The Association for Science Education in Scotland



www.ase.org.uk



March 2022 No. 6



ASE Scotland Conference 2022 in partnership with SSERC: Practical Work in Science

The rescheduled ASE Scotland conference, in partnership with SSERC, will be on Saturday 11th June 2022 from 08:45 to 16:05 at Kinross High School.

The Conference, in partnership with SSERC, focuses on practical work in science and will be held face-to-face. The programme features sessions for early years and primary science along with secondary sessions for biology, chemistry, physics and spotlight sessions.

We are delighted to be offering two parallel strands for primary and one each for secondary physics, chemistry and biology, as well as an All strand which has something for everyone. Some examples drawn from the timetable include:

- Bruce Robertson as keynote speaker
- Outdoor practical work on rocketry and biology
- A wide range of primary workshop activities
- IOP Scotland Physics Coaches delivering practical workshops
- Secondary Spotlights
- Preparing for practical electronics with soldering
- Workshops delivered by Royal Society of Chemistry and SSERC
- Exhibitors showcasing their latest resources with exclusive Conference offers

SSERC has a limited amount of funding available for bursaries specifically for Early Career Teachers who book by 22nd March!

As a very special offer and by generous sponsorship from SSERC, Early Career Teachers who book places by 22nd March 2022 are able to book at a special discounted cost of £10 for ASE Members, or £35 for Non-ASE Members. (Did you know that ECT Membership starts from £24 per year? For queries, please email membership@ase.org.uk)

Early Bird rates for teachers are £20 for ASE Members; £42 for Non-ASE Members. Other ticket prices are available for ASE Members from £45, and for Non-Members from £80.



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Page

- 1. ASE SCOTLAND CONFERENCE
 - * Scottish Annual **Conference Programme**
 - * Description of each workshop
- 8. NEWS:
 - * IOP Scotland Stirling Meeting
 - * IOP limit less campaign
 - * IOP Scotland/SSERC Physics Teachers' Summer School
 - * The Learned Society on Scottish STEM Education
 - * RSC: I am a scientist
 - * RSC: January to March -Practical chemistry sessions
 - * RSC: Practical Chemistry **Education in Scotland**
 - * RSC: Calculations Strike Back
 - * RSC: Global Experiment 2022
 - * RSC: Teaching empowerment funds
 - * SSERC: Young STEM leader programme led by SSERC
 - * SSERC: Bulletins
- **13. OPPORTUNITIES IN ASE:**
 - * Membership
 - * Professional registration
 - * ASE Scottish Committee

Further details and the link to tickets can be found on the ASE Scotland Conference 2022 webpage at www.ase.org.uk/events/asescotland-conference-2022



Scottish Annual Conference Programme

	All audiences Primary Secondary			
09:30 – 10:05	Welcome from ASE Scotland Committee Chair.			
	Keynote: Power of pedagogy: Bruce Robertson			
	A1: Biodiversity and interdependence: using your outdoor space Dr Susan Bur PSQM			
Session A	A2: Lego colorimetry Dr Nikki Penman, The High School of Glasgow			
10:10 – 11:10	A3: Rocket Rodeo (Physics) Brian Redman, IOP			
	A4: Inclusion in practical work (Chemistry) Dr Jane Essex, Strathclyde University			
	A5: Taste (Biology & Chemistry) Laura-Alexandra Smith, RSC			
	A6: Freedom to investigate Jennie Hargreaves, Lockerbie Academy			
11:10 – 11:40	Refreshments and exhibitions			
	B1: Developing a "can – do" Science cluster Lauren McKecknie, Larbert High School			
	B2: Marvelous Magnets Brian Redman, IOP			
Session B	B3: Practical ideas for teaching electrostatics (Physics) Tim Browett, IOP			
11:40 – 12:40	B4: Practical Carousel – using different approaches to practicals (Chemistry) Dr Stephen Hendry, RSC			
	B5: Practical Biology for Advanced Higher - experiments (Biology) Jennifer Kennedy, Kinross High School			
	B6: How Scientists think? Stuart Farmer, IOP			
12:40 – 13:50	Lunch and exhibition			
Session C 13:50 – 14:50	 C1: Jack and the Beanstalk meets practical science investigations using recycled materials! Dr Diane Molyneux C2: Primary Spotlight: STEM story suitcases Laura Peden, Pitteuchar East PS Teaching Science in your local primary – a module for S6 pupils Lucy Payne, Dollar Academy Tinker Trucks Tracey Ellicott C3: Preparing for Practical Electronics (Physics) Dr Colin Oates, Kinross High School C4: Pupil voice in sustainability matters: Debunking fake news (Chemistry) Laura - Alexandra Smith. RSC C5: Go Bananas for colorimetry (Biology) Annie McRobbie, SSERC C6: Secondary Spotlight TechFest's Secondary Outreach Programme Dr Martha Gavan & Yashka Smith, Techfest Practical ideas for BGE on waves Tim Browett, IOP Civa it a shell Cathering Dupp SSERC 			

