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## SSR in Practice

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However, errors and omissions can be made, and employers may have adopted different standards. Therefore, before any practical activity, teachers and technicians should always check their employer's risk assessment. Any local rules issued by their employer must be obeyed, whatever is recommended in *SSR in Practice*. Unless the context dictates otherwise it is assumed that:

- practical work is conducted in a properly equipped laboratory;
- any mains-operated and other equipment is properly maintained;
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- care is taken with normal laboratory operations such as heating substances or handling heavy objects;
- good laboratory practice is observed when chemicals or living organisms are handled;
- eye protection is worn whenever there is any recognised risk to the eyes;
- fieldwork takes account of any guidelines issued by the employer;
- pupils are taught safe techniques for such activities as heating or smelling chemicals, and for handling microorganisms.

For further guidance, please see page 3 of *SSR in Depth*.

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# Editorial

Fiona Williams, SSR Content Editor



Welcome to the March issue of *SSR*, with its interesting range of articles covering many different areas. In particular, there are articles that provide insights into different cultures, teaching approaches and curricula. In *SSR in Practice*, Simon Taylor shares research into the use of dioramas as an approach to teaching sustainability to pupils in New Zealand. In *SSR in Depth*, Syakti Sriyansyah gives some insights into Indonesian culture and how he has used musical instruments and a free mobile phone app to take measurements and calculate the speed of sound with the students in his class. Ken Rotheram discusses curriculum reform and provides a brief overview of curricula in a variety of countries.



Image of Indonesian angklung by Rianda Hardi from Pixabay

The Language of Science is one of the seven areas identified in the EEF report 'Improving Secondary Science'. In his article in *SSR in Practice*, James Williams shares his insights into demystifying scientific language for students. This links back to his article 'Scientific language: how important should it be to teachers of science?', which was featured in the November issue of *SSR in Depth*. In addition to scientific literacy, maths skills in science also features in this issue with Amanda Clegg's and Karen Collins' article about graph interpretation skills.

Teacher education is a vast area ranging from initial teacher education through to CPD for experienced teachers. This issue has a variety of articles to span these areas. In *SSR in Depth*, Ade Magaji discusses the promotion of constructivist teaching strategies with trainee science teachers with a view to promoting learning. In *SSR in Practice*, Michael Greener shares some points from his ITE project in which he explored the use of metacognitive questioning. His article provides some food for thought for both new and experienced teachers. In addition, Brotati Veraitch shares some learning from a CPD course on using structure strips to help with answering 6-mark questions. This is often an area that students struggle with at GCSE. The article shows how Brotati implemented what she had learnt from the course and from other reading to improve the attainment of pupils in this type of question. Cognitive load and dual coding are prominent topics in education at present. On this theme, Penny Robotham discusses the use of diagrams in teaching and how she has been prompted to think about how these are used following her research with John Oversby and the PALAVA teacher action research group.

Following her article on hinterland electrochemistry in the November issue of *SSR in Practice*, Jennifer Marchant writes about isolating metals and shares some ways on how to use the ideas in various teaching scenarios. In *SSR in Depth*, Frank Harris discusses how various physics principles can be exemplified through thinking and braking times when driving.

Student book reviews feature again in this issue. Please take the opportunity to share these with your students. On page 31 you will find information on how your students can take part if they so wish.

Finally, Helen Harden, commissioning editor, puts out a call for people to take part in peer-reviewing of articles. Please read 'Get involved' on page 32 and get in touch if this is something you would like to consider.

Fiona Williams

For further articles you can access *SSR in Depth* online at [www.ase.org.uk/SSR-in-depth/issue-390](http://www.ase.org.uk/SSR-in-depth/issue-390)



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