

CLEAPSS

G223

Health & Safety Policy for St Michael's Prep Science Department



November 2016

Reviewed and revised as required

Health & Safety Policy for Science Departments

CLEAPSS Guide G223

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HEALTH & SAFETY POLICY for SCIENCE

Introduction

All teachers, technicians and support staff

1. Teachers and technicians have a general duty to take reasonable care for the health and safety of themselves, of other members of staff and of pupils. They have specific duties: to be familiar with this health and safety policy, its updates, the texts to which it refers and any Appendices. They must cooperate with the employer's instructions, observe the requirements of this policy and fulfil any special responsibilities it gives them. They must cooperate with colleagues in their specific health & safety duties. They have a duty to report to local management any failure of equipment that has a health & safety function.
2. Staff practice must set a good example to pupils and be consistent with pupil laboratory rules, eg, over the wearing of eye protection.
3. Staff must be familiar with emergency drills and with the location in each science room of: the escape route; fire-fighting equipment; the eye wash station; the main gas cock; the main electricity switch and the nearest spill kit.

Firefighting equipment is located in both laboratories and clearly labelled. Eye wash stations are available in both laboratories and are clearly labelled. Escape route notices are displayed on the wall of each lab and prep room. Spill kits are available in both labs and clearly labelled.

The emergency stop push button to turn off all electricity and gas is located in both labs and prep room and is clearly labelled
4. Laboratories must be left safe. Special arrangements must be made for equipment which has to be left running overnight and hazardous equipment which has to be left out. In general, all gas taps should be completely turned off and all mains-operated apparatus switched off.

Power- Mains lab off at night, unless ICT maintenance is being carried out, when site manager is made aware that the power and gas is on. ICT maintenance staff must notify Site manager when the power/gas is on outside the normal teaching day and when science staff are not present

[At the end of the day, if practicable, gas should also be turned off at the laboratory main gas cock and electricity at the laboratory main switch.]

Power in Prep Lab is on at all times for fridge (chemicals needing to be kept cold) and fish tank (in SWo) power supply
5. Eating, drinking and the application of cosmetics should not take place in laboratories, storage areas or preparation rooms unless an area in which it is safe to do so has been created. There are notices in both labs to inform pupils that there is to be no drinking or eating in the laboratory.
6. When staff are alone in the science department, nothing should be done which could lead to an accident requiring remedial measures. A teacher or technician must assess risks very carefully before conducting any practical operation in such circumstances.
7. In general, pupils must not be left unsupervised in a laboratory. Staff needing to leave a class briefly must assess the risks of doing so, perhaps arranging for temporary supervision by a neighbouring member of staff. Special arrangements may be needed for senior students doing project work, depending on the hazards involved, eg, an experienced member of staff in an adjacent room.
8. Science laboratories, preparation rooms and stores are locked electronically with fob access when not in use. Pupils are never allowed into preparation rooms unless 100% supervision can be guaranteed. Laboratories must only be used by teachers who are not scientists for teaching or registration if the laboratories have been cleared/ or the technician is in attendance. The setting of cover lessons must take into account the need not to involve specialist dangerous equipment.

Teachers

1. At the beginning of each school year, teachers must make sure that their classes have copies of the student laboratory rules [see section 10] and issue them if necessary. They should be stuck into an exercise book, work folder or similar place.

2. Teachers must enforce the student laboratory rules, reminding students of them often enough for them to be familiar. With new students, time should be spent explaining the rules, with appropriate demonstrations.
3. Lesson preparation should be adequate and include checking on risk assessments and, where necessary, the health & safety precautions required. Requisitions must not be handed in at the last minute; technicians must be given adequate time to prepare work safely. Time should be allowed for consulting more-senior colleagues where there is any doubt and to try out practical's, particularly those involving significant hazards. Teachers must only deviate from the scheme of work (for which the activities have been checked against model risk assessments), after considering a further risk assessment, checking with a subject specialist, possibly obtaining a special risk assessment from CLEAPSS. Teachers should explain precautions to students as part of their health & safety education, [using the CLEAPSS *Student Safety Sheets*, where appropriate].
4. Open-ended investigations must be organised to allow the teacher to assess any risks and identify precautions before any hazards are met / practical work begins.
5. If, health and safety cannot be maintained during certain practical work, the work should be modified or abandoned. This decision should be reported to the [Head of Science] / [subject specialist].
6. A teacher is responsible for the health and safety of any of his/her classes taken by a trainee teacher. If the normal class teacher is absent, another science teacher must be given this responsibility by the Head of Department.
7. Teachers in charge of courses are responsible for ensuring that technicians are familiar with the appropriate precautions needed to control any hazards which might be encountered in preparing equipment for their lessons and in clearing the equipment away. Class teachers may need to remind technicians of such warnings.

