of teachers and students from early childhood to senior secondary levels contribute to National Science Week celebrations by organising and participating in a div It provides an opportunity to acknowledge the contributions of Australian scientists' to the world of knowledge. It also aims to encourage an interest in science pursuits among the general public, and to encourage younger people to become fascinated by the world we live in.

How do SCHOOLS get involved?

Go to a National Science Week event. Approximately 1000 events take place around Australia during National Science Week each year, including those delivered by universities, schools, museums and science centres.



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These events attract a wide audience from children to adults, and science amateurs to professionals. Over one million people participate in science events across the nation, with another 160,000 taking part in school activities.

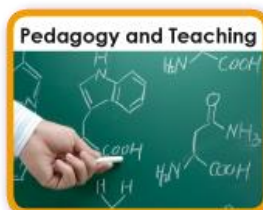
Use the ASTA teacher resource book. For National Science Week each year, ASTA produces a teacher resource book to help support and assist teachers in providing engaging science activities for their students. The book is based, each year, on the National Science Week school theme chosen for that year and is always packed with information, classroom activities, experiments, diagrams, photographs and websites.

Since 2011, ASTA has provided the teacher resource books as web-based digital books. Titles include: *React to Chemistry*, *Energy Evolution*, *A Century of Australian Science* and *Food for our future: Science feeding the world*. These are available free of charge from the National Science Week Books and Resources link below. Some past resource books are also provided electronically, but hard copies can be purchased from the ASTA office.

The ASTA Online Professional Learning portal.

You can [view a list of all available courses](#) or click on one of the buttons below to select a category of professional learning activities on this site.

Some courses allow Guest access, but to gain access to more activities please [join the site](#) (free) and [login](#). You are then able to enrol in any course you wish to view.



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Is there a CASE for safety in ICASE?

Bob Worley - CLEAPSS, Chair of ICASE Safety Committee

bob.worley@cleapss.org.uk

Education is reeling from the effects of the Covid-19 pandemic. Some countries have coped very well, but others, like the UK, not so well. What is reflected in the effects on the economy and social well-being is also reflected in our education system. This pandemic is certainly causing some issues in the UK with regard to practical work in schools. At present there is 2-metre restriction which means only 7 to 12 students can be in a lab at any one time. They are not allowed to move from their desks and if they must move, it is by designated routes. They are required to work on their own (no bad thing some say). The supply of equipment issue can just about accommodate this scenario. If we relax to 1-metre distancing with 20 in the room, each doing the activity then there will be supply problems. Some classes have over 30 students in them so what happens to the other 10 if only 20 allowed in the room. More rooms are required; will they be suitable? Eye protection will have to be sanitised after each use. The UK have school science technicians to relieve teachers of these many organizational issues, but their numbers have been reduced. There is an organisational problems for school management, science teachers and technicians. Many teachers are asking what activities they can safely do.

We can retreat from the situation and let the teachers do demonstrations. In order for the students to see the demonstration, the room must be fitted with sophisticated projection equipment, visualizers, USB microscopes, and webcams. This is expensive. Laboratory skills are assessed for examination purposes via experiments suggested by the Examination Boards. How is this going to be addressed?

Some teachers suggest removing practical work completely and use videos. They argue that practical work means little to most students in understanding and knowledge and only has entertainment value. Sir John Holman's report on Good Practical Science noted that practical work does need to be focused. See the full report at: <https://www.gatsby.org.uk/education/programmes/support-for-practical-science-in-schools>.

If you go to <http://science.cleapss.org.uk/> and scroll down, you will find CLEAPSS advice in open documents (eg, GL343). These are working documents because conditions/medical advice/government pronouncements are changing as we publish. Matt Endean (CLEAPSS Assistant Director) with other CLEAPSS advisers has worked tremendously hard to provide down-to earth practical advice (see Fig 1). Fortunately, all CLEAPSS advisers were previously teachers and technicians and know the issues. CLEAPSS is also on twitter @CLEAPSS



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Ken Roy who is Chief Science Safety Compliance Adviser for the National Science Teaching Association (safesci@sbcglobal.net) has supplied this link for teachers and managers of the High Schools <https://www.nsta.org/blog/safety-recommendations-opening-new-school-year>. There is twitter on @drroysafersci



How can we communicate?

