



Editorial

■ Matt Endean

Welcome to issue 13
of *ASE International*

CLEAPSS



This issue has come together during the summer holidays here in the UK, where we are fortunate to be in a situation of receding COVID-19 protocols, which are extending into schools. This will hopefully continue into the new school year, which will then allow greater freedoms in schools to carry out practical work.

The main theme of this issue is around the importance of practical work. Our work at CLEAPSS is all centred on the importance of practical work,

and providing support materials to ensure that staff and pupils can carry out practical work both effectively and safely. Throughout the COVID-19 pandemic, we have provided guidance and support to ensure that practical work can continue in a safe manner. We know that our guidance has been used around the world and not just in science lessons to support various practical-based subjects. CLEAPSS will continue to provide guidance to ensure that practical work can continue as we adapt and manage our way through our evolving COVID-19 pandemic. Members of CLEAPSS can find all our latest COVID-19 guidance here:

<http://science.cleapss.org.uk/> and for those who are not members you can see how to join CLEAPSS here as well.

In this issue we have an extended number of articles to make this a bumper issue, all highlighting differing ways to carry out effective hands-on practical work.

In ***Moss Safari: inspiring interest in nature under the microscope***, Andrew Chandler-Grevatt looks at the use of sampling water from moss to develop trainee teachers' skills and confidence in using microscopes, as well as hoping to achieve sight of the 'Big Five' micro-organisms.

In ***What enables successful open-ended practical investigative work in the sciences post-16?*** Dunlop *et al* discuss how to manage effective open-ended investigative work, the learning benefits it brings for the learners involved, and how to link its benefits to the current A-level curriculum structures. The article also looks at the challenges faced by teachers implementing what can be a time-consuming activity in an already busy school year.

Does your classroom help children learn? by Katherine Forsey looks at the work done by Professor Stephen Heppell into the effects that the classroom environment has on learning outcomes. This highlights the importance of good ventilation,





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other factors to monitor and their potential effects on learning. She also explores how working outdoors can be an easy way to overcome some of these issues that may exist in your classrooms and labs.

Continuing the working outdoors theme, Harvey *et al*, in ***Just how much time outdoors in nature is enough?***, look into the emotional benefits and biodiversity understanding gained from studying our own natural spaces. This study was carried out both in school grounds and at home during home schooling forced by the COVID-19 pandemic. Taking pupils outside can sometimes seem like a distraction from the learning, but these studies are a good reminder of the real benefits for everyone of using our outside spaces as part of our learning environments.

3D science – no, not a new science fiction movie, but research carried out by Price & Bevins, which conceptualises science around three dimensions: domain knowledge, evidence-management procedures and psychological energy. They propose that this model could underpin a rigorous, effective and motivating approach to science education in schools. One to get your brain thinking over a coffee!

It's not just traditional pupil lessons that have been affected by the COVID-19 pandemic – providers of teacher CPD and training for NQT and trainee teachers have all had to adapt to the world of online learning. Alex Sinclair in ***COVID-19 – what have we learned?*** looks at how five professional CPD and training deliverers have adapted to the 'new normal' and, in this, they highlight some of the many benefits from the switch to online learning.

Finally we move to two original articles: one by **Chadwick and McLoughlin** looks into the effects that the pandemic is having on education in Irish schools; and the other, by **Khalid and Anbreen**, examines peer engagement for practicals in 'blended' classrooms.

Although it seems a long way off at time of writing, I hope to see some of you in person at the ASE

From Marc Neesam, outgoing Editor of ASE International

Thank you to Matt for being our special guest Editor, and to CLEAPSS for their support, for this issue of ASE International. The International Group, ASE and I appreciate your involvement and we value the relationship that we have with CLEAPSS in supporting practical science.

To our readers, I hope that this issue supports you in further considering practical science as we continue to live in a world with SARS-CoV-2 and reflect on the impact that the pandemic has had, and continues to have, on the teaching and learning of science.

This issue also marks my last as Editor, after two years. I am pleased to announce that Dr. Ade Magaji, member of the International Group and Guest Editor of Issue 11, will take over the editorship from the next issue (December/January). I will focus my time on chairing the ASE International Group and supporting the International Day at Annual Conference (the 2022 Conference is now open for bookings: visit <https://www.ase.org.uk/events/ase-annual-conference-2022> or see page 83 of this issue).

It has been a pleasure to edit this journal and I'm confident that, under Ade's stewardship, it will continue to go from strength to strength – welcome, Ade!

I look forward to seeing many of you at ASE International Day 2022 – until then, I wish you all the best.

Annual Conference in January at Sheffield Hallam University. The main Conference will run from 5th-8th January, and CLEAPSS will have its usual mix of hands-on workshops and talks, plus please come and have a chat with us on our stand.

The 2022 International Day will, unusually, be running separately, online, on Wednesday 12th January – for more details and the programme, please see page 83.

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