



## Safety X<sup>1</sup>: Science department safety policies

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*Changing legislation, changing attitudes towards safety, and changing responsibilities within schools mean that science departments or faculties need to have a written safety policy. The purpose of this article is to summarize what science departments should consider including in such a policy; it is not in itself a policy. Each department is unique, and needs to write its own policy in the light of its own circumstances, although departmental policies must of course be compatible with those of the school, the LEA, and any national requirements.*

### THE NEED FOR A SAFETY POLICY

In general terms, a safety policy is NOT a statement of all the ways in which practical science activities are to be carried out safely. Such information is already available in many publications [1, 2, 3, 4, 5]. Rather, it is a statement that defines procedures and areas of responsibility, in order to promote safe working for staff and students alike. The policy may initially be written by any suitably experienced member of the teaching team, not necessarily the head of department, but it should be reviewed and revised regularly. One member of the department could be given this task each year.

Lines of communication between the employer (ie the LEA<sup>2</sup> or governing body) and the school should be defined in the employer's own policy statement. The employer is responsible for health and safety in its school(s), (and even under LMS the LEA is still considered the employer in this context), but some employers may have delegated some duties to heads of science. For example, under the COSHH Regulations, if an employer has adopted a set of General Risk Assessments, the head of science will almost certainly be given the task of checking whether a proposed activity conforms with them, or whether a Special Risk Assessment is required.

Once a science department policy has been produced, it should be distributed to individual members of the department, perhaps as part of a departmental handbook. It may be thought desirable to ask staff to sign a statement that they have received the policy. In addition, copies should be attached to the school's safety policy statement, and also sent to the governors and the LEA.

### CONTENTS OF THE SAFETY POLICY

A safety policy document might contain the following sections:

- Introduction
- Specific responsibilities of particular staff
- General responsibilities of all staff

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<sup>1</sup> Previous articles in this series were published in Nos 209, 215, 217, 224, 231, 236, 246, 247, 250

<sup>2</sup> Many schools now are no longer under the control of the local education authority (LEA) but the trust or multi-academy trust has a similar role in this context.

- Procedures
- Regular checks
- Pupils
- List of safety resources

### *The Introduction*

The opening paragraph could explain that, under the Health and Safety at Work etc Act 1974, each employer must have a safety policy, that each school must have a safety policy, and, for clarity, it is desirable for individual departments to have their own policies. It might then go on to refer to the duties that the Act places upon workers, including their responsibilities towards each other (eg teachers towards technicians and vice versa), and their duty to co-operate with their employer in the matter of safety. There may be a reference to relevant sections of the employer's safety policy, or the whole of that policy could be attached as an Appendix.

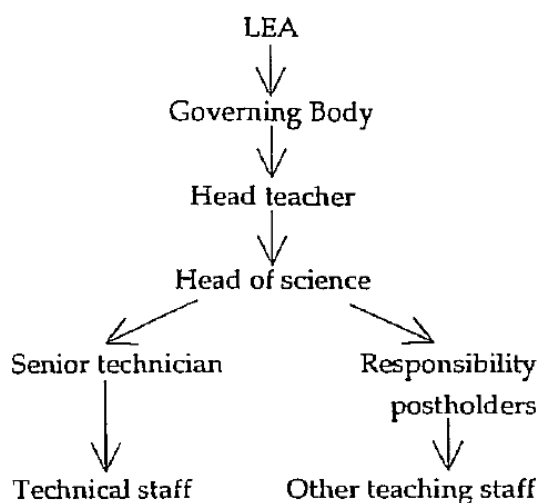
The policy should emphasise that it is the responsibility of all staff within the department to ensure that safe working practices are adopted. This includes:

- Designing practical work in such a way as to avoid or minimise hazards.
- Seeking the safest practicable way of achieving desirable educational objectives.
- Emphasising individuals' responsibilities to implement safety policies, procedures and precautions.
- Being aware of the uses of various types of safety equipment.

The policy should indicate not only the responsibilities of staff towards each other, and towards pupils, but also towards others who might be affected by their acts or omissions. This could include cleaners, caretakers, outside contractors and other visitors. It also includes non-science staff teaching in science laboratories, because they are providing support in a science lesson, covering for an absent scientist, or because there is no other room available.