What is safety in science education like in your country? There must be education safety advisers in every country so please link with me and other on bob.worley@cleapss.org.uk. When I took on this post I vowed not to preach the right way but provide information which would enable others to deliver safety advice relevant to the conditions of their country. I have learned so much on my visits to other countries. I like to see teachers' reactions to comments like "this condenser arrangement with recycling water comes from Thailand" or "this use of bottle tops in deflagrating spoons comes from Ethiopia."

What can we do to communicate?

- Disseminate information of what appears to be working in our countries.
- written advice,
- discuss issues over the phone or via video conferencing,
- Provide webinars, James Kauffman Laboratory Safety Institute (LSI), Founder/President Emeritus has a wealth of experience and has offered this service. He can be contacted by the website <https://www.labsafety.org/>.

It makes me realise just how fortunate we are to be communicate using the web, twitter and conferencing facilities which were never available in the last global pandemic of such magnitude, 100 year ago. However ... No science member institution/safety officer/consultant etc. contacted me in my 3 years as safety chair. Nobody told me of any serious incident in a school/college from which we could learn lessons. When asbestos was discovered in gauzes, ICASE was not notified so was unable to tell other institutions. It caused serious issues in the UK. We now have an issue of tremendous importance now. Everyone is thinking on their feet how to solve issues in schools, it is something governments cannot do, only the teachers, consultants, and technicians with experience of working at the lab bench. Please support, if you want practical work to survive.

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Up Coming Events

The National Science Teaching Association (NSTA) of the U.S. generally offers 4 events each year to connect science teachers and leaders in science education from around the world. These conferences offer the latest in science content, teaching strategy, and research to enhance and expand your professional growth. Each year, NSTA hosts a national conference on science education (in the spring), three area conferences (in the fall), and a STEM Forum & Expo. NSTA is offering the **STEM20: Virtual Event** in lieu of the face-to-face STEM Forum & Expo.



Registration includes live access to the conference program as well as to a post event archive of all session content for the day(s) registered. To register online, you must be logged into the website as the person who will be attending the **STEM20: Virtual Event**.

Please go to <http://www.nsta.org/membership/> if you wish to join NSTA and save on your conference or STEM20: Virtual Event registration.

Register at: <https://my.nsta.org/event/stem20-virtual-event>.

NSTA's **STEM20: Virtual Event** will feature an engaging array of sessions, panels, and presentations focused on the latest developments and insights on the most important topics and issues affecting the STEM education community today. Each day of the four-day event will concentrate on a different grade level.

Options for NSTA STEM20 include:

- **Monday, Jul 27, 2020:** 12 Noon - 7:00 PM Eastern - Live and Pre-recorded Content
 - o Early childhood and upper elementary-level educators and administrators.
- **Tuesday, Jul 28, 2020:** 12 Noon - 7:00 PM Eastern - Live and Pre-recorded Content
 - o Middle-level educators and administrators.
- **Wednesday, Jul 29, 2020:** 12 Noon - 7:00 PM Eastern - Live and Pre-recorded Content
 - o High school-level educators and administrators.
- **Thursday, Jul 30, 2020:** 12 Noon - 7:00 PM Eastern - Live and Pre-recorded Content
 - o Postsecondary-level educators and administrators.

Astronaut Mike Massimino will kick off each day with a message of support and encouragement for attendees. The event will also have a virtual exhibit hall, several networking opportunities, and special events, including the Elementary STEM Showcase and the Robot Roundup. More specific scheduling will be available in mid-June.

This reimagined event, although different in format from any previous NSTA conference, promises exciting prospects both familiar and innovative.

Attend NSTA's STEM20 Virtual Event in July 2020! Join NSTA!

Members Rates: Single Day \$47;
All Days \$141.

Nonmember: Single Day \$97, \$47
for each additional day (maximum
charge of \$191); All Days \$191
(Includes a one-year NSTA Digital
Membership).