Programme continued

14:50 – 15:05	Afternoon tea-break
Session D 15:05 – 16:05	 D1: Diversity in STEM education: escaping the Primary Classroom John Cochrane, SSERC D2: Outdoor STEM - tried and tested activities: Elaine Arbuckle, Mearns PS A fossil hunter's tale: Mari-Clare Mitchell, Mearns PS D3: Enhancing Practical Investigations with Mobile Devices (Physics) Martyn Crawshaw, Millburn Academy D4: Mission impossible (Chemistry) Pete Johnson, Kitchen Chemistry D5: Fresh air Fridays and windy Wednesdays (Biology) Sandra Buchan, Kemnay Academy D6: STEM Academy Ashifa Nasser, Larbert High School
17:00	Conference closes

Keynote address

Power of pedagogy: Bruce Robertson

Bruce Robertson is the Rector of Berwickshire High School and author of The Teaching Delusion trilogy, published by John Catt Educational. As a chemistry teacher and senior leader, he has been working in education for almost 20 years. In recent years, Bruce has been in high demand as a consultant and conference presenter. He works closely with primary and secondary schools, keeping teaching and learning improvement at the centre of everything he does.

https://www.johncattbookshop. com/the-teaching-delusion



45 % discount for signed copies of Bruce's trilogy

Description of each workshop.

Workshop A choices:

A1: Biodiversity and interdependence: using your outdoor space Dr Susan Burr, PSQM

This hands on workshop will look at outdoor learning including designing and setting up a wildlife garden, making use of school grounds and local open spaces. There will be a focus on the range of possible investigations with a chance to try out a selection and advice on resources.

A2: Lego colorimetry Dr Nikki Penman, The High School of Glasgow

A practical session building a basic (and cheap) colorimeter from Lego and using it with blackcurrant juice to teach light and colour, and also scientific measurement and processing results using Excel. This could be suitable for P6/7 or S1/2 pupils, or as a Science Club activity.

A3: Rocket Rodeo (Physics) Brian Redman, IOP

Rockets of different types can be used at various point in the curriculum to give a "WOW" factor to your lessons. This workshop gives an opportunity to try out a variety of rockets powered by air, water and compressed air, both commercial and home/pupil-made types, suitable for inclusion in your teaching.

A4: Inclusion in practical work (Chemistry) Dr Jane Essex, Strathclyde University

This session will look at approaches to practical work that will facilitate full participation by pupils with ASN. The primary focus will be pupils with learning difficulties but motor and sensory barriers to participation will also be considered. Practical examples of successful adaptations will be shared and participants will be encouraged to try these out.

A5: Taste (Biology & Chemistry) Laura-Alexandra Smith, RSC

This session will examine the cross over between biology and chemistry. We will be sharing ideas and resources for teaching about important olfaction and volatile molecules.

A6: Freedom to investigate Jennie Hargreaves, Lockerbie Academy

Do we really let the students "investigate" ? Aren't they really directed to do an experiment and we know the answer? What about if we let students have total control over what and how they can investigate? Does it produce better prepared students? Using the experience of an S2 heat topic, which would work for all levels primary and secondary, I can take you through some of the pros and cons of working with students in this way.

