Topic 1: Managing Health & Safety

This *Topic* (dated March 2017) is an updated version of *Topic 1*, which appeared in the 3rd edition of *Topics in Safety* (ASE, 2001). There have been changes to reflect legislative changes, and some rewriting to clarify particular sections, but on the whole changes are relatively minor.

1.1 Introduction

The Management of Health & Safety Regulations 1999 (*Management Regulations*) make explicit some requirements of employers in terms of managing health & safety. These are:

- to assess the risks to health & safety to which employees and others are exposed (the **significant** findings of the assessments must be recorded);
- to make arrangements for the effective planning, control, monitoring and review of safety measures, which should also be recorded;
- to provide comprehensive and relevant information to employees on risks, specific safety measures, procedures to be taken in the event of serious and imminent danger and to identify those responsible for implementing such procedures;
- to appoint a competent person or persons, to assist the employer in complying with its legal duties. Employers are encouraged to appoint such competent persons from amongst their own employees.

A head of science is expected to be a competent person as described in the last of the above points. S/he will be expected to manage health and safety within the science department in order to support the employer in fulfilling its duties.

Rather than repeat most of the detailed guidance available elsewhere, this *Topic* will concentrate on the significant management principles such as the need to make arrangements for the effective planning, organisation, control, monitoring and review of preventative and protective measures. These principles are discussed under various themes. We also aim to put the legal requirements in perspective as far as school science is concerned and raise issues that may be overlooked. The themes and issues are:

- Employers and employees
- Risk assessment (including consideration of students with special needs)
- The need for training
- The need for monitoring.

1.2 Science is safe

It is important in the management of health and safety within a science department to recognise that, in schools, science is extremely safe[1]. However, this observation does not provide an opportunity for complacency, rather the opposite. It does provide a context for implementation of practices and procedures, which will ensure that the present safety record is maintained and even improved.

Although there is no suitable recent data, some years ago the majority of accidents reported to HSE involving students in schools occurred during sporting activities and in playgrounds. At that time, only 2.3% of such accidents occurred in a science laboratory. The proportion of **serious** accidents occurring in science laboratories was even less, at around 0.8%. There is no evidence to suggest that

[1] See *Safeguards in the School Laboratory*, sections 4.1 and 4.2 (ASE, 11th edition, 2006). **https://secure.ase.org.uk/membersarea/shop/layout4.asp?Search=Safeguards+in+the+School+Lab+&type=product_name&submit1.x=0&submit1.y=0&submit1=Search**

this has changed significantly. A comment from an inspector from the HSE endorsed this by stating that the number of accidents in school science is vanishingly small. Such a record reflects the knowledge and understanding which science teachers and technicians have of the hazards associated with their work and the care taken to minimise the risk from them. However, a few of the accidents are very serious and there continues to be a number of minor accidents such as chemical splashes on skin and in eyes, cuts from glass, and burns and scalds, particularly from tripods and hot water. The aim is to reduce or eliminate these as well as ensure that the more obvious and significant risks continue to be controlled.

1.3 Employers and employees

The Health & Safety at Work Act 1974 (*HSW Act*) places duties on employers and on employees. The employer is the body with which the employee has a written contract. In education, the employer will be one of the following.

- Local authorities in England and Wales (for community and voluntary-controlled schools).
- Governing bodies in England and Wales (for some academies, free schools, foundation schools, voluntary-aided schools, etc).
- Trust boards in England and Wales (for academies in multi-academy trusts).
- Education authorities in Scotland.
- The Education Authority in Northern Ireland.
- Governing bodies, charitable trusts or proprietors (for independent schools).

A head of department and all the staff working in the department are employees. Students and visitors are referred to as ‘others’, who are covered by the general duty of care of the *HSW Act*.