Health and Safety in Science at St Michael's Prep

1. The role of this policy

This *Science Department Health & Safety Policy* should be read in conjunction with the employer's general Health & Safety Policy and [where separate] the detailed arrangements for implementing that policy in this school. The purpose of this document is to record the arrangements made in the science department to implement the policy. This document is maintained by the science department. It is copied to all new members of staff, ie, teachers, technicians, trainees, etc working in the department. A reference copy, is kept in the Science folder in Curriculum folder on staff drive and is available for consultation by staff and for inspection by visiting HSE inspectors or a representative of the employer. A copy of this document is also in the department. All members of staff are able to play a part in and are required to assume responsibility for health and safety at school. The science department is represented on the health and safety committee and aims to promote health, safety and welfare and will address any matters raised by or through such a representative in a manner appropriate to the level of risk.

2. General aims

Science teaching has an excellent health & safety record and this department is keen to promote practical work as an essential component of good science teaching. It is determined that spurious concerns about health and safety should not be allowed to inhibit good teaching. However, it is the duty of all members of the science staff and those who work in the department occasionally, technicians, teaching assistants and other support staff (eg, special needs and bilingual staff) and trainees:

- to take reasonable care for the health and safety of themselves and other persons who may be affected by their acts or omissions during work;
- to be familiar with this health & safety policy by periodic reference to it;
- to look out for any revisions;
- to follow its provisions, and
- to cooperate with other members of staff in promoting health and safety.

3. Health and safety roles

3.1 Duties, functions and tasks

The employer, St Michael's Prep, has the ultimate duty to ensure the health and safety of employees and others on the site (and hence in this department).

The task of overseeing health and safety on this site has been delegated by the employer to the Health and Safety Leader. Within the science department, this task is further delegated to the Head of Science who has the particular function of maintaining this policy document. See section 10 for the names of the staff members currently with specific H&S functions.

3.2 Communications

Communication of health & safety information is of the greatest importance and is the task of the Head of Science with the assistance of subject specialists. In this department, all staff are issued with this policy. A reference copy is kept in the prep room.

3.3 Monitoring and checking

The employer expects the science department to monitor the implementation of this policy. Records of monitoring are kept by the Head of Science. Monitoring and checking records kept in Prep Lab. Weekly checks on front of cupboard. Termly and Annual checks in green science health and safety file.

Weekly checks	Termly checks	Annual checks
First aid Kit	Bunsen tubing	Disposal of unwanted chemicals
Eye wash bottles/station	Fume cupboard	Chemical stock take
Spillage kit	Chemical store/ Tidiness and labelling of bottles	Glass disposal
Position of fire extinguishers	Chemical stores/Review of quantities	Risk assessment and procedures updated
	Visual inspection of Alkaline metals	Battery disposal
	Visual inspection of safety glasses	Fume cupboard

This policy is reviewed as required

Date of last review November 2016 (JAi SWo and JBo)

4. Training

The person with the task of seeing that training is provided is the Head of Science.

Particular training functions are delegated as follows (to be read in conjunction with section 10).

Health & safety aspects of the work of newly-qualified teachers and other new teachers	The Head of Science
Health and safety of trainees on teaching practice	The Head of Science
Induction of newly-appointed technicians	The Head of Science
Immediate remedial measures and other emergency procedures (spills, bench fires, etc)	The Head of Science/Technician/Teacher in Charge of Classroom
Training in the use of specialist equipment, chemicals or procedures (in line with CLEAPSS guides L238 and L234, as customised)	The Head of Science/Science Technician
Health & safety training of non-science support staff	The Head of Science/Science Technician
Health and safety of non-science teachers using laboratories	The Head of Science/Science Technician
Manual handling for all staff using laboratories	The Head of Science/Science Technician
*Healthy and safe procedures for laboratory cleaners	The Head of Science/Science Technician
Regular update training (covering new or changed regulations, new equipment etc)	The Head of Science/Science Technician

*Cleaners and maintenance staff are trained annually on basic laboratory safety: How to turn off gas, about safe behaviour around any equipment or chemicals that may be in the prep lab awaiting use the following day. Equipment left out must be in a safe state, e.g. hotplates turned off and chemicals must be labelled with internationally recognised warning symbols. No hazardous chemicals will be left out in the labs when science staff are not present.