### *Specific responsibilities*

The policy should lay down a chain of communication within the department. It will need to define who is responsible for what, in terms of implementing current safety policy. It should indicate, for example, which member of the science teaching team is responsible for disseminating safety information to less experienced staff, both teaching and technical staff. A well defined procedure should be included for recording and disseminating new safety information. A possible chain might be as follows:



Individuals should be named within the chain.

In addition to the above chain of communication, the policy will probably need to define the responsibilities of particular members of the department. The head of department has overall responsibility. It is suggested in *Topics in Safety*<sup>3</sup> that '...the head of department... is responsible for ensuring, so far as is reasonably practicable, that the working practices in the department do not give rise to risk to the health and safety of employees and pupils'. However, parts of the job are likely to be delegated. For example, who is responsible for:

- Co-ordinating the arrangements for risk assessments under the COSHH regulations?
- Checking the storage and labelling of chemicals?
- Checking that radio-active sources are logged in and out? (ie who is the Radiation Protection Supervisor?)
- Checking first aid boxes?
- Identifying safety issues in, for example, the Year 8 course?
- Training staff (teachers and technicians) in the use of safety equipment?
- The induction of new teachers and technicians?<sup>4</sup>
- Informing responsible authorities when faults are found in safety equipment such as fume cupboards?
- Monitoring the effectiveness of the departmental policy?
- Monitoring the effectiveness of teaching safety attitudes to pupils?
- etc.

Such responsibilities need to be explicitly stated in the safety policy.

### *General responsibilities*

Most science teachers would acknowledge that certain individuals have particular responsibilities by virtue of the posts they occupy (eg, in their role as Head of Chemistry). It can sometimes be forgotten, however, that all teachers and technicians have certain general responsibilities. These expectations, (in effect, rules for teachers and technicians), need to be spelled out: the following list gives some examples, although they may well need modification to cater for a particular school.

All teachers and technicians:

- Have responsibility for each other's safety, and should warn each other of hazardous situations.
- Are required to co-operate with the safety policies of the LEA, school, and department.
- Should set a good example, for example by wearing eye protection when needed.
- Check that a proposed activity is in accordance with the General Risk Assessments<sup>5</sup>.
- Make sure that laboratories and prep rooms are locked when unoccupied (unless this would block a fire exit);

In addition, teachers should:

- Take all relevant safety precautions when preparing lessons.
- Check that technicians know how to carry out safely hazardous operations which they have asked them to do (eg, diluting concentrated sulphuric acid).

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<sup>3</sup> *Topics in Safety*, 2nd edn, (ASE, 1988). The 2<sup>nd</sup> edition was replaced by an expanded 3<sup>rd</sup> edition in 2001 but that in turn has mostly been replaced by an on-line version in a rolling programme of up-dating.

<sup>4</sup> Who is responsible for providing re-training when there is a change in job or new equipment is to be used?

<sup>5</sup> Usually now referred to as Model Risk Assessments.

- Issue pupils with the departmental safety rules every year, and explain what they mean and why they are necessary.
- Remind pupils about the safety rules from time to time, and whenever a hazardous situation arises.
- Never leave pupils unsupervised in the laboratory.<sup>6</sup>

### Procedures

The departmental safety policy should lay down procedures for dealing with the day to day running of the department, for example:

- How laboratories are to be left at the end of a lesson.
- Duties of the last person to leave at night.
- Emergency procedures.
- What forms need to be completed in the event of an accident.
- How COSHH Risk Assessments are to be carried out.
- How hazards in new courses are to be identified.
- How staff are to be alerted to identified hazards in particular courses.
- What procedures for risk assessment are to be adopted in open-ended investigations or projects.
- How new staff, including technicians, students on teaching practice, probationary, articulated, licensed or overseas trained teachers, or indeed those just new to the school, are to be inducted.
- How safety matters get on to the agenda of departmental meetings.
- How pupils are to be trained in safety awareness.
- What support is given to supply teachers covering lessons.
- In what circumstances non-scientists may teach in laboratories.
- How visitors, eg support staff or parents, are dealt with.

In addition, there may be rules governing the use of particular items, eg Local Rules for the use of closed/open radioactive sources, or a requirement that technicians put out the relevant CLEAPSS Hazcards<sup>7 8 9</sup> when preparing lessons involving the use of hazardous chemicals.

Some of the information about procedures might most clearly be presented in the form of a table. A limited example is shown below.

