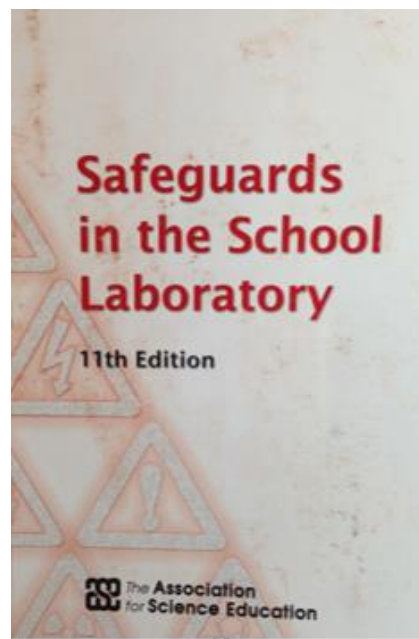




Safeguards in the School Laboratory 11th edition,
The Association for Science Education, Hatfield, 2006

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. A 12th edition is currently under preparation, so watch out for that. The strength of Safeguards is that it covers all the essentials of school laboratory safety in a small volume of 142 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.

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

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

In addition the ASE has published companion 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 where primary schools seek advice on science and technology from their specialist secondary colleagues. The other is *Topics in Safety* [4], intended originally as a reference book it is no longer available in a print edition. The topics are currently being revised and are available as 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 in making decisions or in providing advice to influence decision makers on health and safety matters. Figure 2 shows a list of all the topics.

Figure 2 – *Topics in Safety*

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

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 11th edition, The Association for Science Education, Hatfield, 2006
2. SSERC, <http://www.sserc.org.uk/health-a-safety>
3. Be Safe! 4th edition, The Association for Science Education, Hatfield, 2011
4. ASE, <https://www.ase.org.uk/resources/health-and-safety-resources/revised-topics-in-safety/>