The term ‘head of science’ is generic and is taken to mean any person who has some management responsibility for science in a school or college. This could be a head of department or faculty; the principal teacher or director of science; a subject leader; a head of biology, physics or chemistry; or a teacher in charge of a key stage. The term ‘staff’ is taken to mean any employee who works within science, full or part time. This may include teachers, technicians, non-science teachers covering lessons or tutor periods, support assistants, cover supervisors, other adults working in science, supply teachers or agency technicians.

The *HSW Act* gives employers the duty:

- to provide safe and healthy working conditions for employees and others;
- to provide information, instruction and training about health and safety; and
- to prepare a written health & safety policy which must be brought to the attention of employees.

Employees have the duty:

- to take reasonable care for their own health and safety and that of others;
- to co-operate with their employers over health & safety matters; and
- not to interfere with or misuse items provided for health and safety.

This last provision also applies to non-employees.

The *Management Regulations* additionally require employees:

- to carry out activities in accordance with training and instructions; and
- to inform the employer of any serious risk and failure in health & safety arrangements.

Delegation of tasks by the employer is made through the governors (or from the governors where they are the employer, e.g. in independent schools) or trust board and the head teacher to the head of science.

The head of science will therefore need to have systems in place:

- to plan for and manage health and safety within science;
- to ensure staff within the department are kept up to date and given training as appropriate; and
- to monitor and review the effective working of the systems within science.

It is important to note that although tasks have been delegated to the head of science, the responsibility for ensuring health and safety still ultimately rests with the employer. The employer is required to provide information, instruction and training in order that a competent person remains competent. The full working of the health & safety legislation is founded on the principle that the employer identifies the hazards and risks, sets up safety management systems, trains or appoints employees to carry out tasks and monitors the successful working of the system. As long as a suitably-trained employee does not wilfully or negligently disregard advice or instruction, and does take reasonable care for his/her own health and safety and that of other people, the responsibility, in the event of an accident, rests with the employer.

Table 1: Example of possible allocation of health & safety tasks in a science department

Head of Science (who happens to be a biologist)

In overall charge of health and safety in the department; specifically, in charge of managing risk assessment for post-16 biology; also for providing risk assessment information for 11-16 courses. Is in charge of GCSE and therefore for ensuring risk assessments are in place in these course(s). Produces annual health & safety report for head teacher and governors.

Second in charge of department (who happens to be the senior chemist) and is responsible for lower-school science.

In overall charge of ensuring risk assessments for lower-school courses are in place and that appropriate input is made by specialist colleagues; in charge of risk assessment in post-16 chemistry course; in charge of updating department on health & safety issues to do with chemicals; oversees health & safety implications of chemicals including their storage and security. Reports termly to head of science.

Senior physics teacher

In charge of risk assessment in post-16 physics courses and for providing risk assessment information and advice for 11-16 courses; is the radiation protection supervisor (RPS) and therefore in charge of safe storage and monitoring of radioactive sources and materials. Reports on these annually to the head of science.

Another teacher (a biologist of 5+ years' experience)

Agreed, as part of professional development, to be in charge of newly-qualified teachers, including their health & safety induction and monitoring; reports termly on this to the head of science. As the most-experienced microbiologist, is in charge of risk assessments to do with microbiology and with ensuring microbiological equipment and procedures are in place, suitable and up-to-date.

Senior technician (10+ years' experience)

In charge of technicians' health and safety; reports health & safety issues which arise to appropriate staff, e.g. difficulties with chemical storage to senior chemist. Because of training and agreed job description, in charge of doing annual inspection of fume cupboard (but not for repair work, nor responsible for any subsequent failure) and in charge of seeing that inspection of portable electrical appliances takes place (but not for doing this), Reports formally, termly, to head of science on health & safety matters, and informally very much more frequently.

Technician (part-time, shared with technology department)

Because of training and agreed job description, carries out the inspection of portable electrical appliances; reports health & safety issues arising from these, and other aspects of work, to senior technician.

All teachers and technicians

Responsible for personal health and safety and implementing school/departmental policies in their area of operation.