Workshop B choices:

B1: Developing a "can - do" Science cluster Lauren McKecknie, Larbert High School

Sharing Larbert Cluster's approach to science. Over the past 6 years we have worked as a group (all 7 primaries and the secondary) to create a full science course for use in early years through to the end of primary. This was partly funded through grants from Education Scotland and SSERC and we are now happy to share our approach and resources across Scotland.

B2: Marvelous Magnets Brian Redman, IOP

An exploration of magnetism basics, poles, permanent magnets and electromagnets. The workshop is built around hands-on activities focusing on level 1 and 2 outcomes aimed at classroom use using cheap, readily available equipment.

B3: Practical ideas for teaching electrostatics (Physics) Tim Browett, IOP

Electrostatics is one of those topics that is revisited across the secondary physics curriculum. Come and have a go at some simple practical activities to engage pupils and build a deeper understanding.

B4: Practical Carousel – using different approaches to practicals (Chemistry) Dr Stephen Hendry, RSC

This session aims to help build confidence after what has been a difficult few years for planning and running any sort of practical science. In this session we will look at what good practical science is, through a carousel of practical activities and explore some key resources to aid your planning and delivery. We will look at the aspects to consider during a class practical, such as cognitive load, alongside Education in Chemistry articles and resources to support effective, evidence based principles of improving science teaching, that can be used both before, during and after class practical's. By the end of this session you will: • Have a better understanding of how to use demonstrations in a topic • Know where to find good practical demonstration resources • How to ensure concepts are fully understood and challenging your students misconceptions.

B5: Practical Biology for Advanced Higher – experiments (Biology) Jennifer Kennedy, Kinross High School

This session shall focus on straightforward practical experiments which can be used to support teaching of Advanced Higher Biology.

B6: How Scientists think? Stuart Farmer, IOP

What is so special about the way scientists think? What are the key habits of mind that scientists practise that enable them to make discoveries? Come and explore the process of science and engage in hands-on, minds-on practical activities that will encourage pupils to develop their problem-solving and collaboration skills.

Workshop C choices:

C1: Jack and the Beanstalk meets practical science investigations using recycled materials! Dr Diane Molyneux

This workshop, teachers will be given a number of resources, including beans and items from a household recycling bin, and challenge themselves to plan openended investigations which could be carried out in their own setting. The approach focuses on letting children determine what they want to investigate, as well as deep discussions about what we really mean by 'better than' in comparing results in a fair test.

C2: Primary Spotlight:

STEM story suitcases Laura Peden, Pitteuchar East PS

I have been working on some suitcases that contain story books relating to science topics and activities that the learnings can take part in. I would love to share these resources with others.

Teaching Science in your local primary - a module for S6 pupils Lucy Payne, Dollar Academy

In this session I will exemplify the practicals offered and explain how to access the resources. Primary teachers can learn how to sign up to receive one or more science practical lessons. A group of pupils in S6 at Dollar Academy spend one period a week teaching practice science at local primary schools. This gives them an experience of volunteering and of teaching (useful for UCAS and as a life experience), and also benefits the primary pupils and teachers, who engage in handson science practical activities free of charge. The resources required to run the module can be borrowed from Dollar Academy or from the STEM officer for Clackmannashire, Jennifer McLean.

Tinker Trucks Tracey Ellicott

Tinker Trucks are cheaply-resourced trolleys intended to encourage colleagues and learners to engage in engineering-based activities using the Engineering Design Process in their classrooms. This was part of a Change Leadership initiative to collaborate with colleagues during the pandemic, aiming to develop a growth mindset around the pedagogy of tinkering

C3: Preparing for Practical Electronics (Physics) Dr Colin Oates, Kinross High School

An introduction to the assignment part of SQA's Practical Electronics is offered to those who are preparing this course next year. Delegates will practise soldering on stripboards and printed circuit boards. Examples of assignments are also offered, which are appropriate for the Alternative Certificate Model.

