

GLC HEALTH AND SAFETY POLICY

This Policy was ratified by the Board of Directors on:	Autumn 2023
This Policy will be reviewed by the GLC Board on:	Autumn 2024

GLC Mission Statement

The GLC's mission is to develop active and thriving citizens within a diverse, truly fair and equal community.

This will be achieved through:

- High quality teaching that deliberately develops competencies of curiosity, creativity, communication and critical-thinking;
- An inspiring and meaningful curriculum;
- The development of productive relationships by instilling the values of compassion, resilience, responsibility and aspiration to prepare our young people for learning and life;
- A commitment to the wellbeing of our staff;
- A culture of professional generosity, collaboration, challenge and support throughout the GLC;
- The development of effective external partnerships for the benefit and wellbeing of our community.

Equalities Statement

The GLC's commitment to equality is enshrined in our mission statement to develop 'active and thriving citizens within a diverse, truly fair and equal community'.

We are a vibrant, innovative and successful organisation: we work hard to be the place of choice to work and to learn. Across the 5 academies of the GLC, we pledge that everyone enjoys an equality of opportunity. We work tirelessly to ensure that individual characteristics including age, ethnicity, socio-economic background, academic ability, disability, gender, religious beliefs, sexual orientation are not discriminated against in any way. We create inclusive environments characterised by mutual respect where difference is celebrated.

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HEALTH AND SAFETY POLICY STATEMENT OF INTENT

The Gateway Learning Community [GLC] recognises the fact that health and safety have positive benefits to the organisation and commitment to a high level of safety makes good business sense. It recognises the Health and Safety at Work Etc. Act 1974 and that health and safety is a business function and must, therefore, continually progress and adapt to changes. The approach to health and safety will be based on the identification and control of risks. As there are distinct benefits to be gained from providing a safe and healthy working environment, appropriate levels of resources will be allocated to ensuring health and safety within the organisation. A positive culture will be encouraged within the organisation and senior management shall actively support this culture.

Adequate planning, monitoring, and review of the implementation of the health and safety policy will be carried out. In order to ensure that this general statement is achieved, the following will form the aims and objectives.

1. The GLC Board of Directors will ensure that there are arrangements put into place for the effective planning, development, and review of this policy statement.
2. The Support Service Manager of each Academy, overseen by the GLC Director of Finance and Operations will ensure that appropriate systems are developed and maintained for the effective communication of health and safety matters throughout the organisation.
3. The GLC will provide the necessary information, instruction and training to employees and others, including temporary staff to ensure their competence with respect to health and safety.
4. Each academy within the GLC will devote the necessary resources in the form of finance, equipment, personnel and time to ensure health and safety. The assistance of expert's help will be sought where the necessary skills are not available within the GLC.
5. Each academy will liaise and work with all necessary persons to ensure health and safety. The academies will also ensure that adequate arrangements are also in place for ensuring the health and safety of visitors.
6. The GLC believes in constantly improving health and safety standards and performance. It will to this end endeavour to ensure that all relevant statutes, regulations and codes of practice are complied with. The minimum standards that will be adopted by the academies are those required by law, although the academies will always seek to exceed these where there is a demonstrable benefit.
7. The GLC recognises that safety is the responsibility of everyone within the organisation and is not just a function of management. Managers will have specific duties and responsibilities to comply with the letter and spirit of academy policy. Employees will have specific responsibilities to take reasonable care of themselves and others who could be affected by their activities and to co-operate with management in achieving the standards required. The GLC will ensure that health and safety management is an integral part of the manager's function and will monitor their performance along with their other duties.
8. The GLC will ensure that health and safety is fully integrated into the management and decision-making processes within each academy.
9. The GLC will set up a system to ensure that accidents and 'near-misses' are fully investigated and appropriate action taken to reduce the likelihood of their occurrence.
10. The GLC will ensure that procedures are established to ensure that safe equipment and plant are provided for employees and non-employees.
11. A GLC Health and Safety Officer will be appointed to oversee the implementation of this policy.
12. The CEO will complete an annual Health and Safety report for the Board of Directors.

V. J. Reid

V REID
CHIEF EXECUTIVE OFFICER

Date: 9th October 2023

2. ORGANISATION - KEY RESPONSIBILITIES

2.1. SUMMARY

The following people have specific duties and responsibilities in the management of Health and Safety.

The Gateway Learning Community:	CEO - Viki Reid
The Gateway Learning Community:	Director of Finance and Resources [i/c Health and Safety] - Jo Jones
The Gateway Academy:	Site Manager - Maggie Earey
The Gateway Primary Free School:	SSM - Olivia Martin
Herringham Primary Free School:	Site Manager – Daniel Starns
Lansdowne Primary Academy:	SSM - Kathryn Luckin
Tilbury Pioneer Academy:	SSM - Johanna Allison

First Aiders: Please see: First Aid Policy

GLC Fire Marshalls

<p>Gateway Academy Maggie Earey [Co-ordinator] Natalie Steel [Chief Fire Marshal] Charlotte Bettle (medication)</p> <p>Top Floor: Denise Paterson Sam Vickers Paul Salter</p> <p>Ground Floor: Tracey Passingham Robyn Bevans Jo Jaffa</p> <p>Humanities: (2nd Floor GPFS) Jodie Lee</p> <p>Courtyard Gates Dean March</p> <p>Community Gates Site Team</p> <p>Reserves: Sonia Humphries Anna Fuller Dawn Henry</p>	<p>Gateway Primary Free School Olivia Martin [Co-ordinator] Emma Buglione [Deputy] Liz Winters Sarah Barnes Jayne Raven Diane Pierson Elisha Ryan</p> <p>Tilbury Pioneer Primary Academy Johanna Allison [Co-ordinator] Teresa Fleming [Deputy/First Aid] Mick Donnelly [Site Staff] Jade Baker Julia Bowman Denise Cowell Katie Duligall Jackie Hamlet Amanda Jordan Louise Lumbard Racheal Pearson Sally Tooley Christina Vango Suzanne Wright</p>	<p>Herringham Primary Academy Sam Otto [Co-ordinator] Michelle Glumart Lianne Boreham Jo Sanham Donna Dennett Hayley Razzell</p> <p>Lansdowne Primary Academy Kathryn Luckin [Co-ordinator] Lee Spall [Deputy] Lynsey Tyler Tracey Austin Rebecca Bass</p>
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Managers of Safety:

Gateway Academy

Maggie Earey
Site Manager

Lansdowne Primary Academy

Kathryn Luckin
Support Service Manager

Herringham Primary Academy

Daniel Starns
Site Manager

Pioneer Primary Academy

Johanna Allison
Support Service Manager

Gateway Primary Free School

Olivia Martin
Support Service Manager

2.2. RESPONSIBILITIES OF DESIGNATED PEOPLE

- The ultimate responsibility for compliance to ALL relevant H&S legislation lies with the CEO, SSMs, Directors and Governors.
- These are responsible for the authorisation and implementation of the GLC Health and Safety Policy and procedures, and for the provision of sufficient resources to maintain H&S standards – including, where appropriate, the authorisation of priority attention to H&S issues.
- The GLC will make the commitment to adopt management systems to ensure the continuous development of health and safety performance.
- The CEO will ensure that one full audit is completed of each site annually.
- The CEO as the Chief Accounting Officer is responsible for the provision of sufficient financial resources to maintain compliance to all H&S legislation.
- SSMs and other key budget holders will ensure that the H&S implications are considered prior to the purchase or design of new work equipment.