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The 11th International Symposium on Microscale Chemistry

Oundle School 12-15th July 2021 (Note the year)

Stimulating the development and use of microscale practical science and green chemistry approaches worldwide.

There is notification of a meeting starting on July 12, 2021 on Microscale Chemistry at **Oundle School near Peterborough, England UK**. I have chosen a school because it has several chemistry labs where workshops can take place.

See <https://ismc2021.weebly.com/>. The Secondary and Further Education Interest Group at the Royal Society of Chemistry are supporting the initiative, see <https://www.rsc.org/events/detail/44879/the-11th-international-symposium-on-microscale-chemistry>.

Peterborough is on the fast road and rails routes from London to Edinburgh. **Oundle** is beautiful market town within easy reach of Cambridge and Ely. It is an area called the fens and is rich in archaeology and natural history. If you are interested, please let me know via the website.

There is more about microscale chemistry on this video, https://youtu.be/_K5WOKh6eIA.



<http://microchemuk.weebly.com/>

<https://ismc2021.weebly.com/>

<https://twitter.com/UncleBo80053383>

<https://bit.ly/2HDv8jo> for small video clips of chemical reactions



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INVITATION TO TEACHERS AND THEIR STUDENTS: PARTICIPATE IN THE COVID-19 ENGINEERING DESIGN CHALLENGE

The University of Texas at Tyler University Academy is a system of K-12 STEM Lab Schools located on 3 separate campuses in East Texas (USA), in the cities of Tyler, Longview and Palestine. Our students are participating in a COVID-19 Engineering Design Challenge, in collaboration with the **Texas STEM Coalition (T-STEM)** and the **ICASE network**.



We invite you and your students to join us - over 100 students have participated so far!

The **COVID-19 Engineering Design Challenge** provides students of all ages with a platform to identify and design solutions to challenges and world-wide problems related to the pandemic. Students are encouraged to identify areas of need, brainstorm and design solutions, and communicate their designs to their classmates, families, and community members.

Teacher instructions and a **sample student project** are available in the **six United Nations (UN) languages (Arabic, Chinese, English, French, Russian and Spanish) plus Japanese, Portuguese and Turkish**, on the project web page. Teachers are asked to respond to a short survey summarizing the work of their students and will be provided with participation certificates to personalize for their students, a world-wide map displaying the countries represented by Challenge participants, as well as a summary of all design project titles submitted by the end of each round of the Challenge. For more information: <https://tinyurl.com/COVID19-Engineering-Challenge>

Important Dates: Challenge 1: **March - December 2020** ◆ Challenge 2: **January - December 2021**

We look forward to learning about the design projects your students create as their engineering solutions to the many challenges related to this pandemic. As teachers, we have the best job in the world—we work with the next generation of problem-solving citizens!

Sincerely,

Teresa Kennedy, Ph.D.

tkennedy@uttyler.edu



ICASE, North America Representative and Representative to UNESCO
Professor, International STEM and Bilingual/ELL Education
College of Education and Psychology; College of Engineering
The University of Texas at Tyler

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Hands-on Science Network, HSCI2020

July 13th to 17th, 2020

HSCI2020

Viana do Castelo
Portugal
13-17 July 2020



PANDEMIC SITUATION

Unfortunately due to the current pandemic situation we are facing these days, **we were forced to convert the HSCI2020 conference from the traditional in-person format to an online conference on the same dates.**

The 17th annual international conference on Hands-on Science, HSCI2020, will be held in Viana do Castelo, Portugal, at the Colégio do Minho and the Escola Superior de Educação de Viana do Castelo, from July 13th to 17th, 2020. This year the main moto of the conference is:

Science Education. Discovering and understanding the wonders of Nature

The Conference will provide the ideal opportunity for presentation of work and in the widest range of perspectives related to Science Education. The Hands-on Science Network is open to all views and approaches on Science Education. However, we advocate an active learning of Sciences through an enlarged use of hands-on experiments in the classroom. The aim of the Conference is to promote friendly and broad exchange of experiences on good practices, syllabus and policy matters, social factors and the learning of science, and other issues related to Science Education and its development.

