

SSR in Practice

June 2022
volume 103 number 385

The ASE's professionally reviewed journal for science education 11–19



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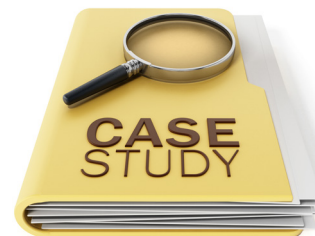
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Co-editor **Helen Harden**

Executive Editor **Martin Payne**

Assistant Executive Editor **Helen Johnson**

Editorial contact ASE **Jane Hanrott**

Design/typesetting **Andrew Welsh**

Advertising **Rebecca Dixon-Watmough**

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Contributing to *SSR in Practice*

We will be welcoming contributions for all sections of *SSR in Practice* and will be announcing how to submit proposals in the next issue (September/October). If you are interested in reviewing articles for future issues of *SSR in Practice*, please contact ssreditor@ase.org.uk. Reviewers who are currently teaching would be particularly welcome.

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Contact

The Association for Science Education
College Lane, Hatfield, Herts AL10 9AA
T: 01707 283000
www.ase.org.uk

✉ info@ase.org.uk

🐦 @theASE

Advertising: Rebecca Dixon-Watmough: ✉ rebecca@ase.org.uk

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For all practical procedures described in *SSR in Practice*, we have attempted to ensure that:

- the requirements of UK health & safety law are observed;
- all recognised hazards have been identified;
- appropriate precautions are suggested;
- where possible, procedures are in accordance with commonly adopted model risk assessments;
- if a special risk assessment is likely to be necessary, this is highlighted.

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;
- any fume cupboard operates at least to the standard of CLEAPSS Guide G9;
- 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 p. 3 of *SSR in Depth*.

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Editorial

Helen Harden is ASE Chair-elect and Interim Co-editor of *SSR in Practice*



As Chair-elect of ASE and Interim Co-editor, I am delighted to welcome you to the very first issue of the new two-part format *SSR* journal. We hope the combination of *SSR in Practice*, which you are reading now, and *SSR in Depth*, available online via the QR code below, will provide shorter articles focused on classroom practice as well as longer articles about science education.

Just like a school science department, the ASE community is made up of a range of science education professionals, including science leaders, classroom teachers and technicians working with students aged 11–19, as well as those who work in early-years settings, primary schools (5–11), further education (FE) and the initial teacher education (ITE) sector. Without this community, this publication would not be possible and we acknowledge and thank them on the previous page.

By providing mentoring for new writers and an accessible proposal system we hope that, over time, *SSR in Practice* will provide an opportunity for a far greater range of science teachers and technicians to get their ideas and experiences published in a journal. Please see the next issue for further announcements.

The curriculum features more than once in this issue, including the opening leadership article, an update on the new Curriculum for Wales and a discussion on the implications for schools of major educational reforms in Scotland.

The two parts of *SSR* are planned to work in tandem, so this issue of *SSR in Depth* develops curriculum thinking further with an article by Alistair Moore and Ann Fullick about the Royal Society of Biology's *Evolving 5–19 Biology* report. Christian Moore-Anderson also writes in depth about how to measure and foster biological thinking beyond short-answer questions. Kendra McMahon has contributed articles to both parts of this issue.

So, whether you are an individual 11–19 member reading this at home, a trainee teacher accessing it via your institution library, or you are coming across this in school as part of your departmental membership, we hope you will find many articles of interest that will support you in your classroom practice.

So what regular features of *SSR in Practice* should you look out for in this issue?

- **Leadership article.** Each issue will contain an article to support science leaders. The theme of the first leadership article is leading the development of a science department curriculum over time.
- **Practitioner case studies.** The case studies will provide an opportunity for teachers to share and reflect on research-inspired practice in their department or classroom. The teachers writing these very first case studies were mentored by ASE's 11–19 Committee Chair, Andy Chandler-Grevatt.
- **Practical ideas.** The practical-focused articles will be led by ASE's Technician Committee and will include all-important technician tips. Committee Chair Jane Oldham has written the first practical article, which links to the exclusive bonus content – a video extract of Jane's presentation at ASE's 2022 online Annual Conference.
- **Real-life science and careers.** ASE members have requested articles that provide hinterland (real-life contexts) for students, as well as examples of STEM careers. This issue includes articles about sickle cell anaemia, geophysics and genome sequencing as well as a career profile.
- **Education research.** ASE's Research Group will be contributing a regular *Journal club* feature, with guiding questions to explore one of the many influential articles available to members in the online *SSR* archive. In addition, Research Group Chair Alastair Gittner has carried out the first of a series of education researcher interviews.
- **Learning from primary.** This article style will facilitate the sharing of good practice from ASE's primary community by showing how primary-focused CPD can be used effectively in a secondary context.
- **Talking point.** *Talking point* articles will be designed to encourage discussion with colleagues or the wider science education community.
- **Opinion.** This article type will enable authors to share their personal opinions on topical science education issues.

For further articles you can access *SSR in Depth* online at www.ase.org.uk/SSR-in-depth/issue-385



All the weblinks mentioned in articles in this issue are listed in one convenient document available at www.ase.org.uk/ssr-resources