Teachers and, more rarely, technicians sometimes worry that, irrespective of the *HSW Act,* injured pupils, or parents/guardians on their behalf, may sue the teacher for damages in the civil courts. Whilst this is a theoretical possibility, and certainly occurs in the USA, it simply does not happen in the UK. If successful, the plaintiff would be certain of receiving much more compensation by suing the employer.

Unfortunately, some school employers fail to recognise their responsibilities and, for example, do not provide adequate training for managers such as heads of science. In such circumstances, in the event of an accident, the employer would be held fully accountable. Heads of science can ensure they are blameless by setting up suitable management systems in the department and monitoring their effectiveness.

The management structure shown in *Table 1* illustrates one possible way of organising a science department in order to fulfil the requirements of the *Management Regulations*. Functions are allocated to individuals to illustrate how the system might work. Remember, however, it is not the precise details which are important but the structure which ensures that the department can plan for, manage and monitor the health & safety systems needed.

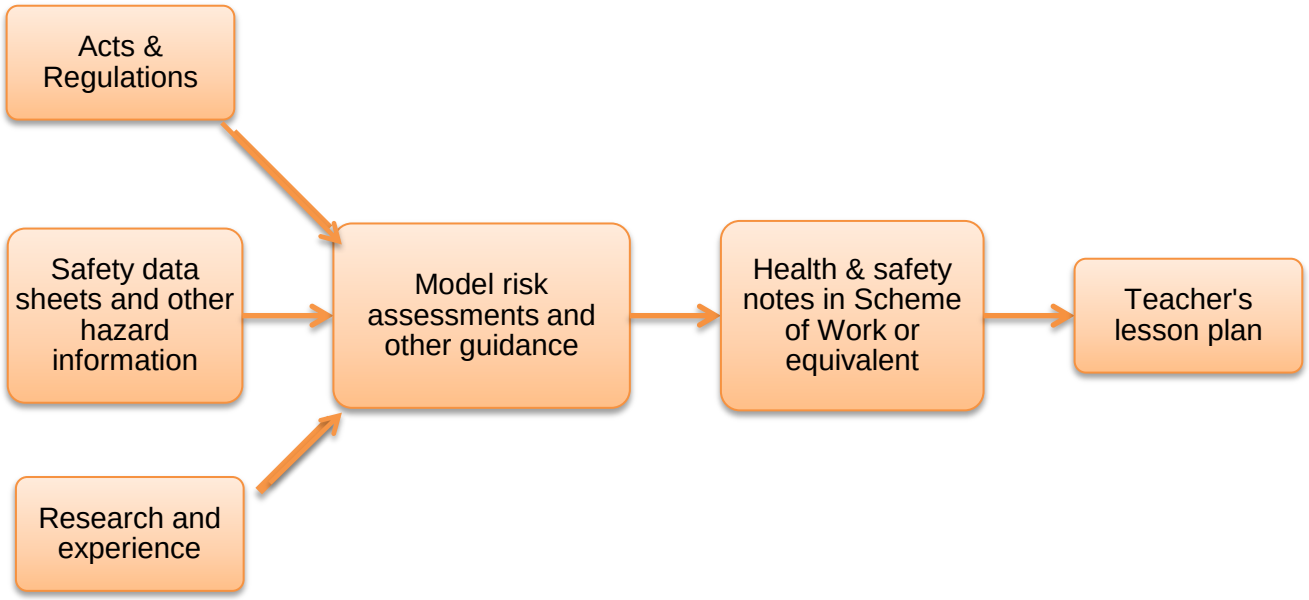
1.4 Risk assessment

Risk assessment sometimes has a bad name amongst science teachers. Safety precautions should be proportionate to the risk and enable practical science to be effective, memorable and motivating. Too many teachers and technicians think that a particular activity is banned or, if not actually banned, is unsafe to carry out in their school, with their facilities, teachers and students. Whilst this may sometimes be true and practical science must achieve the highest standards of safety, it should not be so risk averse as to damage the education of young people. Teachers and technicians need to understand the process of risk assessment and their role in it.