2.2.1 Manager of Safety

The Manager of Safety within each GLC academy:

- is responsible for the day-to-day management of health and safety, involving appropriate liaison with external assistance;
- is the designated representative within each GLC Academy for liaison with the Health and Safety Executive and other enforcing bodies, in particular with regard to reporting of accidents, diseases and dangerous occurrences;
- is responsible for the approval of contractors and holding records required for the demonstration of competency;
- will carry out site safety visits and spot checks to confirm the continued compliance and adoption of GLC Policy and specific local risk assessments and control measures;
- is additionally responsible for communications with employees to ensure, so far as is reasonable, the availability of the necessary resource to ensure effective compliance to GLC Policy;
- is responsible for the identification and coordination of staff training needs. The Manager of Safety will hold copies of training records, which will be used to demonstrate individual competency in the various Academy activities.

The ultimate responsibility for compliance to ALL relevant H&S legislation lies with the Board of Directors.

2.2.2 Responsibilities of People with a Management Role

GLC staff with a management role will:

- ensure ALL staff that they line-manage, are aware of, and comply with, the current GLC H&S Policy;
- Identify staff training needs with respect to H&S.
- carry out safety inspections and spot checks as appropriate.

- ensure that H&S performance is covered in staff appraisals where appropriate;
- investigate all accidents as appropriate and ensure full reports are available for the records.
- undergo any H&S training as may be required and approved by the Manager of Safety

2.2.3 First Aiders

- Each Academy within the GLC will appoint first aiders who are responsible for the day-to-day management of first aid within their academy.
- The lead first aider will carry out site safety visits and spot checks to confirm the continued compliance and adoption of academy policy.
- The lead first aiders are responsible for the identification and coordination of staff first aid training needs. The Manager of Safety will hold copies of training records.

First Aiders will:

- Provide on the spot first aid attention in case of any accident, until the Emergency Services arrive [if required];
- Maintain the stocks of First Aid equipment;
- Ensure accident report forms are generated for all accidents regardless of severity of outcome;
- Follow the procedures as set out within the GLC First Aid Policy;
- Undergo further Health, Safety and First Aid training as may be required and approved by their Manager of Safety.

2.2.4 Fire Marshalls

- Fire marshals are responsible for ensuring the building is cleared in the event of an evacuation.
- Fire marshals will undergo Health and Safety training as required and approved by the Manager of Safety.

2.2.5 Designated member of each academy's site team

- A member of each GLC academy's site time will be responsible for the weekly checking of smoke alarms, fire exits, fire alarms, and fire extinguishers and will maintain a maintenance log.

2.2.6 The Designated Health & Safety Representatives for each Academy will:

- Play a key role in their academy's safety management system.
- Be responsible for communicating actions back to the Management team and staff alike, reporting on progress, and raising any issues brought up by the staff they represent.
- Assist in the accident reporting and investigation process, ensuring that a no-blame culture is actively promoted.
- Undergo any H&S training as may be required and approved by their Manager of Safety.

2.2.7 All employees of the Gateway Learning Community will:

- Work in accordance with GLC procedures
- Report defective equipment and dangerous situations
- Use safety equipment provided
- Comply with management requests and instructions
- Not use defective equipment
- Not misuse equipment
- Not use damaged equipment
- Exercise reasonable care towards themselves and others
- Not undertake tasks that they are not sufficiently trained for

Health and Safety is no one person's function it is a team effort. We all should help and encourage pupils and adults to act in a safe manner, so that we do not endanger ourselves or others that we work with or teach.

**THE GATEWAY LEARNING COMMUNITY ARRANGEMENTS
FOR IMPLEMENTING THE POLICY**

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3. ARRANGEMENTS FOR IMPLEMENTING THE POLICY

The various arrangements detailed within this policy folder are, in general, comprehensive. Where a subject requires further consideration, the reader will be referred to a specific document or procedure, and only a summary will be given in this Policy.

3.1 EMERGENCY PROCEDURES

3.1.1 FIRE

On discovery of a fire:

1. Raise the alarm
2. Telephone the Fire Brigade by dialling [9 for an outside line] 999 offering as much information as possible:
 - Location of the fire?
 - If anybody is injured, trapped or unaccounted for?
 - Are there any dangerous substances involved or in the immediate vicinity of the incident [e.g. large volumes of solvents, compressed gas bottles
3. Leave the building by the nearest Emergency Exit and report to the Assembly Point

See the staff handbook of each GLC Academy for the fire assembly points.

Use of firefighting equipment:

- ALWAYS alert other staff *before* attempting to tackle the fire
- ALWAYS ensure that you have a safe exit – never let the fire get between you and the exit

On hearing the fire alarm

Leave the building by the nearest Emergency Exit and report to the Assembly Point.

DO NOT return to the building in any circumstances until informed that it is safe to do so by the Fire Marshal.

For further details please refer to the Fire Procedures and Fire risk assessments for each GLC Academy

3.2 SECURITY

3.2.1 GENERAL

1. Each academy within the GLC accepts the responsibility for ensuring, so far as is reasonably practical, that unauthorised access to its premises is prevented at all times.
2. From time to time access to specific areas within the GLC academies may be restricted to nominated staff as identified by assessments of particular hazards. Such restrictions will be clearly marked.

Academies within the GLC, will use an entry system for all main doors within the academy grounds, all visitors will have to use the entry system button before gaining access to the building and therefore will also have to sign in and be given a visitor's badge. Each visitor's host will have the responsibility in the case of fire or emergency to escort the visitor to the assembly area. Visitors should not be left alone unless this has been agreed via the Manager of Safety first and instruction given in the case of emergency.

3.3 FIRST AID

ON SITE

ALL injuries and illnesses should be reported to a First Aider *as soon as possible*, so an appropriate assessment can be made as to whether treatment is required. This is vital as even the most trivial of injuries could lead to complications later.

First Aid boxes are available but under NO circumstances should items be removed without consent. The First Aiders have a responsibility to maintain an inventory checklist and sufficient stocks for each first aid box.

In the event that an injury was sustained outside of working hours, the use of all first aid facilities MUST be reported.

OTHER DOCUMENTS

See each GLC Academy's First Aid Policy

3.4 ACCIDENT REPORTING

The First Aid Policy gives details about how to make the report. There is a legal duty to report accidents and to maintain accident statistics. This is a useful method of demonstrating continuous improvement in safety performance, but it can only work if all accidents are reported including pupils, staff and visitors.

More serious accidents require reporting to the Health and Safety Executive and are specified under the Reportable Injuries, Diseases, and Dangerous Occurrences Regulations [RIDDOR]. The Manager of Safety should file these reports.

It is The GLC policy that all personal injury accidents are reported. Please see the First Aid Policy for further details.

3.5 EMPLOYEES

3.5.1 INDUCTION TRAINING

All new employees of The GLC will receive Health and Safety Induction training. This will constitute familiarisation of their Academy layout, including the location of all relevant H&S items [e.g. fire exits]. A copy of the GLC Health and Safety Policy and relevant supporting procedures will be available to the employee who will sign and state that they have read and understood the contents.

3.5.2 TRAINING RECORDS

Each Academy within the GLC makes the commitment to provide sufficient training in the awareness and implementation of Health and Safety initiatives, to ensure compliance with the GLC Policy.

All training relating to H&S issues will be recorded and signed by both the trainer and the individual as a record that such training was given. The Manager of Safety of each Academy will hold training records. These will be subject to inspection and are auditable in line with the GLC safety inspections and audits.