C4: Pupil voice in sustainability matters: Debunking fake news (Chemistry) Laura-Alexandra Smith. RSC

From social media to Netflix documentaries, in modern world the ability to critically analyse information and claims has never been more important. In this session, we will explore and reflect on how we encourage pupils to search for the truth in claims surrounding sustainability, and beyond. Aims: Provide teachers with tools to help students debunk misconceptions relating to science in the media through the medium of healthy and respectful debate or discussion. How: We will discuss common misconceptions students have relating to sustainability and explore resources that students can use to investigate and correct their knowledge. Outcomes: By the end of the session, you will: • Have explored strategies for students to evaluate their initial ideas that have come from the media regarding sustainability • Have explored tools that can help students to assess the validity of media claims • Have methods for identifying good sources of information

C5: Go Bananas for colorimetry (Biology) Annie McRobbie, SSERC

This quantitative colorimetric assay provides an inexpensive, robust and simple investigation for learners to explore the dynamics of enzyme activity. A wide variety of independent variables can be investigated, making it a fantastic choice for wider assignments and projects

C6: Secondary Spotlight

TechFest's Secondary Outreach Programme Dr Martha Gavan & Yashka Smith, Techfest

TechFest is a North East based charity organisation with a mission to promote all things STEM (Science, Technology, Engineering and Mathematics). Join us for a whistle stop tour of our secondary outreach programme where we will highlight some of our greatest hits and outline the ways you (and your school!) can get involved.

Practical ideas for BGE on waves Tim Browett, IOP

Come explore fun ways to cover all six of the "vibrations and waves" experiences and outcomes from second to forth level, all in just 15 minutes

Give it a shot! Catherine Dunn, SSERC

Energy transfers with a calculation that are simple, quick and enhance understanding I found to be engaging for students. The experiment using lead shot can be done simply now bead thermistors are cheap and data logging possible. Using a cardboard tube and lead shot watch the temperature of the lead shot rise as the tube is inverted several times. This shows energy transfer from gravitational potential energy to kinetic energy and finally to heat energy. The specific heat capacity of lead shot can be calculated and errors discussed. I found it to be a great lesson as it had meaningful learning an engaging experiment and a calculation!

Workshop D choices:

D1: Diversity in STEM education: Escaping the Primary Classroom John Cochrane, SSERC

Using an escape room concept to inspire primary practitioners. Six STEM activities were designed using innovative approaches based on the work of Adrian Allan. A CLPL session was delivered to North Lanarkshire teachers under the auspices of the SSERC.

D2: Outdoor STEM - tried and tested activities: Elaine Arbuckle, Mearns PS Looking at a range of outdoor STEM activities aimed at Nursery and Early Primary

A fossil hunter's tale: Mari-Clare Mitchell, Mearns PS

Mari-Claire will discuss some of the findings from the ASE's interdisciplinary project "A Fossil Hunter's Story", including the impact on primary teachers and their pupils

D3: Enhancing Practical Investigations with Mobile Devices (Physics) Martyn Crawshaw, Millburn Academy

Mobile devices such as smartphones, tablets and Chromebooks are increasingly available to learners in secondary school science labs. This session will show how free apps and interfacing apparatus can be used such devices and how online spreadsheets can be used to analyse experimental data on devices.

D4: Mission impossible (Chemistry) Pete Johnson, Kitchen Chemistry

Mission Impossible: Science Challenges aims to challenge pupils to compete in teams to solve problems using science. The tasks are all open-ended and may appear at first sight "Impossible" to the pupils, but with some guidance and the time to learn from their mistakes most will find that they can make the impossible possible.

D5: Fresh air Fridays and Windy Wednesdays (Biology) Sandra Buchan, Kemnay Academy

How and where can you include the outdoors in science lessons? School grounds are rich sources of practical examples to demonstrate scientific principles, identify reactions and practice field work. From themed walks to observational exercises to data gathering, explore a variety of methods to engage learners in the outdoor environment.

D6: STEM Academy Ashifa Nasser, Larbert High School

Planning and implementing a bespoke curriculum to meet the DYW agenda through STEM Academy. STEM Academy is a course developed by the Science, Technologies and Maths Faculty staff at Larbert High School for S1-S4 pupils focussing on skills development. We will share our collaborative approach and showcase the resources pupils are using to develop their thinking, enterprise and leadership skills.