The phrase risk assessment is used in two distinct ways – to describe a process and to describe the outcome of that process. The law requires that employers carry out the process of risk assessment for each hazardous activity and that the ‘significant findings’ of that process are recorded. In effect, the law requires you to show the answer but you don’t have to show the working. The complexity of teaching science creates challenges for employers. It is one thing to assess the risks when cleaning the floor of the dining hall and to summarise the outcomes in a document for the site manager and the cleaners but it is quite another to do so for all of the dozens of practical activities that might take place each week in a good science department. Teachers often have their own successful way of carrying out an activity which may be different from that of their colleagues. Technicians handle larger quantities of chemicals, often in more concentrated solutions, than teachers or students. The biggest risk factor in most classrooms is the students themselves. They lack skills and experience, they don’t listen to or read instructions, their understanding of English may be limited, they may misbehave. Employers sometimes ask science departments to complete risk assessment forms which can be laughably unsuitable. For example, they may ask for a form to be completed for each chemical stored, ignoring the fact sulfuric acid is used in many different ways, with the risk depending on who is doing what with how much of it. Or they may ask for the hazards of each chemical being used in an activity to be listed – completely ignoring the much more hazardous products of the chemical reaction. Once completed, such forms sit unread and unloved in a filing cabinet and do not in any way influence what happens daily in the classroom.

The strategies described above are unmanageable and should be resisted – members could call on assistance or advice from CLEAPSS or SSERC. The preferred strategy, supported by the HSE, is for the employer to adopt model (or general) risk assessments, usually in the form of publications and guidance from CLEAPSS, SSERC or ASE. It is not, however, sufficient for the science department to have copies of these documents sitting on the shelf in the prep room or on a teacher’s laptop. Teachers and technicians must actually follow the advice in these model risk assessments, possibly modified to suit their local circumstances. They could be held to account for failing to do so. A good defence might be to argue that your employer had failed to inform you of

this requirement during training, especially if you had made a request for training that was turned down. The model risk assessments must be read and acted upon, and there needs to be evidence that this is happening. Would an inspector from the HSE get the same story if s/he talked to the head of department, a junior technician and a trainee teacher?



CLEAPSS, SSERC and ASE draw up model risk assessments and issue guidance based on an understanding of the relevant legislation, using safety data sheets and similar information from suppliers and knowing what schools (teachers, technicians, students, facilities) are really like and what happens there. Most schools will have a scheme of work, some sort of document which tells teachers what they are going to teach next and tells technicians what equipment is needed lesson by lesson. This is the one document everybody is likely to consult on a regular basis, unlike risk assessments tucked away in a filing cabinet. This is the place to make some safety notes, gleaned from a scrutiny of the employer's model risk assessments. This task can be shared amongst the more experienced members of the department, including technicians. If the scheme is from a commercial publisher it is not safe to assume that the author has done it correctly. It needs to be checked and endorsed perhaps by highlighting particular points or adding further comments. In any case, it could not take account of local factors, such as which rooms have a fume cupboard or which are too small for the safe conduct of some practical work with larger classes. The individual teacher then needs to consider the safety notes in relation to the class s/he is about to teach and incorporate key points into the lesson plan. An activity may be thought suitable for most of our Year 10 students but is it safe with my class, in this room, on a Friday afternoon?

Not everyone will want to follow the detailed scheme of work all the time. There are sometimes good reasons for an alternative, more imaginative approach. This should be encouraged – providing that there is a prior consultation of the employer's model risk assessments. If the proposed activity cannot be found there, a special risk assessment will be required, usually by contacting CLEAPSS or SSERC. Be warned, especially, of activities found on YouTube or elsewhere on the internet – some are downright dangerous.

