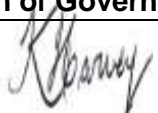
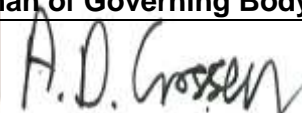


SCIENCE CODE OF PRACTICE POLICY



NAMED PERSON:	Mr Richard Peel
----------------------	-----------------

Last Review Date:	September 2023
Review Cycle:	1 Year
Next Review Date:	September 2024

Mr Keith Harvey Co Chairman of Governing Body	Mr Andy Crossey Co Chairman of Governing Body
Signed: 	Signed: 
Date: September 2023	Date: September 2023

Summary Guidelines for Staff

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, e.g., 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 eyewash station; the main gas cock; the main electricity switch and the nearest spill kit.
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. At the end of the day gas should also be turned off at the laboratory main gas cock.
5. Eating, drinking and the application of cosmetics must not take place in laboratories, storage areas or preparation rooms. Pupils must not be allowed to drink from water bottles.
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 Sixth Form students doing project work, depending on the hazards involved, e.g., an experienced member of staff in an adjacent room.
8. Science laboratories, preparation rooms and stores must be locked by staff when not in use.
9. Pupils must never be allowed into preparation rooms (unless 100% supervision can be guaranteed).
10. Laboratories must only be used by teachers who are not scientists for teaching or registration after they have received special training.

Teachers

1. At the beginning of each school year, teachers must make sure that their classes have copies of the student laboratory rules 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.
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, because of large class size or indiscipline, health and safety cannot be maintained during certain practical work, the work should be modified or abandoned. This decision should be reported to the Curriculum Leader.
6. A teacher is responsible for the health and safety of any of their classes taken by a trainee teacher. If the normal class teacher is absent, another science teacher must be given this responsibility by the Curriculum Leader.
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.

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. 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, i.e., teachers, technicians, trainees, etc. working in the department. A reference copy is kept in both Prep Rooms, available for consultation by staff and for inspection by visiting HSE inspectors or a representative of the employer. This document recognises the right of any or every trade union in the workplace to elect health & safety representatives for its members and its right to require a health & safety committee to be set up in the school. The science department will cooperate with any union health & safety representative 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, staff who work in the department occasionally, technicians, teaching assistants and other support 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 (The Local Authority) has the ultimate duty to ensure the health and safety of employees and others on the site (and hence in this department).

The employer to the Head teacher has delegated the task of overseeing health and safety at The Buckingham School. Within the science department, this task is further delegated to the Curriculum Leader who has the particular function of maintaining this policy document.

3.2 Communications

Communication of health & safety information is of the greatest importance and is the task of the Curriculum Leader, with the assistance of the Senior Science Technician.

In this department, all staff are issued with this policy. A reference copy is kept in the both Prep Rooms. Any new instructions, restrictions or rescinded (lifted) restrictions made by the employer are communicated to all staff in writing as well as being attached to the reference copy of this policy.

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 Curriculum Leader.

Checklists on resources and facilities for use by technicians are customised from those suggested in CLEAPSS Guide L248 *Running a Prep Room*. The timetable for such checks is kept with the reference copy of this policy. Records of the checks are kept by the Senior Science Technician.

4. Training

The person with the task of seeing that training is provided is the Curriculum Leader.

Generally, this department follows guidance in the CLEAPSS documents G238, *Health and Safety Induction and Training of Science Teachers* and L234, *Induction and Training of Science Technicians*, suitably customised, to identify the training needs of staff.

Particular training functions are delegated as follows:

Health & safety aspects of the work of newly-qualified teachers and other new teachers	The Curriculum Leader
Health and safety of trainees on teaching practice	The Curriculum Leader
Induction of newly-appointed technicians	The Senior Science Technician
Immediate remedial measures and other emergency procedures (spills, bench fires, etc.)	The Senior Science Technician
Training in the use of specialist equipment, chemicals or procedures (in line with CLEAPSS guides G238 and L234, as customised)	The Senior Science Technician
Health & safety training of non-science support staff	The Senior Science Technician
Health and safety of non-science teachers using laboratories	The Senior Science Technician
Manual handling for all staff using laboratories	The Curriculum Leader
Healthy and safe procedures for laboratory cleaners	The Senior Science Technician
Regular update training (covering new or changed regulations, new equipment etc.)	The Curriculum Leader

Records of the training received by members of the science staff are kept in the *Safety Check File*.

5. Risk Assessments

Every employer is required under various regulations¹ 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 following publications are to be used as sources of model (general) risk assessments:

- CLEAPSS² publications generally
- CLEAPSS, *Hazards*, current edition
- CLEAPSS, *Laboratory Handbook*, current edition
- CLEAPSS, *Recipe Book*, current edition
- CLEAPSS, L93, *Managing Ionising Radiations and Radioactive Substances*

¹ Risk assessments are required by the *Control of Substances Hazardous to Health (COSHH) Regulations*, the *Management of Health & Safety at Work Regulations*, the *Dangerous Substances and Explosive Atmospheres Regulations (DSEAR)* and many others.