Proposals are invited for oral or poster presentations, workshops and group discussions, hands-on experiments demonstration sessions, Science Fair booths and exhibitions or scienceshows.

More Information: <http://hsci.info/hsci2020/>

<http://www.icaseonline.net>



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ESERA Conference, 2021, Braga, Portugal

The 14th Conference of the European Science Education Research Association (ESERA 2021) will be held in Braga, Portugal, from 30 August to 3 September.



More Information:

<https://www.esera.org/conference/33-conference/830-esera-conference-2021-praga-portugal>

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ASE Annual Conference 2021 at the University of Birmingham



📅 06 January 2021 - 09 January 2021

🕒 08:30 - 16:00

📍 University of Birmingham

Edgbaston , Birmingham B15 2TT , United Kingdom

Invitations for session proposals will close at midnight on 29th May 2020. Do propose sessions - the show will go on!

Event Type: Conference

👤 11-19 Teachers, Early Career Teachers, Primary, SLT, Technician
National, International,
North & East Midlands (Nottinghamshire, Derbyshire, Leicestershire,
🏰 Northamptonshire, Lincolnshire and Rutland),
West Midlands (Herefordshire, West Midlands, Shropshire,
Staffordshire, Worcestershire and Warwickshire)

More Information:

<https://www.ase.org.uk/events/ase-annual-conference-2021-university-of-birmingham>

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ICASE Journal - Science Education International

The ICASE quarterly journal is now about to enter its 26th year. From humble beginnings in 1990 when it was created to serve as the dissemination channel for ICASE, the journal has now grown to be a major English language international science education journal, receiving articles from science educators around the world. Thanks to its team of volunteers, the journal follows a strict review process to ensure the research and philosophical articles meet the ICASE criteria as relating to primary or secondary science education, or to pre-service teacher education at the tertiary level. Since 2008, the journal is available as open access, online only, although limited copies of occasional issues are published and distributed to interested science educators.

THE ICASE JOURNAL IS A MAJOR DISSEMINATION CHANNEL FOR ICASE MEMBER ORGANISATIONS AND THEIR MEMBERS. AS SUCH, ICASE GIVES PRIORITY TO ARTICLES SUBMITTED VIA ICASE MEMBER ORGANISATIONS AND IS VERY WILLING TO ASSIST MEMBER ORGANISATIONS IN PREPARING ARTICLES FOR THE JOURNAL (especially with respect to written English).

A major attraction of SEI is that there is no payment for those wishing to publish in the journal. And ICASE welcomes submissions by teachers, higher degree students or science educators in general from around the world. ICASE will do its best to assist authors whose native language is not English.

Before making a submission, please consult the Author's Manual for SEI located at www.icaseonline.net/seiweb for information related to the following topics:

- | | | |
|-------------------------|--------------------------------|----------------------|
| (a) Copyright | (b) Plagiarism | (c) Language |
| (d) Material submission | (e) Formatting | (f) Artwork & Photos |
| (g) The Review Process | (h) Non-native English authors | |

And we very much appreciate referencing articles previously published in SEI in your submissions.

ICASE also welcomes new reviewers. If you are interested please contact Dr. Baohui ZHANG, Chair, ICASE Research and Publications Standing Committee at icase2017bhzhang@163.com.

Please refer to www.icaseonline.net/seiweb for the full articles.



SCIENCE EDUCATION INTERNATIONAL
ICASE Online Journal

Science Education International is now indexed in

- AE Global Index Master Journals List 2015
http://aeglobalindex.com/?page_id=264
- European Reference Index for the Humanities and Social Sciences (ERIH Plus)
<https://dbh.nsd.uib.no/publiseringskanaler/erihplus/periodical/info.action?id=480336>

In addition to 6 international indexes, including ERIC, The Asian Education Index, Education Research Complete Database, Index Copernicus Journals Master List, DOAJ Directory of Open Access Journals, and The Education Research Global Observatory.