Records of the training received by members of the science staff/support staff, maintenance and cleaners are kept in the Prep Laboratory by the Science Technician.

5. Risk assessments

Every employer is required to supply employees with a risk assessment before any hazardous activity takes place. (Common hazardous activities carried out in science departments are listed in the publications below.) Because it is impracticable for the employer to write risk assessments for each of the many activities in school science, this employer follows the recommendation of the Health and Safety Commission to adopt published 'model' or 'general' risk assessments which school science departments adapt to their local circumstances.

The employer has endorsed the use of the following publications as sources of model (general) risk assessments.

[CLEAPSS² publications generally]

[CLEAPSS, *Hazcards*, current edition]

[CLEAPSS, *Laboratory Handbook*, current edition]

[CLEAPSS, *Recipe Book*, current edition]

[ASE, *Safeguards in the School Laboratory*, ASE, 2006 (11th Edition), ISBN 978-0-86357-408-5]

Whenever a new course is adopted or developed, all activities (including preparation and clearing-up work) are checked against the model risk assessments and significant findings are incorporated into texts in daily use, ie, the risk assessment files. See section 10 for the member of staff with the task of overseeing this process³.

If a model risk assessment for a particular operation involving hazards cannot be found in these texts, a special risk assessment is obtained, following the employer's instructions, from CLEAPSS. In order to assess the risks adequately, the following information is collected.

Details of the proposed activity.

The age and ability of the persons likely to do it.

Details of the room to be used, ie, size, availability of services and whether or not the ventilation rate is good or poor.

Any substance(s) possibly hazardous to health.

The quantities of substances hazardous to health likely to be used, including the concentrations of any solutions.

Class size.

Any other relevant details, eg, high voltages, heavy masses, etc.

Since the scheme of work has been checked against the model risk assessments, staff should deviate from it only if their proposed activities have been agreed with the Head of Science.

We encourage the development of new practical activities (including on open evenings, at science clubs, etc) but these should be undertaken only after a prior check against model risk assessments and/or a special risk assessment has been obtained.

Where an activity must be restricted to those with special training, that restriction is included in a note on the text.

² Current versions of all CLEAPSS publications for secondary schools are available to members on the CLEAPSS website.

³ See CLEAPSS guide L196, *Managing Risk Assessment in Science* and the guidance leaflet GL90 *Making and recording risk assessments in school science*.

For technicians' activities in and around the prep room, the assessments in CLEAPSS publication PS25, *Model Risk Assessments for Laboratory Technician Activities* have been customised and form an Appendix to this document.

6 Equipment and resources

6.1 Fume cupboards

The *COSHH Regulations* require the regular testing of fume cupboards (maximum interval 14 months) with a quick check before use. This is arranged by the Estate Manager, and the Science Technician has the function of seeing that this happens. The regular tests will be carried out by the trained technician servicing the fume cupboard using a suitable air-flow meter. The Records of this are kept by the Estates manager

All users have been trained to carry out a quick check that a fume cupboard is working before use.

Smoking cigarettes is not permitted in the school. However, **demonstrations of a 'smoking machine' are permitted in fume cupboards in designated laboratories.** The following laboratories fitted with efficient fume cupboards, or in which an efficient mobile fume cupboard could be used, are so designated: SWo lab.

6.2 Electrical testing

To meet the requirements of the *Electricity at Work Regulations*, this employer requires portable electrical equipment to be inspected and tested regularly. The Science Technician has the function of seeing that this happens within the science department. Testing normally takes place each year at Christmas. This is arranged by the Estates Manager.

Completed schedules are kept by the Estates manager and are available for staff reference and for inspection by the employer's representative or an HSE Inspector.

See section 10 for the names of the staff members currently with these functions.

All users must carry out a quick visual inspection before using mains-powered equipment.

6.3 Radioactive sources

Not applicable

6.4 Pressure vessels

Not presently applicable

6.5 Animals, plants and microorganisms in schools

The hazards associated with the use of animals, plants and microorganisms are discussed in the texts listed in section 5 which also give advice on controlling them. This advice will be followed and any queries referred to the subject specialist for biology (see section 10).

6.6 Equipment safety

All staff selecting equipment for purchase will check that it is safe and suitable for the intended purpose (to comply with the *Provision and Use of Work Equipment Regulations*). Equipment listed by specialist educational equipment suppliers is taken to meet these *Regulations* but all other equipment, especially gifts, is treated with caution and carefully assessed. Advice on safety and suitability is sought from CLEAPSS through publications and directly.