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

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, i.e., the schemes of work and technicians notes. Fiona Bloomfield, Senior Science Technician is 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, i.e., 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, e.g., high voltages, heavy masses, etc.

Since the schemes of work have been checked against the model risk assessments, staff should deviate from it only if their proposed activities have been checked and agreed by the Senior Science Technician. 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.

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. Testing normally takes place each year. The Senior Science Technician has the function of seeing that this happens. The regular tests will be carried out by the trained technician using a suitable air-flow meter and equipment for testing filter saturation where necessary, using the procedure detailed in CLEAPSS guide G9. The records of the tests are available for staff reference and for inspection by the employer's representative or an HSE Inspector in the Safety File Check.

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.

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 Senior Science Technician has the function of seeing that this happens within the science department. Testing normally takes place each year in summer holidays. Records are kept by the Health & safety Officer for the school.

All users have been trained to carry out a quick visual inspection before using mains-powered equipment.

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

6.3 Radioactive Sources

This school follows the guidance in the most recent edition of CLEAPSS Guide L93 *Managing Ionising Radiations and Radioactive Sources*.

The Standard Operating Procedures] for the use of ionising radiations have been adapted from the CLEAPSS model in consultation with the RPA and it is a function of the Teacher in Charge (Radiation Protection Supervisor) to see that they are adhered to. Staff using ionising radiations have been issued with their own copies, as a part of their training, and a reference set is filed centrally with this policy.

The *Radioactive Sources History* and the *Use Log* (showing the times that any sources are removed from and returned to their store), are kept in the prep room adjacent to the radioactive sources storage area. The *Monitoring Record* of tests for leakage of radioactive sources and contamination by radium sources is also kept in the same place. It is the function of the RPS to ensure these records are kept up to date.

6.4 Pressure vessels

Autoclaves need periodic inspection under the *Pressure Systems Safety Regulations*. Inspection normally takes place each year. Records of examinations are kept in the *Safety Check File*.

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 Curriculum Leader.

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 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 Senior Science Technician.

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*). 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 regularly.

6.8 Chemicals

Offers of gifts of chemicals are viewed with extreme caution to ensure that stocks are not increased unduly and that no unwanted chemicals are included.

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 Senior Science Technician. The Senior Science Technician will ensure that chemicals are stored securely, the risks of fire, explosion and spillage are minimised, and labels are readable and that a spill kit is available and properly replenished.

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 *Hazards*. Other disposal follows relevant CLEAPSS guidance.

7. Activities and procedures

7.1 Outdoor activities

When planning any field trips etc., staff consult the CLEAPSS *Laboratory Handbook*, in conjunction with the Buckingham schools policy for trips and events.

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 Senior Science Technician.

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 will always use two people, one to hold open the door, the other to carry the items.

Following risk assessments under the *Work at Height Regulations*, when it is impossible to avoid storage or display above head height, glass or other fragile items are never stored above head height and only lightweight and rarely used items are stored there. When displaying items at high level, or fetching and replacing items stored at high level, stepladders or kick stools are used.

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, preparation rooms and store rooms are to be kept locked 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. All laboratories which are left open are cleared of all hazards, including shutting-off all services when supervision by a qualified science teacher, a suitably-trained teacher or teaching assistant comes to an end. No class is allowed to be in a laboratory without adequate supervision.

Any non-science staff who have to supervise any class in a laboratory will receive brief training in laboratory rules. The guidance for such staff is filed and kept for reference in Prep Room 1.

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. Regular drills arranged by the Curriculum Leader support this training. Advice on firefighting 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*).

Major spills are those involving the escape of toxic gases and vapours or of flammable gases and vapours in significant concentrations.

Staff are trained in the appropriate procedures, which may involve calling the Fire and Rescue Service. Regular drills arranged by the Curriculum Leader support this training.

8.3 Injury

Science staff will follow the normal school procedures in cases that require first aid. Science staff are trained to carry out immediate remedial measures (e.g., eye rinsing), while waiting for first aiders, after accidents which occur in science. See the most recent edition of the *CLEAPSS Emergency Hazards (cards E2A and E2b)*. A copy of these should be readily available to all staff in labs and prep rooms, e.g. by having it on a suitable computer, or having a copy of the cards displayed on a wall.

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 reported to the Health & Safety Officer as quickly as possible.

Dangerous situations and incidents which might have resulted in injury ('near-misses') should be reported in writing to the Curriculum Leader and the Health & Safety Officer. These will be analysed and discussed at departmental meetings.

9. Laboratory rules for students

The rules for students during science lessons are as follows.

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 (e.g., 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.