3.5.3 THE FINANCE COMMITTEE OF THE BOARD OF DIRECTORS

The Finance Committee is responsible for the development and oversight of the H&S policy. It will convene twice a term.

The role of the Committee is to bring together representatives from across all functions of the business to discuss all finance and health and safety issues pertinent to the GLC. It is a vehicle to ensure GLC Policy and Procedures are clearly defined, communicated to all staff, and complied with on a consistent basis.

It is through the Finance Committee that the GLC will meet its obligations under the Health and Safety (Consultation) Regulations and the Safety Representatives and Safety Committee Regulations.

3.5.4 YOUNG PERSONS

The GLC recognises that there is greater risk of accidents when employing young people due to the general lack of experience and unfamiliar working environment. It therefore will provide appropriate supervision and training as appropriate to control the risks where young people are employed.

3.5.5 PREGNANT WOMEN & NURSING MOTHERS

Under these special circumstances an appropriate risk assessment will be carried out for the tasks undertaken by the pregnant women or nursing mothers. Where necessary extra control measures will be implemented, and if required appropriate alternative employment will be found in order to eliminate the risks to the employee.

3.5.6 WELFARE

General Access

To ensure that the site is safe, all staff are asked to observe the following guidelines:

1. Do not obstruct roadways, pathways and access areas with plant, vehicles or materials. Roads may be required for the emergency services.
2. Observe direction and speed signs when moving around site. With the number of children on the Academy site we should always be very careful when driving on the Academy grounds. The work programme may alter these routes – be alert to changes.
3. There must be safe means of access to all work and welfare areas, report any problems of access to the Manager of Safety.
4. Lighting is provided to all common access routes; do not move this lighting to working areas.
5. Clear all surplus material and rubbish to agreed points and leave work/class area clear for next staff/teacher. Do not leave materials, rubbish or tools where they may block access or fire routes or fall onto persons below.

3.5.7 DRUGS AND ALCOHOL

The use of illegal drug taking is forbidden and applies to all employees and sub-contractors of the GLC.

Employees, parents, carers or visitors may not consume alcohol on the premises, unless this has been agreed by the Head of School of the particular Academy.

Personnel who have been prescribed drugs or have any medical condition that may affect their ability to work safely must inform their manager immediately. Pupils that are required to have prescribed drugs or medical items on their Academy grounds should contact Student Services for the Gateway Academy or their class teacher for the primary Academies.

Any person found to be under the influence of illegal substances or alcohol during working/Academy hours shall be removed from the premises and disciplinary action may be taken under the GLC Code of Conduct Policy.

Smoking is not allowed within any GLC Academy building or school grounds.

3.5.8 MOBILE PHONES

Employees are strictly forbidden from using hand-held mobile phones or similar devices whilst driving a vehicle on school business. Vehicles must be stationary prior to the use of any hand-held mobile phone device and the engine must be switched off.

The Road Traffic Act 2006 [RTA]

RTA came into force on February 27, 2007. S.26 introduced a new fixed penalty of three points, along with a doubling of the fine for using a hand-held mobile phone to £60. If this is challenged in court, the maximum fine increases to £1,000 [£2,500 for drivers of lorries and vans]. It is illegal to use a hand-held, even whilst stationary at traffic lights. The GLC will not be responsible for any member of staff who contravenes this regulation.

3.6. WORKPLACE

3.6.1 GENERAL

The GLC will ensure that the detailed requirements of the Workplace Regulations 1992 are complied with at all times. Including, but not limited to, the supply of safe access and egress; the provision of suitable ventilation and lighting; a supply of fresh drinking water; and suitable welfare facilities.

3.6.2 LONE WORKERS

Under no circumstances should anybody perform any potentially hazardous work whilst working alone [e.g. out of normal hours] without a Lone Worker assessment accounting for the environment and the task to be carried out, authorised their Manager

Please see the Lone Worker Policy for further details

3.6.3 MAINTENANCE (Non-Vehicle)

Required buildings and general maintenance is identified through the various inspections, housekeeping checks, and maintenance schedules. The maintenance shall be sufficient to maintain a healthy and safe working and teaching environment.

3.6.4 HOUSEKEEPING

It is recognised that housekeeping is often a contributory cause to accidents, for example slips, trips, and falls the like are often caused by a cluttered workplace or classrooms

It is everybody's responsibility to maintain a clean, tidy and safe working environment at all times.

A programme of housekeeping checks will operate to monitor the tidiness of the workplace, and to identify problem areas. This will be supported by the Safety Inspection Procedure and will allow issues to be corrected quickly.

3.7 PROVISION AND USE OF WORK EQUIPMENT REGULATIONS (PUWER)

Each Academy of the GLC will provide all equipment necessary to allow employees to carry out their tasks. The equipment will be suitable for purpose and maintained in a safe and orderly state of repair.

Appropriate training in the use of the equipment shall be provided before staff are allowed to use it. This training will be documented and form part of the training records referred to in 3.5.2.

3.7.1 ELECTRICAL

All portable electrical equipment shall be tested at regular intervals to ensure it is suitable for use. The Manager of Safety within each Academy will hold records of the testing and the results.

Working safely with Electricity

All Staff must comply with the following guidelines:

- Electrical supply will be a maximum of 220 volts unless permission and procedures have been agreed for higher voltages.
- Electricians must be used to install and maintain electrical supplies on site. Do not tamper with or adapt any electrical equipment or cable.
- Check all equipment before use for: - defective plugs, sockets, cables or switches.
- Tool adjustments or changes must not be carried out unless isolated (pull out the plug).
- Report all electrical defects to the Manager of Safety
- Observe and report defects in access and safety lighting.
- Cables must be long enough for use without strain on connections.
- Use correct plugs and sockets for extensions – **DO NOT MAKE TAPED CONNECTIONS.**
- Task lighting at your place of work is your responsibility; ensure it is adequate.
- Isolate the supply before any work is carried out on the electrical system.
- Overloading of plugs and sockets can lead to fires – 1 plug per socket.

3.7.2 MAINTENANCE

All work equipment will be inspected and maintained to ensure its suitability for use. The period of inspection will be identified from risk assessments, but shall be construed as annually unless otherwise stated.

Maintenance will be carried out by a competent person, as deemed by the GLC, and is likely to be the supplier of the equipment. The Managers of Safety will hold records of inspection and maintenance. A maintenance schedule will operate to keep the programme manageable.

3.7.3 PROCUREMENT OF NEW EQUIPMENT

In conjunction with the GLC procedures for purchase of new equipment, the suitability for purpose of any new equipment should be demonstrated before purchase. Once purchased, the designated responsible person will carry out a risk assessment and detail any further control measures necessary before the equipment is used.

Staff will be trained in the use of the new equipment before being allowed to operate it.

3.7.4 LIFTING OPERATIONS AND LIFTING EQUIPMENT REGULATIONS (LOLER)

In general terms the GLC does not have any lifting equipment that it covered by the LOLER Regulations. The detailed extension to the PUWER Regulations, these Regulations specifically covers all lifting equipment. If the Academies were to have such equipment it would follow the steps detailed below: -

All equipment shall be inspected before use by the operator and routinely maintained and inspected by external competent personnel on an annual basis

All operators shall receive appropriate training with records being held by the Manager of Safety.