Risk assessment and control measures will often need to be modified for some students with special needs and/or disabilities, perhaps because there is an increased risk in a practical activity when it is attempted by a student with a disability. Under the *Equality Act 2010* (or the *Disability Discrimination Act* in Northern Ireland) those who provide services have to make 'reasonable adjustments' for people with disabilities, such as providing extra help or auxiliary aids or making

changes to the workplace in order to overcome physical barriers to access. Heads of science will need to work with the school's SENCO in identifying pupils with special educational needs and planning and monitoring provision. ASE has published a useful article[2] on teaching science to pupils with special needs and there are two relevant publications from CLEAPSS[3, 4]

1.5 The need for training

Under the *HSW Act*, reinforced by the *Management Regulations*, there is a requirement to provide training for all staff: teachers, technicians and others who work in the department. Such training is required:

- when new staff are recruited (i.e., induction);
- if staff roles change (e.g., a physicist starting to teach chemistry or a PE teacher helping out in the science department);
- in the use of particularly hazardous equipment or materials;
- when new equipment or materials are introduced; and
- in emergency procedures.

This training must be repeated periodically, must take place during working hours, and must take account of the needs of part-time staff. To prevent the spread of misinformation, it must also be authoritative, using trainers or materials that are known to be accurate and up-to-date.

A head of science will usually be required to ensure that the above training requirements are met for the science department. Often the training is most easily and appropriately provided within the department itself, using suitably-experienced teachers or technicians. Discussions at department meetings will contribute to training. So, also, would the chemistry teacher giving a demonstration to the rest of the staff on how to conduct, for example, the thermite reaction safely. A new, but experienced, member of staff may only need to be given the department health & safety policy[5], with an appropriate commentary identifying specific ways of working within the department. A newly-qualified teacher requires a more-thorough and systematic induction[6] which is likely to include more wide-ranging themes than just how the department works. A recent chemistry graduate, for example, may be an expert in NMR spectroscopy, but has probably never generated - or even used - chlorine gas.

Trainee teachers need closer and more-detailed training and scrutiny. Health & safety issues should feature prominently in lesson planning and should be checked carefully by the teacher mentor. There should be regular and frequent discussion about lesson plans and, where there is doubt about a trainee's experience in carrying out a procedure safely, specific, hands-on training should be provided. The regular class teacher should be present for the first few lessons until s/he is satisfied that the trainee can be left alone with the class. Even then, an experienced teacher should always be within earshot and should check from time to time that all is well.

Occasional attendance at a training course is useful for every individual. The head of science or an aspiring head of science should attend one of the authoritative and relevant management of health &

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2 *Teaching Science to pupils with special needs*, SSR no. 296, March 2000. **http://www.ase.org.uk/journals/school-science-review/2000/03/296/**

3 *G077 Science for Secondary-aged Pupils with Special Educational Needs and/or Disability* (CLEAPSS, 2012). **http://science.cleapss.org.uk/Resources/Resource-Search.aspx?search=G077**

4 *G269 Safe Practical Science in Short Stay Schools* (CLEAPSS, 2014). http://science.cleapss.org.uk/Resource-Info/G269-Safe-Practical-Science-in-Short-Stay-Schools.aspx

5 See, for example, *G223 Model Health and Safety Policy for Science Departments* (CLEAPSS, 2013) http://science.cleapss.org.uk/Resource/G223-Model-Health-and-Safety-Policy-for-Science-Departments.pdf.

6 For members, CLEAPSS provides a useful checklist, ***G238 Health and Safety Induction and Training for Science Teachers*** (CLEAPSS, 2009).

safety courses available from CLEAPSS or SSERC. Such training is even more useful if the person reports significant issues and details to a subsequent meeting of the whole department.

The ASE has published an INSET pack[7] that helps a department to train itself. The flexibility of the pack allows training over a short period or, using occasional department meetings, to complete the programme over a couple of years. As well as being economical, the flexibility allows a department to tailor its training to meet its individual requirements.