<i>Event</i>	<i>Procedure</i>	<i>Effective Result</i>
New administrative memorandum <sup>10</sup> arrives	Head of Science copies to teachers and files copy in Dept Safety File	Relevant staff receive copies
Accident occurs	Emergency aid, emergency procedure including form filling by relevant staff	Head of dept discusses incident with appropriate staff
New member of staff	Head of subject or designated rep covers	Head of Science issues safety documents to new

<sup>6</sup> Special rules might apply to sixth form students, but the safety policy should define what is implied by limited supervision or supervision at a distance.

<sup>7</sup> *Hazcards*, (CLEAPSS, 1989). OR

<sup>8</sup> *Hazardous Chemicals: A Manual for Schools and Colleges* (SSERC / Oliver and Boyd 1979) [New edition in preparation 1995]

<sup>9</sup> Both CLEAPSS *Hazcards* and the SSERC *Manual* have now been replaced by on-line resources.

<sup>10</sup> The Department for Education no longer issues Administrative Memoranda but the procedure could apply to any newly-arrived health & safety information, eg from CLEAPSS/SSERC.

	safety in their area	staff and checks when/if read.
New course decided by department	Responsible staff check practical work to see if in accordance with usual practice.	If OK, teaching can commence. If not, Special Risk Assessment required.
Member of staff wants to introduce novel practical work involving chemical covered by COSHH regulations.	Head of Science follows local procedure for getting Special Risk Assessment on proposed technique.	Embargo on work until Special Risk Assessment arrives. If work is approved, assessment filed for future reference.

### *Regular checks*

Regular checks are required on a range of things found in science departments, for example:

- Fume cupboards
- Mains electrical equipment
- Autoclaves, pressure cookers and steam engines
- Possible leakage of radioactive sources
- Chemicals likely to deteriorate
- Eye protection
- First aid boxes
- Fire extinguishers
- etc

There is a statutory requirement for checking some of the above items, but for others it is just good safe practice. Some checks may be carried out by the employer, others are clearly the responsibility of the department. The policy should specify:

- Where the responsibility lies.
- The frequency and/or timing of such checks.
- The procedures or criteria to be used.
- How records of the check are to be maintained.

Checklists of jobs to be done by the last member of staff to leave at night might be included, together with checklists of those jobs done on a weekly, termly or annual basis.

### *Pupils*

A copy of the pupils' laboratory rules should be included in the policy document: different rules may be needed for different age groups. See *Appendix C of Safeguards in the School Laboratory*<sup>11</sup>. The policy should also make it clear that staff need to teach children actively about the rules, and the reasons for them. It should emphasize the need for constant reinforcement and reminders, eg about wearing eye protection. The policy might outline a departmental style for alerting pupils to safety points on worksheets, etc.

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<sup>11</sup> *Safeguards in the School Laboratory* 9th edn (ASE 1988). Such rules now appear in section 4.3 of the 11<sup>th</sup> edition (2006) of *Safeguards in the School Laboratory*.

## *Safety Resources*

The department should keep a central file of safety resources, known to, and easily accessible by, all members of the department. Included in this file will be any General Risk Assessments<sup>12</sup> adopted by the employer, eg *Topics in Safety, Hazcards, Microbiology: An HMI Guide for Schools and Further Education*<sup>13</sup>, *Safeguards in the School Laboratory, Hazardous Chemicals: a Manual for Schools and Colleges, COSHH: Guidance for schools*. Relevant Administrative Memoranda from the DES, publications from the Health and Safety Executive (eg on COSHH<sup>14</sup>), or circulars from the LEA should also be kept there for reference. The safety policy should include a list of such resources, together with details about access. Guidance on what to include in such a file may be found in Appendix B of *Safeguards in the School Laboratory*<sup>715</sup>. The policy should indicate how resources are kept up to date and how staff are informed about any such updating.

**The views expressed in this article are those of the authors and of the ASE Laboratory Safeguards Sub-Committee, and not necessarily those of their employers.**

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<sup>12</sup> Now, most Model Risk Assessments are based on current ASE and CLEAPSS/SSERC publications.

<sup>13</sup> *Microbiology. An HMI Guide for Schools and Further Education*, 2nd impression (HMSO 1990). Now out of print

<sup>14</sup> COSHH: Guidance for Schools, HSC (HMSO 1989). Now out of print.

<sup>15</sup> Now, schools mostly obtain authoritative guidance from the ASE or from CLEAPSS/SSERC.