IOP Scotland Stirling Meeting — Thursday, 26th May 2022

Registration open for is now the 2022 meeting http://www.stirlingmeeting.org/home. Early-bird rates apply before 24th March 2022.



at

All IOP members and teachers who work in schools with IOP Affiliated School membership are eligible for the member rates https://www.iop.org/education/support-school-collegephysics-teachers/affiliation-scheme.



The meeting will be held at the Stirling Court Hotel and the theme of the meeting will be Energy and Sustainability and one of the keynote lecturers will be Neil Kermode of the European Marine Energy Centre in Orkney, where research is being done into the production of green hydrogen. The Stirling Meeting will also form one of the days of the IOP Scotland/SSERC Physics Teachers' Summer School, see below.

IOP Scotland/SSERC Physics Teachers' Summer School - 25 to 28 May 2022



Registration is now open for the 2022 Summer School at

https://www.sserc.org.uk/professionallearning/secondary-clpl/physics-clpl/iopscotland-sserc-physics-teachers-summerschool-2022/.

As in pre-pandemic years this four-day residential course will contain a range of sessions to support the teaching of physics across the curriculum including hands-on workshops by SSERC staff and IOP Scotland coaches, seminars and evening sessions with IOP Scotland coaches, and a visit to the University of St Andrews.

Attendance of the IOP Scotland Stirling Physics Teachers' Meeting is included as part of the package.

Delegates will also receive equipment to allow them to do many of the experimental activities once they are back in school and teachers in state funded schools are eligible for an Enthuse award of £480 for their school.

At IOP we are keen to promote our Limit Less Campaign, particularly to encourage HTs and DHTs to sign up their schools, ELCs, primaries and secondaries

IOP Limit Less Campaign

At the Institute of Physics, we want every school to have a whole-school equity plan that creates an inclusive learning environment for all young people. Please encourage a member of your school's Senior Leadership Team to sign your school up to the Limit Less Campaign https://campaign.iop.org/page/87075/petition/1.



Further information at https://www.iop.org/strategy/limitless/nurseries-schools/teaching-without-limits.



Support our young people to change the world.

Stuart Farmer

Stuart is IoP Education Manager in Scotland.

The Learned Society on Scottish STEM Education (LSG)



Stuart Farmer



There is an LSG meeting coming up at the start of April. The LSG response to Ken Muir's consultation can be downloaded at <u>https://rse.org.uk/about-us/governance/standing-committees/learned-societies-group/.</u>



January — March: Practical chemistry sessions (live)

Throughout the spring term, the Royal Society of Chemistry's education coordinators are putting on a series of live sessions supporting practical chemistry. Each session will be run twice.

The full, interactive (1 hour) version will include features such as discussions, demonstrations and/or opportunity to engage with the resources live.

The short (30 minute) version will contain the same key information as the full version but will be delivered as a presentation with limited opportunity for interaction.

Slides and resources from all sessions will be made available to attending delegates and each session will be supported by a co-host to ensure questions can be answered live.

https://edu.rsc.org/events/january-marchpractical-chemistry-sessionslive/4014852.article





Let us know you'd like to take part, and we'll email you when booking opens: https://imascientist.org.uk/teachers/scotchem/



Can't find the answer to your question? Email <u>support@imascientist.org.uk</u> or call us on 01225 326892



Practical Chemistry Education (Rural/Urban) in Scotland

The **University of Glasgow**, in partnership with the **Royal Society of Chemistry**, are undertaking a longitudinal research project to understand regional inequality in educational outcomes, in particular the geographical disparity in experience and attainment between urban and rural secondary schools in Scotland.

"In 2020, 47.4% of leavers from Scotland's large urban areas went on to higher education, but for young people from remote small towns that figure is just 36.9%. Those from remote areas are significantly more likely to go straight into employment after school than students from other parts of Scotland. In terms of attainment statistics, these show fewer than 60% of leavers from small towns have at least one qualification at level six, once again the lowest of all six categories." McEnaney, J 2021, p.86, Class rules The truth about Scottish schools, Luath press limited, Edinburgh.