Any user who discovers a hazardous defect in an item of equipment must report it to the Science Technician/Head of Science.

6.7 Personal protective equipment

The employer accepts the duty to provide eye protection, gloves and laboratory coats for employees where the risk assessment requires them (*Personal Protective Equipment at Work Regulations*). Prescription safety spectacles are to be ordered from an optician and the employer will meet the full cost of the safety features. Laboratory coats are supplied by the employer.

The employer expects eye protection to be available for students and visitors. Safety spectacles are provided for general use, with a set of goggles or face shields used whenever the risk assessment requires them. Goggles or face shields to chemical-splash standard are worn whenever there is a risk to the eyes.

The condition of the eye protection is checked termly by the science technician and noted and dated in the termly check sheets located in Science Department Health and Safety green folder located in the prep room (see section 3.3, *Monitoring and checking*).

6.8 Chemicals

Offers of gifts of chemicals are not accepted.

The task of arranging safe storage of chemicals (and, where necessary, disposal), including highly-flammable liquids, in accordance with the requirements of the *Dangerous Substances and Explosive Atmospheres Regulations (DSEAR)* is given to the Science Technician who will ensure that chemicals are stored securely, the risks of fire, explosion and spillage are minimised, labels are readable and that a spill kit is available and properly replenished.

See section 10 for the name of the staff member currently with this function.

Hazardous activities involving chemicals restricted to those who have received special training (see section 4, *Training*) are identified in the texts in daily use as part of the risk assessment (see section 5, *Risk assessments*).

6.9 Waste disposal

Waste chemicals and equipment are disposed of in an environmentally-responsible manner in accordance with relevant legislation. Chemical disposal follows guidance on *CLEAPSS Hazcards* (2007 edition or later). Other disposal follows relevant *CLEAPSS* guidance.

7 Activities and procedures

7.1 Outdoor activities

Science lessons outside or science related trips follow relevant Risk Assessment expectations

7.2 Manual handling and working at height

All regular operations involving lifting or carrying equipment, pushing trolleys, etc will be assessed to see if any may give rise to risks of injury (*Manual Handling Operations Regulations*) by the Head of Science.

As it is sometimes necessary to carry chemicals or equipment through heavy fire doors, we have assessed risks under both the *Manual Handling Operations Regulations* and under the *Regulatory Reform (Fire Safety) Order* and consider that the risk of manual handling injury is greater than the risk of fire injury, therefore, we will prop open the fire door using wedges. We will endeavour to keep the fire door closed as much as possible by removing the prop as soon as practicable.

Occasional (ie, one-off) manual-handling operations will be assessed by the staff member(s) before attempting them. Problems will be reported to the Head of Science.

The relevant Manual Handling guidance fact sheet is displayed in the Science Prep room

See section 10 for the names of the staff members currently with these functions.

Following risk assessments under the *Work at Height Regulations*, when it is impossible to avoid storage or display above head height, only light-weight and rarely-used items are stored there. When displaying items at high level or fetching or replacing items stored at high level, step ladders or kick stools should be used. Staff preferring to stand on benches should only do so with another member of staff close to hand to steady them or assist.

7.3 Security

Access to laboratories and preparation rooms will be controlled to comply with the *Management of Health & Safety at Work Regulations*. All laboratories are kept locked with access by fob only at all times except when in use. It is the task of the staff member leaving such a room to see that the room is empty and that the door is

locked. No class is allowed to be in a laboratory without supervision by a qualified science teacher, familiar with the departmental safety procedures.

Any non-science staff who have to supervise any class in a laboratory will only do so if a trained science teacher is in the adjacent lab.

7.4 Concern for others

All science areas are made safe for cleaners or contractors to work in before these persons are allowed to proceed.

8. Emergency procedures

8.1 Fire

Science staff will follow the normal school procedures in case of major fires. All science staff are trained to deal with minor bench fires, clothing fires and hair fires.

See appendix 2. This training is supported by regular drills arranged by the Head of Science. See section 10 for the name of the staff member currently with this function. Advice on fire-fighting is given in sections 4 of the *CLEAPSS Laboratory Handbook*.

8.2 Spills

Trivial spills are dealt with using damp cloths or paper towels. Spills of any amount which do not give rise to significant quantities of toxic or highly-flammable fumes ('minor spills') are dealt with by teachers or technical staff using a 'spill kit' prepared for this purpose in accordance with section 7 of the *CLEAPSS Laboratory Handbook*. Spill kits are kept in both labs and all science teachers are instructed in their use.