3.7.5 HANDTOOLS

Those using hand tools are required to comply with the following rules:

- Use the right size spanner for the nut. NOTE: adjustable spanners slip more easily.
- Fit files with handles to prevent hand injuries. Don't use as punches or for levering – they break easily.
- Chisels and punches with mushroomed heads must be ground down to prevent splinters of metal flying off.
- Keep hammer heads tightly wedged on their shafts and replace split or damaged wooden handles, don't wire up.
- Keep edges of cutting tools sharp and keep hands behind the cutting edge when working.
- Don't use screwdrivers on work held in the hand or as chisels.
- Keep tools in racks or boxes when not in use.
- Protect sharp edges of tools are to be stored or covered.
- Stanley knives, screwdrivers and sharp edge tools kept in pockets can lead to serious injuries.
- Scrap tools when they become worn or damaged beyond repair.
- Always use the correct tools for the job. Don't improvise.

3.8 RISK MANAGEMENT

Every task undertaken, which presents any significant risk, requires a "suitable and sufficient" risk assessment demonstrating that the hazards and risks have been identified and that control measures have been implemented.

The risk assessments, or Job Safety Analysis, will be complemented with COSHH, Display Screen Equipment [DSE], and Manual Handling assessments as appropriate. The assessments will undergo adequate review as and when significant changes are identified, and in any case not less than every 12 months.

Full details for risk assessment techniques are given in the GLC Risk Management Procedure.

3.9 COSHH

All materials representing a potential hazard due to their storage, handling, use or disposal will be assessed to identify the level of risk. The materials and the corresponding process in which they are used shall have a written assessment carried out detailing the control measures to be used, and any residual risks. All operators must sign the relevant assessment indicating their acknowledgement of the controls and residual risks.

3.10 MANUAL HANDLING

All tasks requiring any lifting, twisting, pulling or other movement of materials or objects from one place to another will be assessed. The vast majority of such *manual handling* tasks will be assessed within the overall risk assessment for that task. Where specific hazards are observed e.g. where the weight to be lifted exceeds 25kg, or where the distance of relocation is significant, or where the number of repetitive tasks is high, the tasks will be assessed formally in accordance to the Manual Handling Assessment forms.

3.11 PERSONAL PROTECTIVE EQUIPMENT (PPE)

All PPE required to carry out any task will be identified from appropriate assessments (COSHH, Risk, DSE, and Manual Handling). Only when all other forms of controlling the risks have been considered should PPE be used. Such PPE will then be:

- Identified as being suitable for the task
- Supplied by the Academies free of charge
- Used by the Operator as intended by the manufacturer
- Stored in a suitable and safe condition when not in use
- Maintained and inspected to ensure its continued suitability for use
- Replaced if deemed unsuitable for use

The Academy will ensure suitable training is given for the use of PPE as required ensuring the correct use of the designated equipment.

The employee accepts that he/she will NOT use the PPE unless properly trained.

3.12 DISPLAY SCREEN EQUIPMENT (DSE)

The identification of DSE “users” will be supported with full DSE assessments. A list of identified users will be kept with the assessments. The assessment of DSE workstations extends to include those that may be “off-site” for management working from home. The Manager of Safety will hold the assessments.

Identified users of DSE are entitled to regular eye tests carried out by a competent person. The Academy will reimburse the individuals for these expenses in accordance with current procedures within the Academy, for further information please see the DSE policy.

3.13 CONTRACTORS

3.13.1 CONTRACTORS TO THE GLC ACADEMIES

The contractors will be selected on their ability to carry out the tasks to a suitable standard at an acceptable cost *without compromising health, safety and environmental standards in any way*. Before offering the contract, tenders are required to submit evidence of their safety policies, method statements, risk assessments, and training records to demonstrate their ability to do the job.

The Managers of Safety will hold lists of approved contractors on the basis of the above information to allow the appointment of contractors to be a less onerous procedure for subsequent contracts. The decision to approve a contractor will be made by the Manager of Safety or designated deputy.

During the work Contractors will be obliged to operate to the GLC Permit to Work System. This will ensure communication between Academy and Contractors staff is maintained and that all relatively high-risk tasks are assessed before permission is given for the task to commence. Such tasks will include hot-work and electrical isolation.

All contractors will supply their own equipment, materials, and PPE required for the task. The Academy will not supply any PPE unless it is very specific to the hazard present within the Academy and would not be expected to be carried by the Contractor.

NB: *In these regulations, the term Works Contractor, includes all subcontractors and their employees.*

The following standards have been prepared to ensure the safety of all people on The GLC projects. It is the responsibility of a works contractor to see that his employees are conversant with the regulations and that they comply with them.

1. All works contractors and their employees must at all times comply with the Health and Safety at Work Act and all subordinate legislation, in addition to complying with the safety requirements set out in this Health & Safety Policy, or such other safety requirements as may be deemed necessary by the Safety Manager and/or Principal and shall take all the necessary precautions to ensure the safety of their employees, the general public and all people not in their employment.

Where works contractors' employees are endangered by persons not employed by him, senior management must be notified.

2. Works contractors shall ensure that their supervisors are competent and have received sufficient training in site safety to enable them to carry out their work safely.

Works contractors shall ensure that their employees shall be instructed as to any hazards, which exist at their place of work and shall receive such training and supervision as may be deemed necessary to carry out their jobs safely and satisfactorily in accordance with the Health and Safety at Work Act 1974 and any applicable regulations and Codes of Practice there under and shall comply with the GLC Policy.

Works contractors' employees must be released to attend Project Site Safety training sessions (where required). This does not relieve work contractors of their duty to ensure that their employees are adequately trained in matters of Safety and Health and relevant legislation.

3. All works contractors shall, at the end of each operation, ensure that the work area is cleared up of their material and not left in a hazardous condition.
4. It is forbidden to use other contractors' tools or equipment without authorisation.
5. Work contractors' plant and equipment must be kept in a good and safe condition.

Site Rules

Adherence to the following rules is a condition of your employment on site:

- It is prohibited to bring on site, firearms or unauthorised explosives.
- It is prohibited to possess or consume alcohol, drugs or other intoxicants on site or be under their influence.
- Permits to work, safety procedures and safe system method statements must be followed.
- All plant and equipment are to be operated and repaired only by trained competent personnel. CITB certificates (or equivalent approved training body) of training achievement must be held by operators of all plants currently within that scheme.
- Incorrect or faulty tools must not be used.
- Audio equipment such as radios and personal hand-held audio equipment may not be used.
- Safety helmets are to be worn at all times where applicable.
- Protective footwear must be worn where applicable.
- Personal protective equipment such as eye, hand, fall and respiratory protection must be used at all times where dictated by statutory or site requirement.
- Drivers of all vehicles must obey site road signs and traffic rules – drivers of dumpers must not remain on the vehicle during loading.
- It is prohibited to indulge in horseplay, fighting or malicious damage.

3.13.2 THE GLC AS THE CONTRACTOR

Under these conditions the GLC shall ensure that the Client, if required, receives copies of the GLC H&S Policy, specific risk assessments and method statements for the activities to be undertaken so far as is reasonable to ensure the safe completion of the tasks, and the demonstration of operator competency.

3.14 VISITORS / GENERAL PUBLIC

All visitors must report to the Academy reception and reception staff will point out to all visitors the safety policy statement of intent displayed in reception. Visits will be issued with a badge to wear. Staff should question any person in the Academy that are not employees of Academy and are not wearing a badge.

They must abide by any general or specific terms of control measures detailed in the area that they may visit. Any PPE that may be required for particular areas to be visited will be supplied free of charge by the Academy, and will be returned at the end of the visit.