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ICASE Executive Committee 2020-2023

ICASE membership spans the world led by an Executive Committee, with a Management Committee (President, President-Elect, Immediate Past President, Secretary, and Treasurer) responsible for the day-to-day administration and working closely with Appointments Co-opted to the Management Committee, Regional Representatives, and Chairs of Standing Committees. Presidential terms are noted below.

Management Committee (2020-2023)

	<p>President (2020-2023) Dr. ZHANG BaoHui Qujiang Scholar Professor, Shaanxi Normal University, Xi'an, China E-mail: icase2017bhzhzhang@163.com (Member Organization: National Association for Science Education, The Chinese Society of Education - CNASE) <i>*Also Chair of Research and Publications Committee</i></p>		<p>Immediate Past- President Dr. Bulent Cavas Professor, Department of Science Education , Dokuz Eylul University Izmir, Turkey E-mail: bulentcavas@gmail.com <i>*Also Chair of Web Communications Committee (Presidential Term: 2017-2020)</i></p>
	<p>President-Elect Dr. Declan Kennedy Senior Lecturer in Science Education Department of Education, University College Cork, Ireland E-mail: d.kennedy@ucc.ie (Member Organisation – Irish Science Teachers Association – ISTA) <i>*Also World Headquarters Coordinator</i></p>		<p>Treasurer Ms. Mary Mullaghy Eureka Secondary School, Kells, Co Meath Dublin, Ireland E-mail: mmullaghy@gmail.com (Member Organization: Irish Science Teachers Association -ISTA)</p>
	<p>Secretary Dr. Sarfraz Aslam Postdoctoral Researcher, School of Education, Shaanxi Normal University, Xi'an, China E-mail: miansarfraz@hotmail.com (Member Organization: National Association for Science Education, The Chinese Society of Education - CNASE) <i>*Also ICASE Newsletter Editor</i> http://www.icaseonline.net/news.html</p>		<p>ICASE Website http://www.icaseonline.net/index.html</p>

Appointments Co-opted to Management Committee (2020-2023)

	<p>Editor, Science Education International The Official Journal of ICASE Dr. Steven Sexton Senior Lecturer, Science Education, College of Education, University of Otago Dunedin, New Zealand E-mail: steven.sexton@otago.ac.nz (Member Organization: New Zealand Association of Science Educators - NZASE) <i>*Also Chair of Pre-secondary & Informal Science Education Committee</i></p>		<p>Representative to UNESCO Dr. Teresa Kennedy Professor, Bilingual STEM Education University of Texas at Tyler Tyler, Texas USA E-mail: tkennedy@uttyler.edu (Member Organization: National Science Teachers Association of the U.S. - NSTA) <i>*Also Past President and North America Representative (Presidential Term: 2014-2017)</i></p>
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Regional Representatives (2020-2023)

	<p>Africa Regional Representative Mr. David Itamah Director of Education, Chair of the STAN Board of Trustees; Chair of the Board of Directors of The STAN Place Ltd, the official publishers of STAN books Abuja, Nigeria E-mail: daitamah@yahoo.com (Member Organization: Science Teachers Association of Nigeria - STAN)</p>		<p>Europe Regional Representative Dr. Manuel Filipe Pereira Cunha Martins Costa Professor, Departamento de Fisica, Universidade do Minho, Campus de Gualtar Braga, Portugal Email: mfcosta@fisica.uminho.pt (Member Organization: Hands-on Science Network – HSCI)</p>
	<p>Asia Regional Representative Dr. Manabu Sumida Professor, Faculty of Education, Ehime University Bunkyo-cho, Matsuyama City, Japan E-mail: msumida@ed.ehime-u.ac.jp (Member Organization: Japan Society for Science Education - JSSE)</p>		<p>Latin America Regional Representative Dr. Cesar Mora, Professor Titular Posgrado de Física Educativa, Centro de Investigación en Ciencia Aplicada Tecnología Avanzada Unidad Legaria del Instituto Politécnico Nacional (CICATA-IPN) Del, Miguel Hidalgo, CP, México D.F. E-mail: ceml36@gmail.com (Member Organization: Latin American Science Education Research Association - LASERA)</p>
	<p>Australia/Pacific Regional Representative Dr. Leah Moore, Associate Professor University of Canberra Canberra, Australia E-mail: Leah.Moore@canberra.edu.au (Member Organization: Australian Science Education Research Association - ASERA)</p>		<p>North America Regional Representative Dr. Teresa Kennedy Professor, Bilingual STEM Education University of Texas at Tyler Tyler, Texas USA E-mail: tkennedy@uttyler.edu (Member Organization: National Science Teachers Association of the U.S. - NSTA) <i>*Also Past President and Representative to UNESCO (Presidential Term: 2014-2017)</i></p>