Major spills are those involving the escape of toxic gases and vapours or of flammable gases and vapours in significant concentrations. (Small amounts can be 'major spills' if spilt in small rooms.) Staff are trained in the appropriate procedures. There is a paper copy signed and dated by all members of staff trained in this located in the prep room in Green folder labelled Science Dept Health and Safety.

A blank document version can be found on RMstaff\prep\staff\curriculum\subjects\science\health and safety

Science staff will follow the normal school procedures in cases that require first aid. Science staff are trained to carry out immediate remedial measures (eg, eye rinsing), while waiting for first aiders, if they are not themselves trained, after accidents which occur in science. See the most recent edition of the *CLEAPSS Laboratory Handbook* section 5. All staff receive remedial first aid and should treat injuries only in so far as they feel competent to do so. Emergency services should be called in serious cases.

8.4 Reporting procedures

Injuries or suspected injuries to a pupil or a member of staff, dangerous occurrences and instances of damage or theft will be reported using the standard school procedures. Following an injury, so that the Regulations (*RIDDOR*) can be complied with, the accident must be recorded in detail on a serious injury form, kept in the Office, and reported to the Health and Safety Leader and Head of Science as quickly as possible.

Dangerous situations and incidents which might have resulted in injury ('near-misses') should be reported to the Head of Science and Health and Safety leader in writing. These will be analysed and discussed at departmental meetings and at the Health and Safety Committee.

9 Laboratory rules for students

The rules for students during science lessons are as follows.

Laboratory rules are stick into the front of every child's book and in future will be added to the homework diary at the beginning of every academic year. There is also a notice is on the wall in each lab

The scheme of work also cross reference the appropriate *CLEAPSS RA*

Laboratory Rules

The biggest danger in the lab is **YOU!** You are at risk when you don't understand the hazards or you are careless, or both. The person most likely to suffer from your mistakes is **YOU!** Report any accident or breakage to your teacher.

1. Only enter a lab when told to do so by a teacher. Never rush about or throw things in the lab. Keep your bench and floor area clear, with bags and coats well out of the way.
2. Follow instructions precisely; check bottle labels carefully and keep tops on bottles except when pouring liquids from them; only touch or use equipment and materials when told to do so by a teacher; never remove anything from the lab without permission.
3. Wear eye protection when told to do so and keep it on from the very start until all practical work is finished and cleared away.
4. When using naked flames (eg, Bunsen or spirit burners or candles), make sure that ties, hair, baggy clothing etc are tied back or tucked away.
5. Always stand up when working with hazardous substances or when heating things so you can quickly move out of the way if you need to.
6. Never taste anything or put anything in your mouth in the laboratory. If you get something in your mouth, spit it out at once and wash your mouth out with lots of water. Tell your teacher.
7. Always wash your hands carefully after handling chemicals, microbes or animal and plant material.
8. If you are burnt or a chemical splashes on your skin, wash the affected part at once with lots of water. Tell your teacher.
9. Never put waste solids in the sink. Put them in the bin unless your teacher instructs you otherwise.
10. Wipe up all small spills and report bigger ones to your teacher.

10. Staff roles and Emergency contacts

Staff roles

Staff roles and/or emergency contacts updated on: Feb 2016	
Advice on health & safety and all aspects of practical science generally	CLEAPSS Helpline 01895 251496. Email: science@cleapss.org.uk
Overseeing health and safety in this school	Jamie Booth
Overseeing health and safety in the science department	Sally Worby
Senior technician	Jude Caswall
Various training functions	Sally Worby/Jude Caswall
Overseeing the checking of activities against the model risk assessments and recording significant findings	Jude Caswall
The person trained to test fume cupboards	Contracted company – refer to Ian Smith
The person trained to do electrical inspection and testing	Contracted company – refer to Ian Smith
The person considered competent to examine pressure vessels	Jude Caswall
The person in charge of chemical storage and disposal	Jude Caswall
Staff with First Aid training	Louise Heslop/Sally Worby

Emergency contacts

Emergency advice	CLEAPSS Helpline 01895 251496
<i>Serious accident:</i> Ambulance service	999
<i>Serious accident:</i> School first-aiders	See lists on all floors
<i>Serious accident:</i> School health & safety officer	Jamie Booth
[<i>Serious accident:</i> Employer's health & safety officer]	The DFO– Di Birmingham
<i>Gas leak:</i> Gas company Zenengi 0845 873 4463 Tim Golding - tim@Zenengi.co.uk	Contact Estate Manager - Ian Smith

Appendix 1

[Blank risk assessment form](#)

Appendix 2

[Fire Remedial measures](#)