All visitors must be supervised by a member of staff at all times whilst on the premises unless agreed by the Manager of Safety and the visitor, has had full instruction on all the emergency policies.

3.15 ENVIRONMENTAL AND WASTE MANAGEMENT

In line with the Environmental Protection Act of 1990, each Academy within the GLC will act as required to minimise the effect on the environment of any of its acts or omissions.

The GLC is a professional and environmentally conscious organisation, which acknowledges the impact that its operations may potentially have on the environment. The clear objective of the GLC is to minimise any impact on the environment by:

- Preventing pollution, reducing waste and ensuring, wherever practicable, that measures are implemented to protect and preserve natural habitats, flora and fauna
- Considering the effects that our operations may have on the local community
- Taking appropriate action to eliminate or reduce, as far as practicable, any potentially adverse environmental impacts
- Promoting environmental awareness amongst our students, suppliers, contractors and partners by implementation of operational procedures
- Seeking to work in partnership with the community by behaving in a considerate and socially responsible manner
- Ensuring effective and expedient incident control, investigation and reporting.

3.16 SAFETY INSPECTION & AUDITING

There are many varied ways of measuring safety performance and procedural compliance. The best results are achieved from using a variety of inspection and auditing techniques, as this ensures assessment of different areas, issues, and involves more staff in safety management.

TECHNIQUE

Safety Tour – Spot Checks
Housekeeping Checks
Safety Audit

PERSONNEL

SSM [Once per term]
SSM [Twice per term]
GLC H&S Pool [Yearly]

3.17 REVIEW OF SAFETY PROCEDURES

The effectiveness of all H&S procedures will be monitored in line with regular inspections and audits. From time to time changes will be required to reflect improvements and changes in working practices. The safety policy will be an agenda item on all health and safety meetings.

Required alterations to H&S procedures must be approved by the Manager of Safety and discussed at the Finance Committee before implementation.

3.18 STRESS MANAGEMENT

The GLC understands that at times people could be and could feel under stress either from the effects of their home life or from duties at work and therefore will follow some key points to manage the levels of stress within its employees. The following points will be the basis of a stress management policy adopted by The GLC:

- Promote employee health, safety and welfare including health surveillance
- Health promotion and good welfare facilities
- An effective management style that recognises the value of its people
- An open communication network that encourages feedback and communication across all levels
- Introduce management tools and techniques that ease the obvious stress caused by fear of change

Action Plans for Managing Stress

As a group of Academies, we plan to manage stress levels within our employees by:

- Recognition of Causes and Symptoms of Stress
- Decision on How to Handle the Stress
- Evaluation of Key Personnel to Manage Stress
- Review of Specific Stressors
- Selection of Strategy

3.19 PERSONAL HEALTH

3.19.1 It is our policy to provide, so far as is reasonably practicable, a healthy working environment for all of our employees. This means that we will take steps to monitor and prevent the occurrence of any work-related disease. We will also take steps to provide working conditions which are not only healthy and comfortable, but which will encourage optimum performance from staff.

Whilst working on site you are liable to come into contact with materials or substances, which could cause health problems if sensible precautions are not taken.

Always follow the manufacturers' instructions printed on containers or packages and wear any protective equipment advised. Consult your supervisor where doubt exists.

Special precautions will be notified where contaminated materials or substances are known to be present but to ensure good health the following simple steps are necessary.

1. Always wash hands before eating.
2. Barrier creams can help minimise infection, use where available.
3. Seek medical treatment immediately for cuts and abrasions and report all cases of suspected work-related illness.
4. Do not leave unwanted food lying around to encourage vermin (rat's mice, pigeons etc) and report any evidence of them.

3.19.2 MEDICAL REFERRAL

Should a problem arise which needs further clarification, we also retain the right to make a referral to

an independent medical advisor of our choice. Where this becomes necessary, the right of an employee to access any medical report is protected under the **Access to Medical Reports Act 1988**. This and any related information will also be kept in accordance with the requirements of the **Data Protection Act 1998** at all times.

3.20 CHEMICAL SPILLS IN SCIENCE

3.20.1 Introduction

Several chemicals in regular use in school science can present major problems if spilt. Clearly, it is important to provide equipment and adopt working practices for students, teachers and technicians that minimise the risk of the spill occurring in the first place, but it is also wise to make provision for dealing quickly, safely and efficiently with any spills that do occur. This provision should form part of the risk assessment for the whole activity.

In many types of laboratories, it is now the policy to provide a spill kit for this purpose and commercial kits are available. The *Highly Flammable Liquid Regulations* require a spill kit to be available during storage. The School Science Service has evaluated commercial kits and investigated the requirements for putting together a DIY kit. The conclusion is that schools **should** make provision and that this is best done by putting together locally a kit based on a mineral absorbent [**cat litter**]. Done this way, the cost need not be high.

The principles advocated depend on the size of the spill and its hazards.

- The smallest spills of even the most hazardous materials can usually be dealt with using a cloth or absorbent paper;
- Moderate spills (typically up to 250 ml of solution or 500 g of solid) need the detailed procedure given in *section 9.3* but the principle advocated is this;
- Act to prevent the spill spreading;
- If the spill is giving off a hazardous vapour, control it immediately, otherwise, clear up the spilt material into a bucket;
- Remove the bucket to the prep room for treatment and appropriate disposal;
- Fence off the area of the spill until it can be cleaned.

Large spills, which could be just large volumes or could be small volumes sprayed over a large area, may require a special procedure given in *Table 'Spills Requiring Special Procedures'*.

3.20.2 CONTENTS OF THE RECOMMENDED SPILL KITS

Mineral absorbent

The cheapest supply of mineral absorbent is cat litter. One type is based on Fuller's Earth, which is often red, and the other on clay, which is often white or grey: either is suitable and safe but the latter is preferable as it does not break up once wet. It can be bought in 10 kg bags from most supermarkets. Some cat litter may be calcined and 'fizz' for a short time when applied to an acid but it is not hazardous.

Other possibilities include Vermiculite sand. Absorbents which are based on recycled **paper or sawdust** [sometimes sold for dealing with oil spills in garages or for use by caretakers for cleaning up vomit] are **unsuitable** as they are combustible.

A DIY spill kit system

It is suggested that the standard kit can be made up in three variants: for the laboratory, for the prep room and for the store, with a completely separate kit for mercury spills. The laboratory kit is just enough for immediate use. The prep room kit is not only for spills in the prep room but to be taken to the scene of any other spill. The variant kept in the store represents a back-up for dealing with the laboratory spill [of up to 250 ml of reagent], materials for dealing with larger spills and for replenishing other kits. If desired, it may be omitted completely or partially with a consequent reduced capacity for dealing with large spills.

Extra spill kits: Where a science department is split, there should certainly be a complete kit in every building where laboratories are situated. With large departments, it may be thought wise to put a complete kit in each storey or in each group of rooms.

In each laboratory:

1 kg of mineral absorbent. This is enough to soak up about 400 ml of liquid and, if sprinkled around the spill, it will stop a larger spill spreading while more absorbent is brought to the scene.

A notice on the wall of the procedures to be followed in case of a spill.