Non-science staff such as form tutors, supply teachers and classroom assistants also require training if they are working in a laboratory. Usually such training can be brief and limited to some do's and don'ts (e.g., do not leave the class unsupervised, make sure the laboratory door is locked at the end of the lesson) that can be summarised on a simple handout. The training need only take a few minutes as long as there are no practical activities involved. If supply teachers or classroom assistants undertake practical work, more-substantial training is required. This is also the case if a non-science specialist is required, for timetable reasons, to teach science regularly.

It is essential that technicians are included in all relevant staff training, including that which is undertaken at department meetings. However, this is nowhere near sufficient. Some of the technicians recruited in schools have few relevant qualifications or prior experience. Even those with relevant qualifications and experience may well have gaps. A school needs to ensure that the competences are assessed and steps taken to fill the gaps. Sometimes this can be done partly in-house but often there are advantages in sending an individual on courses run by reliable trainers with direct school experience, eg CLEAPSS and SSERC. Technicians often act as an important source of health & safety information for teaching staff and so it is vital that their information is accurate and up to date. Newly-qualified teachers and trainees often report that technicians are their best – or only – source of health & safety advice and training. Allowing a technician to attend occasional, good-quality, local or national training courses is often cost-effective, particularly if this includes planned feedback to the rest of the department. Trainee and newly-qualified technicians need close supervision, normally by the senior technician. Whilst this can be difficult to ensure, it is essential for the more hazardous activities. CLEAPSS provides a useful checklist[8] for its members.

All members of the department need training in emergency procedures such as using eye-wash facilities. Training of this sort generally involves practising the procedures that are already well documented in several safety publications (e.g., from CLEAPSS and SSERC). Training for other emergency remedial actions such as dealing with cuts or possibly resuscitation techniques requires specialist input. The school nurse or first aider will be able either to offer such training or suggest someone who can. This kind of training ought to be repeated every few years to ensure it remains fresh in the minds of staff. The ASE INSET pack offers a suitable resource for some of this training.

As part of continuing training, it is important that department staff have access to correct as well as up-to-date information. Ways of bringing this about are discussed below but, on all occasions where new information is discussed, it is essential that the source of the information is specified and, if necessary, checked. It is inappropriate for a member of the department to report a health & safety issue that was relayed from a colleague perhaps in a different school, that was in turn brought back from a training course by a further colleague. Such information can be misinterpreted or exaggerated in the re-telling, often becoming educationally harmful. It should be a criterion for all health & safety information that the documentary source and/or information route is known and recognised as informed and trustworthy. If there is any doubt, a telephone call to CLEAPSS or SSERC will quickly establish the accuracy or otherwise of any information.

One of the simplest and most-effective ways of ensuring all staff keep up-to-date is to have health and safety as a standing item on the agenda of all science department meetings. That way, if there is

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7 *Safe and Exciting Science*, 2nd edition, ASE, 2009. ISBN 978 0 86357 423 8. **https://secure.ase.org.uk/membersarea/Shop/layout4.asp?Child=Child&PID=256**

8 G234 - *Induction and Training of Science Technicians* (CLEAPSS, 2009).

anything to note, it can be raised and discussed. Staff should be encouraged to report near-misses and examples of potentially-unsafe practice. It is important to encourage a culture of no-blame reporting, as happens, for example, amongst airline pilots. Having health and safety as a standing item ensures that it is regularly considered and never overlooked. A 'Hazard Book' hanging in the prep. room (or electronic equivalent) may encourage reporting, as long as it is routinely checked.