The purpose of this particular study is to explore any structural issues in **urban and rural secondary schools in Scotland**, which may impact on the educational outcomes of **practical chemistry teaching**. In addition to making these results public, we aim to implement recommendations based on the voice of the participants that will support both teachers and Heads of Science/Chemistry, and, in turn, enhance the learning for all pupils in Scotland.

We seek to gain first-hand knowledge and original insights from both **Teachers** and from **Heads of Science/Chemistry** in Scottish secondary schools to inform our research recommendations. Both surveys are anonymous and will take approximately 10 minutes to complete.

- Survey Link for Chemistry Teachers in Secondary Schools in Scotland -<u>https://forms.office.com/r/jjM10kZMeG</u>
- Survey Link for Heads of Science/Chemistry in Secondary Schools in Scotland -<u>https://forms.office.com/r/xMpB3L08nF</u>

Thank you so very much for your time and for sharing your experience with us. We hope that these surveys are just the beginning of a much larger conversation that needs to be had about practical chemistry education in Scotland (and in the UK).

Kind regards,

Linnea, Smita & Ainsley



This study forms part of a dissertation project by Ainsley Macdonald, a final year Chemistry student at the University of Glasgow, who plans to enter a career in Teaching. Ainsley is from the Highlands, and her own interests and experiences of rural education and transition to a large city sparked the ideas for this research and shaped the project design.

CONTACTS FOR FURTHER INFORMATION:

Dr. Linnea Soler (<u>Linnea.Soler@glasgow.ac.uk</u>) and Dr Smita Odedra (<u>Smita.Odedra@glasgow.ac.uk</u>) School of Chemistry, Joseph Black Building, University of Glasgow, G12 8QQ

ETHICS: approval (#300210127) granted, CoSE, University of Glasgow.





Calculations strike back - Planned in Scotland for Scottish teachers

Tuesday 22 March, 4.00 - 5.00 pm, MS Teams

At the end of the session you will have looked at an alternative approach to calculations which can work well alongside the equations given in the Data Book. The session will be three 20 minute sessions:

1.20 minutes on proportion

2.20 minutes on National 5 calculations (not covered in the previous session)3.20 minutes on Higher calculations

All of our previous sessions were recorded and can be viewed at the <u>following link</u>. Register here -

https://edu.rsc.org/preview.html?u=https%3a%2f%2fedu.rsc.org%2fstory.aspx%3fsto ryCode%3d4015306%26preview%3d1%26hash%3dD78211D10A2B926D0991EE35 9C1C4B71

RSC Global Experiment 2022

Tuesday 15 March – Thursday 17 March, online

We're excited to announce that we have a new Global experiment for 2022. To support this launch we will be offering teachers multiple options to attend sessions to find out all about it. The Global experiment is designed to have clear aims or questions which students answer by investigation. After the experiment, teachers able share via students are to results our website or https://edu.rsc.org/preview.html?u=https%3a%2f%2fedu.rsc.org%2fstory.aspx%3fst oryCode%3d4015306%26preview%3d1%26hash%3dD78211D10A2B926D0991EE 359C1C4B71

RSC's Teaching empowerment funds – applications now open

Apply by 28 March for up to £600 towards a project or event in your local area

If you're passionate about strengthening the quality of primary science or secondary chemistry teaching in your local area then we want to help. Organise a collaborative project or event with the guidance of your local education coordinator and you could be eligible for up to £600 towards costs from our teaching empowerment funds. Your project should aim to improve the quality of teaching and/or foster supportive and effective teaching communities. To find out more browse the appropriate fund's dedicated website.