In the prep room:

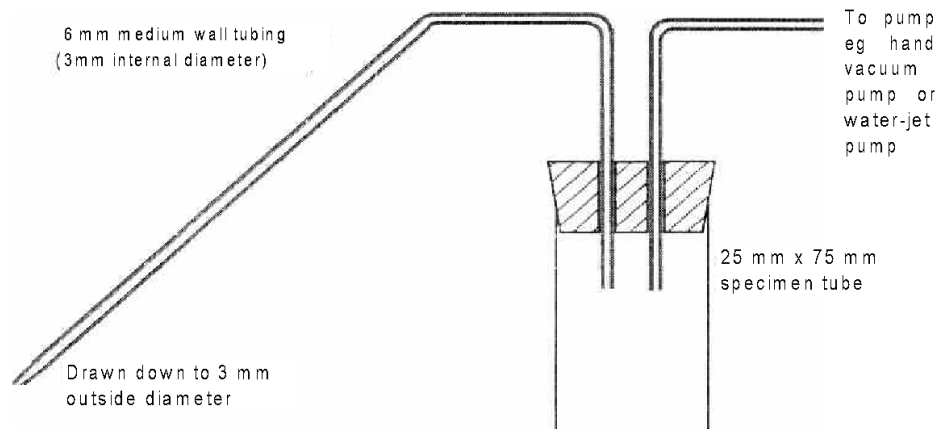
[Kept in a container so that it can be carried to the scene of a spill. **Warning:** this is quite heavy so help may be required.]

- 1 plastic bucket;
- 1 plastic dustpan and brush;
- 3 pairs of protective gloves (natural rubber type);
- eye protection (goggles preferred);
- 3 floor cloths;
- a pack of plastic 'pedal-bin' bags (which fit over a bucket) for the disposal of small amounts of wet absorbent;
- 1 large chemical scoop
- one 2.5 kg pack of mineral absorbent;
- 0.5 kg of anhydrous technical grade sodium carbonate (to neutralise up to 250 ml of concentrated sulphuric acid, for example);
- 0.5 litre of neat dispersing agent ('Teepol' is a general-purpose detergent for laboratories but others suffice and may be cheaper);
- 0.5 kg of citric acid (to neutralise up to 250 ml of concentrated ammonia solution or 2.5 l of 2 M sodium hydroxide solution);
- A copy of the procedures to be followed in dealing with a spill.

In the store:

- Eye protection (a face shield) may be better than goggles);
- 20 kg of mineral absorbent
- 5 heavy-gauge polythene bags suitable for disposing of the wet absorbent after treatment and other plastic bags, gloves, etc as spares;
- 5 kg of dry sand (an optional cheaper material to cope with a corrosive solid or an extra-large spill);
- 5 kg of anhydrous technical grade sodium carbonate, (to cope with up to 2.5 l of concentrated sulphuric acid, for example);
- 2.5 litres of dispersing agent.

A Mercury Pooter



(No extra citric acid is required apart from replenishing stocks. If there were a spill of 2.5 l of 880 ammonia solution in the store, it would be very dangerous to enter that store without breathing apparatus and so the fire brigade should be called.)

For mercury spills:

The special kit for mercury spills should contain:

- mercury pooter or syringe (see diagrams);
- 1 small polythene bottle to take recovered mercury;
- 250 g precipitated copper powder;
- 1 empty bottle, wide mouth (large enough to take the copper powder);
- 100 ml 2 M hydrochloric acid;

- 250 ml polypropylene beaker;
- a mixture of 500 g flowers of sulphur and 500 g calcium hydroxide
- 1 cheap paintbrush about 3 cm wide;
- 10 wooden spatulas (tongue depressors);
- 2 wooden strips 500 x 30 x 5 mm (e.g. old half-metre rules).

Labels

These labels may be copied and stuck onto the relevant containers.

<p align="center">Mineral Absorbent 1 kg</p> <p>Date</p> <p>The contents of this pack are sufficient to absorb approx 400 ml of spilt liquid.</p>	<p align="center">Dispersing Agent 500 ml</p> <p>Date</p> <p>The contents are sufficient to emulsify approx 500 ml of spilt organic liquid.</p>
<p align="center">Sodium Carbonate 500 g</p> <p align="center">Xi</p> <p>Date</p> <p>Sufficient to neutralise approx 250 ml of spilt concentration acid.</p>	<p align="center">Sodium Carbonate 5 kg</p> <p>Date</p> <p>Sufficient to neutralise approx 2.5 l of spilt concentration acid.</p>
<p align="center">Dispersing Agent 2.5 l</p> <p>Date</p> <p>The contents are sufficient to emulsify approx 2.5 l of spilt organic liquid.</p>	<p align="center">Copper Powder 250 g</p> <p>Date</p> <p>To be mixed with hydrochloric acid to form a paste.</p>
<p align="center">Citric Acid 500 g</p> <p>Date</p> <p>Sufficient to neutralise approx 250 ml of spilt concentrated ammonia or 2.5 l of 2 M sodium hydroxide solution.</p>	<p align="center">Dry Sand 5 kg</p> <p>Date</p> <p>Sufficient to absorb a large spill of liquid or mix with 50 g of a corrosive solid.</p>
<p align="center">Hydrochloric Acid 100 ml</p> <p>Date</p> <p>To be mixed with copper powder to form a paste.</p>	<p align="center">Lime/Sulfur Mix 500 g</p> <p>Date</p> <p>To spread over areas where mercury has been cleared but may be in cracks.</p>
<p align="center">Mercury-contaminated waste</p> <p align="center"><input type="checkbox"/></p> <p>Date</p>	<p align="center">Recovered Spilt Mercury</p> <p align="center"><input type="checkbox"/></p> <p>Date</p>

3.20.3 TREATMENT AND DISPOSAL OF THE SPILL

Once the spilt material has been collected into a bucket, the contents need treatment and eventual disposal.

The relevant *Hazard* includes advice on the treatment and disposal of the chemical and the following general procedure can be used as an outline for the process which applies to everything except mercury for which a separate procedure is listed. It is expected that these procedures will be copied and put in the department safety file and/or placed with the spill kits.

The recommended treatment procedures below assume that the school has 'mains drainage'. Where this is not the case and the waste water does not go down a foul-water drain but into a septic tank (for example), see the separate advice, *Special procedure for schools without mains drainage*.

3.20.4 MANAGING A SPILL INCIDENT

A spill of a hazardous chemical is an emergency which needs to be dealt with safely and efficiently, using an established procedure. Teaching staff, technicians and students will need to co-operate and work as a team to deal effectively with a serious or even a moderate spill so all three groups will need some training which should not be entirely theoretical.

Teachers will probably be the adults nearest to a spill and will need to assess the situation quickly and accurately. Technicians may be involved with a spill in one or both of two ways:

- (a) the spill may occur as a consequence of their work;
- (b) they may have to do the clearing up after a spill caused by someone else.

In both cases, the technicians need accurate information about the nature of the spill and they need to be fully familiar with, and to have practised, the clearing up procedure.

Students should be taught to deal effectively with minor spills and encouraged to report the more hazardous ones immediately.

3.20.5 A SUGGESTED PROCEDURE

The following check list indicates the general procedure for dealing with a spill; this (or something like it) should be used as the basis for in-house training exercises with simulated spills.

Possible evacuation of the laboratory The spilt chemical may produce a vapour in the atmosphere which could cause distress, so windows and doors should normally be opened to allow ventilation. However, some chemicals will release so much vapour of a harmful or toxic nature that immediate evacuation of the room is required. These chemicals are identified in the table below.

If such a spill occurs, staff should execute evacuation procedures similar to those during fire practices. If it is possible to open windows on the way out, then this should be done but it should not take preference to the health of the students and the staff. If the spill is too large to be dealt with safely by staff without breathing apparatus, the fire brigade must be called.