Important safety documents sometimes need to be read in full or in part by all members of the department. This includes health & safety circulars, articles in ASE journals, newsletters from CLEAPSS or SSERC and, occasionally, new health & safety reference texts. Such documents should be circulated systematically through the department with a staff list attached and a reasonable timescale for individual reading given. A date for final return to the head of department should also help to ensure that the document does not become irretrievably lost. As a way of raising awareness, some teacher trainers and some employers expect all trainees and/or newly-qualified teachers to read the most recent edition of *Safeguards in the School Laboratory*[9] as a useful summary. However, persuading more established members of staff to do so is less likely to be successful. The head of department could annotate the staff list with suggestions as to which parts of the book are most appropriate for each member of staff and ask individuals to report back to a department meeting on any issues they found surprising or likely to be significant to that school. By sharing the burden, the task of keeping up with developments is reduced, and health and safety becomes more fully integrated into the thinking of the department.

1.6 The need for monitoring

Once appropriate systems and practices are in place, the head of science is required to monitor that they are working as intended. Monitoring does not mean checking everything - a representative sample is usually enough. The head of department does not personally have to check all aspects of health and safety in the department. Some checking can be delegated to those members of staff who have responsibility for specific elements of the curriculum. Planned health & safety discussions with those staff will enable the head of science to monitor the outcomes of those checks.

Monitoring of procedures and equipment can use checklists such as *Appendices 1* and *2*. There should be a programmed time each year when the checklists are used and signed to confirm that all is well. The timing of this monitoring might precede a brief annual written report on health and safety within the department to the head teacher and/or governors.

Pupils can be monitored against department laboratory rules and accepted ways of working (such as the wearing of eye protection). Such monitoring is primarily the task of the individual science teacher but the head of science should sample lessons to see that the rules are being followed.

Monitoring of teachers' and technicians' practice is less simple but no less important. Discussions at department meetings will identify much about health & safety practice. Occasional observation of lessons, or even brief visits to classes, can confirm whether, for example, risk assessments are leading to safe practice and whether pupils are generally working safely. Scrutiny of technicians' requisition sheets may indicate whether risk assessment procedures are being followed. The department's accident record may identify whether there are any patterns to accidents and incidents although these will usually emerge much more quickly through regular discussion.

Newly-qualified and less-experienced teachers - and especially trainee teachers - will require closer monitoring than more-experienced colleagues. However, beware also the 'creative' teacher or any who are unwilling to change long-established, but unsafe, practices. Monitoring is best set in the context of verifying lesson planning and occasional paired working in the laboratory to observe practice. It would be inappropriate for monitoring of a new colleague to be heavy handed even where safety matters are being checked. More-experienced staff teaching an area of the curriculum

[9] *Safeguards in the School Laboratory* (ASE, 11th edition, 2006). **https://secure.ase.org.uk/membersarea/Shop/layout4.asp?Child=Child&PID=256**

for the first time may also require more-sensitive handling but this is no reason to assume that the health and safety of their practice should not be verified.

Schemes of work, their associated safety notes and the department health & safety policy will establish acceptable practice. Monitoring can be used to ensure all staff follow guidelines but it is generally more effective if, through department meetings, staff understand they are expected to follow the guidance. Subsequent monitoring can then be of a 'lighter touch' except where there is reasonable cause to believe that guidelines are not being followed.

A science department should maintain a health & safety monitoring log to record outcomes of monitoring. This can act to cross check that monitoring has taken place. Such a log may be kept within a department diary, an exercise book or on a computer. A record is kept of the date a monitoring activity or discussion took place and a note of any significant outcomes if these are not recorded elsewhere. For example, following a brief discussion with the senior physics teacher, who is the school's radiation protection supervisor, an entry in the log could read: "Radioactive sources and procedures checked and confirmed; details in ionising radiation folder and log". In the case of a newly-qualified teacher, the entry should indicate whether or not health & safety issues were successfully managed, e.g. in a lesson observed, and whether, in addition to ensuring students follow safe practice, any notable advice or instructions were given.