Chairs of Standing Committees

	<p>Early Years STEM Education Dr. Sue Dale Tunnicliffe Professor of Science Education, UCL Institute of Education Leadership, Commonwealth Association of Science, Technology and Mathematics Educators - CASTME, United Kingdom E-mail: lady.tunnicliffe@mac.com (Member Organizations: Commonwealth Association of Science, Technology and Mathematics Educators - CASTME and the Association for Science Education of the UK – ASE)</p>		<p>International Projects Dr. Jack Holbrook Visiting Professor, Center of Science Education, University of Tartu Past President and Newsletter Editor Tartu, Estonia E-mail: jack@ut.ee (Member Organization: Hong Kong Association for Science and Mathematics Education - HKASME) <i>*Also Past President (Presidential Term: 2008-2011)</i></p>
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Chairs of Standing Committees



Research and Publications

Dr. ZHANG BaoHui
Qujiang Scholar Professor, Shaanxi Normal University, Xi'an, China
E-mail: icase2017bhzhang@163.com
(Member Organization: National Association for Science Education, The Chinese Society of Education - CNASE)
***Also President (Presidential Term: 2020-2023)**



Pre-secondary & Informal Science Education

Dr. Steven Sexton
Senior Lecturer, Science Education, College of Education, University of Otago Dunedin, New Zealand
E-mail: steven.sexton@otago.ac.nz
(Member Organization: New Zealand Association of Science Educators – NZASE)
***Also Editor, Science Education International The Official Journal of ICASEResearch and Publications**



Safety in Science Education

Mr. Bob Worley
Chemistry Advisor, CLEAPSS Science United Kingdom
E-mail: bobworley4@gmail.com
(Member Organization: CLEAPSS Science and the Association for Science Education of the UK – ASE)



Web Communications

Dr. Bulent Cavas
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(Member Organization – Dokuz Eylul University)
***Also Past President (Presidential Term: 2017- 2020)**



World Headquarters Coordinator

Dr. Declan Kennedy
Senior Lecturer in Science Education, Department of Education, University College Cork, Ireland
E-mail: d.kennedy@ucc.ie
(Member Organization: Irish Science Teachers Association-ISTA)
***Also President Elect (Presidential Term: 2023-2026)**



Membership

Dr. Virgilio Umangay Manzano
Adjunct Professor, College of Education, University of the Philippines at Diliman, the Philippines
Email: yumanzano@gmail.com
(Member Organization: The Comparative Education Society of the Philippines – CESP)



Science & Technology Education Centers

Dr. Janchai Yingprayoon
Deputy Director, International College, Suan Sunandha Rajabhat University, Bangkok, Thailand
E-mail: janchai@loxinfo.co.th
(Member Organization – Suan Sunandha Rajabhat University)
***Also Past President (Presidential Term: 2004- 2007)**



University Liaison

Dr. Miia Rannikmae
Professor, Center of Science Education University of Tartu, Estonia
E-mail: miia@ut.ee
(Member Organization – Centre for Science Education, University of Tartu)



World Conferences

Dr. Ben Akpan
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(Member Organization: Science Teachers Association of Nigeria - STAN)
***Also Past President (Presidential Term: 2011- 2014)**



Sustainability & Environmental Education

Dr. Yasemin Ozdem
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(Member Organization: Science Teacher's Association of Turkey – FENÖDER)