Possible injury During the spill, a student or a member of staff may be injured by glass, overcome by fumes, or be splashed by the chemical on the skin or clothes. *Hazards* attempt to cover all the major substances used in schools and these should be consulted whilst immediate remedial measures are applied.

Clearing up the spill

Corrosive solids are best mixed with sand as for disposal while all liquids are first controlled with mineral absorbent. As much as possible of the spilt solid or mineral absorbent is then scooped into a bucket before washing down the area. If the spilt solid is a substance known to be insoluble in water, then water may be sprinkled on the spill to avoid raising dust. It is not advisable to use a vacuum cleaner.

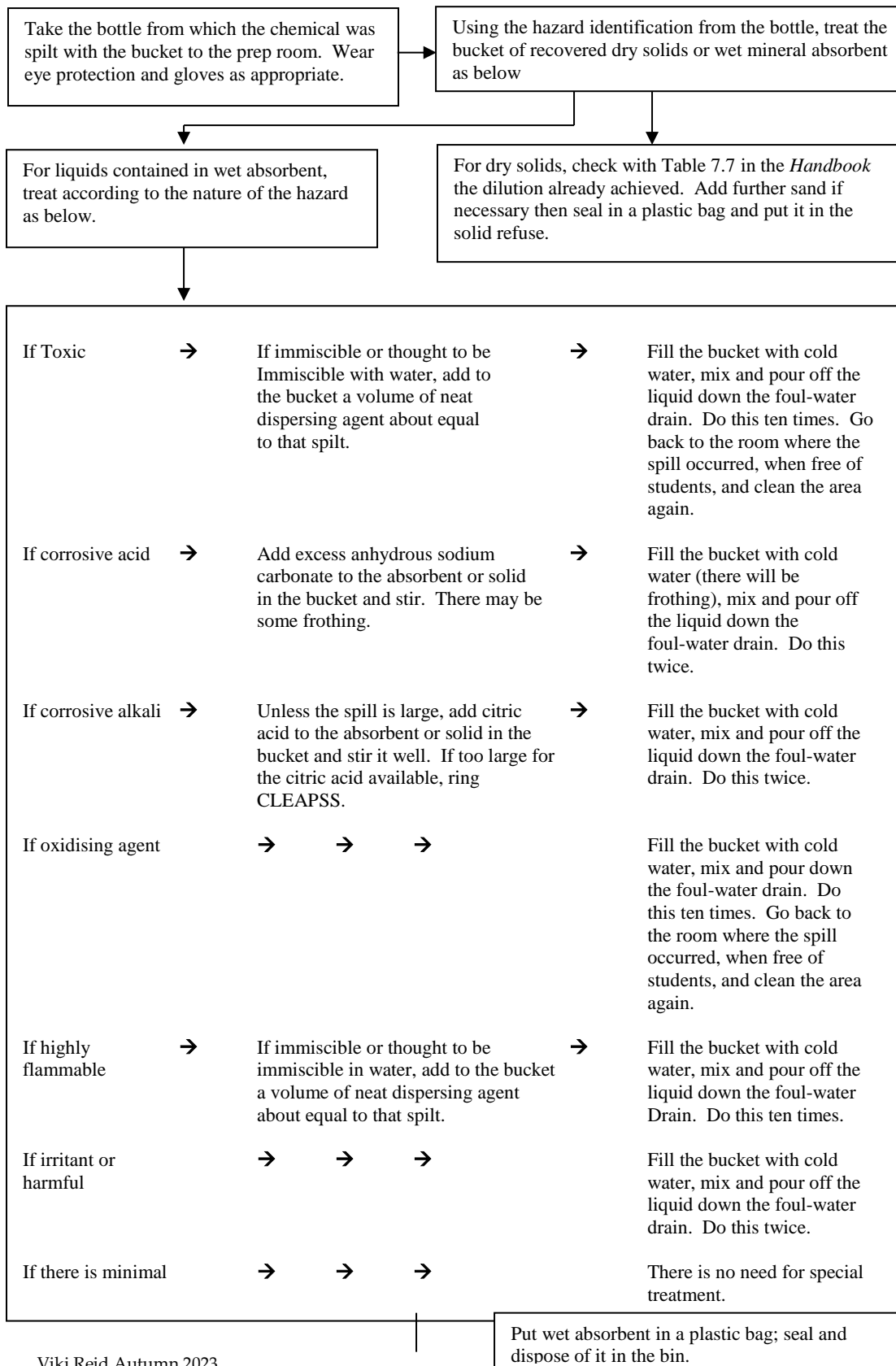
In the case of spills of oxidising agents and toxic chemicals, it is especially important to wash and rinse the area of the spill thoroughly so that no impregnation of the surface by the chemical occurs.

Inquiry

After the spill has been dealt with, the clearing up operation should be examined to see if the existing procedures ran smoothly and to see if there should be any improvements or extra training. It may be useful to discuss the incident and its aftermath with other science teachers and technicians at a departmental meeting. Naturally, if shortcomings are found, then further action, e.g. practice or looking at the activity that caused the mishap, can be taken.

3.20.6 TREATMENT AND DISPOSAL PROCEDURE – GENERAL

This procedure should be followed **once the spilt chemical has been absorbed** (if necessary) and **transferred to a bucket**.



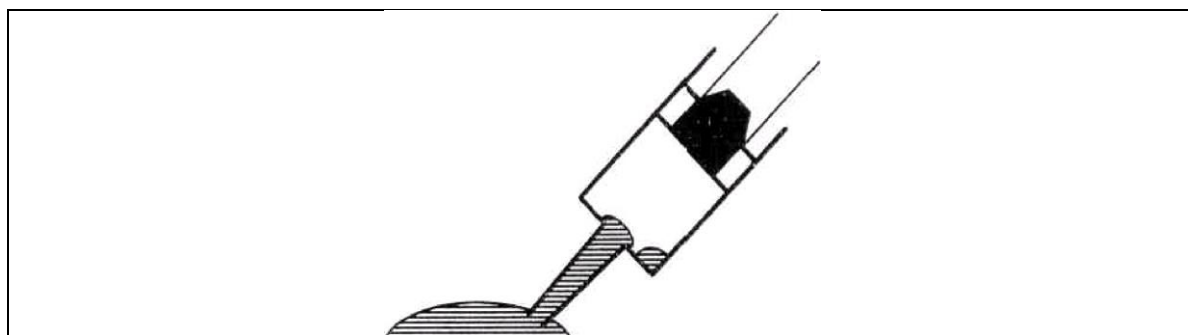
3.20.7 TREATMENT PROCEDURE – MERCURY

Neither a vacuum cleaner nor an unprotected vacuum pump may be used to collect a mercury spill.

Four stages of treatment are advisable:

1. Recover as much of the spilt mercury as possible for purification using the following instructions. Remove any rings, bracelets, watches etc, open windows and put on gloves. Gather the bulk of the mercury together using strips of wood (wooden spatulas or half-metre rules). Connect the pooter to a vacuum pump and use it to collect up the bulk of the mercury. Hold the specimen tube as nearly upright as possible and, if a rotary pump is used, make sure a trap is fitted in the vacuum to protect the pump. If a pooter and pump are not available, or the volume spilt is very small, use a plastic syringe, as shown in diagram, but it may need emptying more frequently. Empty the recovered mercury into the bottle prepared in the kit.

