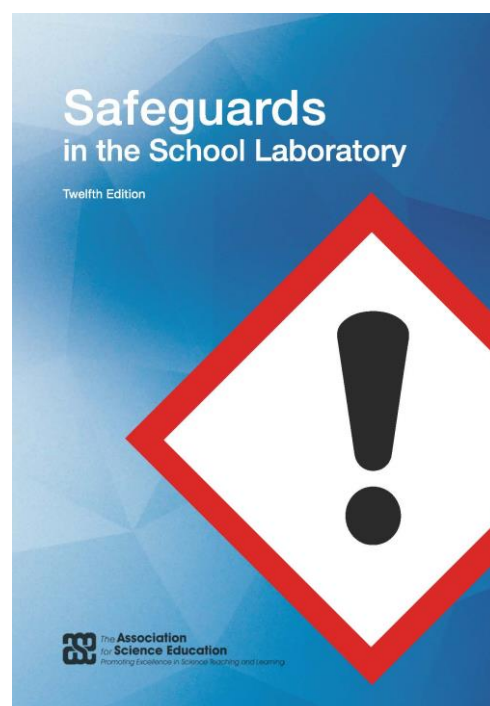


Leadership Book Review

Safeguards in the School Laboratory 12th edition, *The Association for Science Education, Hatfield, 2020*

Safeguards in the School Laboratory [1], affectionately referred to as “Safeguards” or “Lab Safeguards” by science teachers throughout the UK is published by The Association for Science Education (ASE). It provides authoritative and comprehensive advice on safety in school science laboratories. Safeguards is written by a group of experts convened by ASE including representation from SSERC. The strength of Safeguards is that it covers all the essentials of school laboratory safety in a small volume of 143 pages. Thus it is the logical first port of call when teachers have concerns or doubts about safety issues. From there teachers can then consult more detailed sources of guidance via the Health and Safety pages of the SSERC website [2] where definitive up to date advice that takes account of Scottish guidance and legislation can be found.



The tone of Safeguards is to encourage practical work in school science and to emphasise that school laboratories are safe places where accidents rarely occur. Its scope covers laboratory work in biology, chemistry and physics. In addition for a Science Curriculum Leader it covers managing health and safety, health and safety legislation, safe practice, first aid and emergency treatment. It also usefully contains advice on laboratory rules and on the immediate remedial measures to be taken before a first aider arrives.

As a quick and ready form of reference Safeguards is invaluable. Every science department should have one and every science teacher and technician should read it and be familiar with its contents (see fig 1). It is equally valuable as reassurance for the newly qualified teacher and as a point of reference for the more experienced colleague. For a Head of Faculty it will be invaluable for coming to terms with and developing an overview of aspects of safety in all the science disciplines and not just their own particular area of expertise.

Table 1 – Contents of *Safeguards in the School Laboratory*

1. Introduction	7. Safety equipment and other safety measures	13. Biological hazards
2. Health and safety legislation	8. Handling glass	14. Using students as the subjects of investigation
3. Managing health and safety	9. Gases under pressure	15. The safe use of chemicals
4. Safe laboratory practice	10. Mechanical hazards	16. The hazards of chemicals
5. Fire precautions	11. Electricity	17. Storage of chemicals
6. Heating things	12. Radiation hazards	18. First aid and emergency treatment

The ASE also publishes two other health and safety publications that will be of interest and value to science teachers and Science Curriculum Leaders. *Be Safe!* [3] is the equivalent publication to Safeguards for primary schools. It is an invaluable point of reference when primary schools seek advice on science and technology from their specialist secondary colleagues. The other is *Topics in Safety* [4], available as a set of individual downloads from the ASE web site. The topics go into greater depth than Safeguards providing a level of detail and background information that are useful when making health and safety decisions

or when providing advice to influence decision makers on health and safety matters. Figure 2 shows a list of all the topics.

Table 2 – *Topics in Safety*

1. <i>Managing health and safety</i>	8. <i>Fire precautions</i>	15. <i>Microorganisms and biotechnology</i>
2. <i>Teaching health and safety through science</i>	9. <i>Signs and labels</i>	16. <i>Working with DNA</i>
3. <i>Science technicians</i>	10. <i>Using chemicals</i>	17. <i>Electricity</i>
4. <i>Manual handling</i>	11. <i>Disposal of waste and unwanted materials</i>	18. <i>Lasers, infrared, ultraviolet and visible radiation</i>
5. <i>Eye protection and other personal protective equipment</i>	12. <i>Assessing carcinogenic hazards</i>	19. <i>Ionising radiations</i>
6. <i>Laboratory design for health and safety</i>	13. <i>Allergies and asthma</i>	20. <i>Working with enzymes</i>
7. <i>Fume cupboards</i>	14. <i>Living organisms</i>	

ASE, SSERC and CLEAPSS (the equivalent organisation to SSERC in England and Wales) work collaboratively to provide as consistent advice to schools as is possible. Remember that SSERC's advice on safety matters is available free through the web site and by telephone and by email to all teachers whose local authority, school or college is in membership of SSERC.

References:

1. Safeguards in the School Laboratory 12th edition, The Association for Science Education, Hatfield, 2020
2. SSERC, <https://www.sserc.org.uk/>
3. Be Safe! 4th edition, The Association for Science Education, Hatfield, 2011
4. Topics in Safety, ASE, <https://www.ase.org.uk/resources/health-and-safety-resources/reviced-topics-in-safety/>