Appendix 1: Regular checks required in a science department

Check	*Frequency*	*Legal Status*
Fume cupboards. (See *Topic 7.6*)	At least every 14 months.	Specific requirement under *COSHH Regulations*.
Contamination of radium sources. Damage to any sealed radioactive sources. Leak tests. (See *Topic 19*)	Annual. Visual check every time used. [At least once every two years (but CLEAPSS and SSERC recommend annual)].	Specific requirement under *Ionising Radiation Regulations.*
Portable mains-operated electrical equipment. (See *Topic 17*)	Depending on extent of use, items used frequently, such as power packs, may need to be checked termly.	Specific requirement under *Electricity at Work Regulations.*
Autoclaves, model steam engines & pressure cookers.	As specified in the written Scheme of Examination drawn up by a competent, certified person.	Specific requirement under *Pressure Systems Safety Regulations.*
Chemicals with a short safe shelf-life.	Annual.	General duties under *HSW Act.*
Gas cylinders and gas cylinder regulators.	Gas cylinders are often hired and the hirer will test them. Regulators should be inspected yearly and serviced or replaced every 5 years.	Specific requirement under *BCGA Code of Practice*
Beams that are part of the building structure and designed for use in lifting.	Should be arranged by the school management as part of the building maintenance. The frequency of inspection should be that advised by a structural engineer.	General duties under *HSW Act*.
General laboratory fixtures and fittings, equipment, etc.	A checklist should be drawn up of items to be checked daily, weekly, termly or annually.	General duties under *HSW Act*.

Appendix 2: Summary health & safety checklist for heads of science

(This may be freely copied)

1. Health & safety policy document

If required by the employer, is there an up-to-date and appropriate science health & safety policy?
yes ⑦ no ⑦

2. Safety check logbook or file

Does the department have a file or log book, showing when various checks/tests were carried out, by whom, and with what outcome? yes ⑦ no ⑦

3. Functions of named persons

Do named individuals have health & safety functions related to particular courses, for the induction of new staff, etc? List the names and their functions (on the back, if necessary): yes ⑦ no ⑦

4. Risk assessment (for the *COSHH Regulations*, the *Management Regulations, etc*)

Has the employer defined clear procedures (usually involving the use of model risk assessments with local modification), and are these understood and implemented by all teaching and technical staff?
yes ⑦ no ⑦

5. Health & safety guidance, training and communication

Are there appropriate rules for pupils, suitable guidance and training for staff (teachers and technicians), and an effective mechanism for the communication and dissemination of safety information? yes ⑦ no ⑦

6. Fume cupboard testing

Is the testing of fume cupboards in accordance with the requirements of the *COSHH Regulations*?
yes ⑦ no ⑦

7. Pressure systems

Is the testing and checking of pressure vessels in accordance with the requirements of the *Pressure Systems Safety Regulations*? yes ⑦ no ⑦

8. Radioactive substances & ionising radiation

Is there a Radiation Protection Supervisor, and are the legal requirements fully met? yes ⑦ no ⑦

9. Portable electrical appliance testing

If portable electrical appliance testing is a task delegated to the science department, does the testing meet the employer's requirements? yes ⑦ no ⑦

10. Fire extinguishers

Are fire extinguishers checked annually (normally by an external contractor)? yes ⑦ no ⑦

11. Chemicals

Are chemicals date-stamped on arrival, clearly labelled including hazard information, and the condition of those liable to deteriorate checked regularly? Are they stored securely? yes ⑦ no ⑦

12. Personal protective equipment & other safety equipment

Is eye protection, and other protective equipment, readily available, in good condition, and used whenever the risk assessment requires it? yes ⑦ no ⑦

13. Condition of laboratories, store rooms & preparation rooms

Is the condition of the science accommodation (including appropriate safety signs) subject to regular systematic checks? yes ⑦ no ⑦

14. Employer's Local Rules or Codes of Practice

If required by the employer, are any Local Rules/Codes of Practice known and adhered to?
yes ⑦ no ⑦

15. External Health & Safety Audit

Has there been any health & safety audit by someone external to the school, with recommendations being acted upon? yes ⑦ no ⑦