Secondary teaching fund -

https://edu.rsc.org/preview.html?u=https%3a%2f%2fedu.rsc.org%2fstory.aspx%3fstoryCode%3d4015306%26preview%3d1%26hash%3dD78211D10A2B926D0991EE359C1C4 B71

Primary teaching fund -

https://edu.rsc.org/preview.html?u=https%3a%2f%2fedu.rsc.org%2fstory.aspx%3fstoryC ode%3d4015306%26preview%3d1%26hash%3dD78211D10A2B926D0991EE359C1C4 B71







Young STEM Leader Programme led by SSERC: Free STEM programme for schools in Scotland

Euan Mitchell

The <u>Young STEM Leader Programme</u> is a new award aiming to inspire more young people to develop an interest in STEM and pursue relevant STEM study and pathways. The free programme is offered at Curriculum for Excellence Second, Third and Fourth levels and SCQF Levels 4, 5 and 6. Currently being offered in over 600 primary schools, secondary schools and community settings across Scotland, the programme offers an excellent opportunity to improve STEM participation across your learning community whilst giving young people an exciting leadership experience.

The Young STEM Leader Team at SSERC are looking to support more centres to join the programme, with our targets that every young person can access the programme within their learning community at some point in their education. Becoming a delivering centre is easy, we offer regular two hour Tutor Assessor Training sessions that are delivered online, face-to-face at a time that suits you.

To find out more about the Young STEM Leader Programme, <u>visit our website</u>, book on to one of our <u>information or training sessions</u> or <u>get in touch</u>.

Euan Mitchell is SSERC's Head of Early Years and Primary







Bulletins

Euan Mitchell

All teachers across Scotland are members of SSERC. Each LA provides membership to SSERC and as such each practitioner has free access to all our health and safety updates, technician bulletins, secondary science bulletins and Early years and Primary bulletins. The most recent bulletins can be found through the following links.

<u>Technicians</u> <u>Secondary</u> Early Years and Primary







To gain access you need to have a username and password for the SSERC site. It is quick and simple to setup. Please select the register option on the site providing your name, setting or school along with an education email and an automated response will be sent back.

Professional Learning Calendar



The SSERC professional learning calendar is open for application and can be found here for all educators from early years practitioners. https://www.sserc.org.uk/profession al-learning/calendar/

Next newsletter...

If you have any news that you would like to share, with practitioners, on either:

- opportunities and challenges in teaching practical science
- supporting student and probationer teachers
- supporting technicians (for Technicians' Corner)

then please forward your news to either: Susan Burr (<u>Susanburr952@btinternet.com</u>); Tess Watson (<u>tesswatson@ase.org.uk</u>), or Colin Oates (<u>coates@pkc.gov.uk</u>).

ASE Scottish Committee

The Scottish Committee work together in organising TeachMeets; webinars; organising national conferences; newsletters, and many more.

If you are a member of ASE and would like to contribute to ASE Scotland Committee then contact <u>Susanburr952@btinternet.com</u>

Membership <u>https://www.ase.org.uk/membership</u>

From organising local events to influencing national policy, the ASE works for teachers and educators like you to help develop your skills, your career and your professional recognition. A selection of the many benefits you'll enjoy as an ASE member include:

- •Access to thousands of curated teaching and CPD resources
- •Subscriptions to influential, sector-leading journals and publications
- •Inclusive public liability insurance cover up to the value of £10m
- •Numerous CPD opportunities both face-to-face at events and, now, in the online arena
- Professional registration opportunities to enhance your education credentials
- Opportunities to have your say and help shape the science education sector through our advocacy work

You can find a more complete description of the benefits of joining the ASE - broken down into categories: **Primary Membership**; **Secondary and Colleges Membership**, and **Trainee and Early Career Membership**.

Primary Membership	Secondary and Colleges Membership	Trainee and Early Career Membership

Professional Registration

The ASE is licensed by the Science Council to manage professional awards, which recognise excellence for practitioners in science education:

 RSci (Registered Scientist Award), which benefits all those concerned with science teaching as a profession;



https://www.ase.org.uk/rsci

RSciTech (Registered Science Technician Award), which benefits all those concerned with science education, and



https://www.ase.org.uk/rscitech

 CSciTeach (Chartered Science Teacher Award), which benefits all those concerned with science teaching as a profession.



https://www.ase.org.uk/csciteach

These can be awarded to eligible members. If you are not yet a member of ASE, you can click on the above QR code, that applies to you, in the membership section.