A plastic syringe used to suck up mercury



2. Clearing remaining small drops.

From smooth surfaces:

Mix some copper powder with enough 2 M hydrochloric acid to make a thick paste in the beaker. Use wooden spatulas to spread this paste over the contaminated area. The paste will pick up mercury drops.

Sweep up the paste with the paint brush and put it in the bottle for mercury-contaminated waste.

From rough surfaces and cracks:

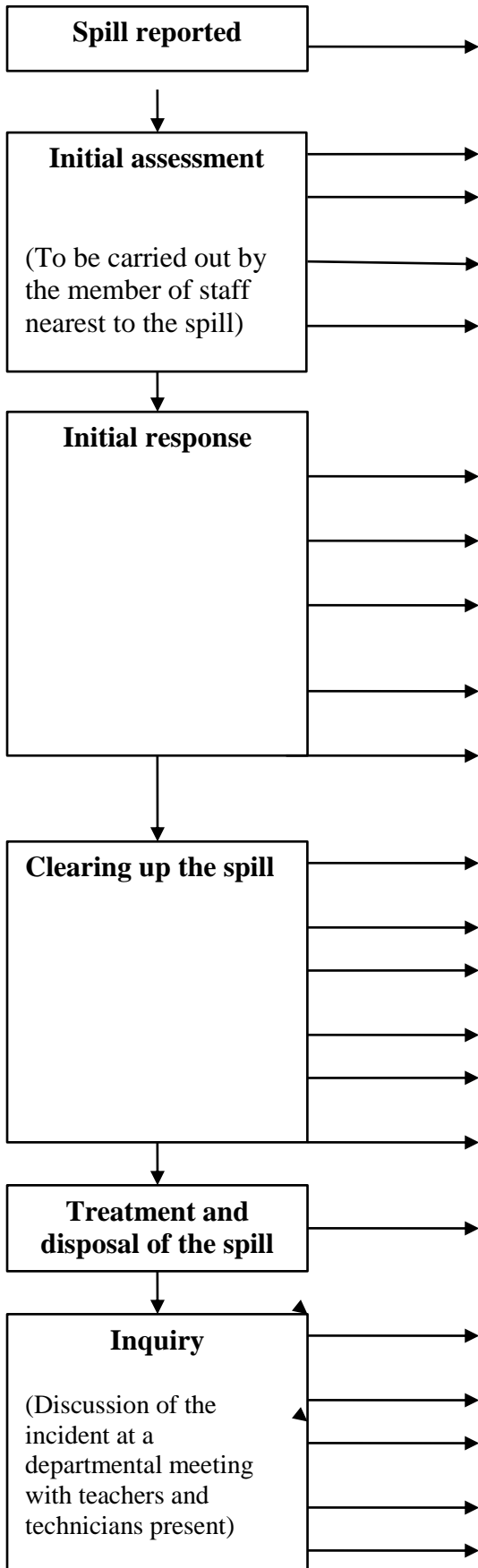
Heat some of the lime/sulphur mix with a little water to make a smooth slurry. Spread this over the contaminated area and leave to dry. It reacts with the mercury to form a sulphur compound.

When dry, using the paint brush, sweep up as much of the mix as possible and put it in the bottle for mercury waste.

Dust dry lime/sulphur mix over the area and brush it into any cracks.

3. Wash all the equipment and arrange for storage of the mercury-bearing waste.
4. Bottles of waste should be stored along with other toxics until sufficient has been collected for transmission to a specialist mercury-waste contractor.

3.20.8 A POSSIBLE MANAGEMENT CHECK LIST FOR DEALING WITH SPILLS



Are students aware that all but the smallest spills must be reported immediately to a member of staff?

What are the hazards of the chemical(s) involved?

Is immediate evacuation of the room required?

Are there any injuries?

What volume has been spilt? Will a damp cloth or paper towel suffice? If so, do it, if not, see below.

50 ml or more liquid should be surrounded and covered (if possible) with mineral absorbent.

Fence off the area of the spill with lab stools etc.

If fumes are apparent, open windows and treat to reduce fume production.

Send student (s) to the technician for assistance with as much information as possible.

Use the Hazard or *handbook* to decide on procedure. Seek help from CLEAPSS if necessary.

The spill kit is brought to the scene of the spill.

Use appropriate personal protection.

Sweep solid or used mineral absorbent into a bucket.

Take it to the prep room for treatment and disposal.

Rinse and dry the area of the spill.

Seek help from CLEAPSS if necessary.

See section

How did the spill occur?

Could it have been avoided?

Did the spill procedures work?

Changed procedures need to be circulated to all staff.

Is practice required by the staff to deal with spills?

3.20.9 SPILLS REQUIRING SPECIAL PROCEDURES

Chemical	Action if the spill is reasonably small	Action if the spill is so large that breathing apparatus might be required
Concentrated ammonia solution	Wear goggles and gloves. Apply the mineral absorbent and citric acid to the spill.	Evacuate the room and call the fire brigade unless the existing ventilation will disperse the fumes.
Concentrated hydrochloric acid	Wear goggles and gloves. Apply the mineral absorbent and sodium carbonate to the spill	Evacuate the room and call the fire brigade.
Concentrated nitric acid	Wear goggles and gloves. Apply the mineral absorbent and sodium carbonate to the spill	Evacuate the room and call the fire brigade
Bromine	Wear goggles and rubber gloves. Cover it with a slurry of sodium carbonate. Open outside windows and wait for any fumes to disperse. Mix with absorbent and clear up into a bucket. Mop the area of the spill. Fill the bucket with water and drain several times before disposing of the wet absorbent in the bin.	Evacuate the room and call the fire brigade.
Phosphorus	Wear goggles and gloves. Cover with sand and then thoroughly soak the sand with water. Evacuate the room of non-essential persons. Fill a reagent bottle with water. Using tongs, pick out all the pieces large enough to handle, rinse and put them into the bottle. Keep watching the spill for any signs of fire. Transfer the sand and small pieces to a safe place (e.g. a fume cupboard) and allow it to dry when the remaining small pieces will burn away.	
Fuming halides (e.g. phosphorus chlorides, sulphur chlorides, silicon tetrachloride and other fuming liquids).	Wear goggles and gloves. Cover with mineral absorbent, open windows and deal with concentrated acids (above).	Cover with sand and then thoroughly soak the sand with water. Evacuate the room and call the fire brigade.
Mercury	See <i>Hazcard</i> and see section 9.2 for details of the special kit.	There is no need to evacuate the room or call the fire brigade. Follow the instructions in section 9.3. Do not use a vacuum cleaner to clean the area.

3.20.10 SPECIAL PROCEDURE FOR SCHOOLS WITHOUT MAINS DRAINAGE

Where schools are not connected to mains drainage system, it is not possible to pass solutions or suspensions into a 'foul-water drain'. In these cases, schools are usually provided with a large septic tank in which the effluent is digested by bacteria, usually anaerobically. This tank must be considerably larger than that used for a single house and dilution of ordinary amounts of chemicals to safe levels is still possible. The action of the tank will be destroyed by large amounts of oxidising agents or large amounts of anything which kills bacteria.

The problem arises after a medium or large spill. In this case, the bucket containing the collected spilt material should be treated with the minimum amount of water: just sufficient to ensure that the neutralization has worked effectively. (There should not be enough water to pour off.) The wet absorbent can then be tipped and shaken into a large, heavy-gauge plastic bag for disposal via the ordinary refuse.

Care should be taken to limit the amounts of heavy metal salts which flow into the tank because compounds of mercury, lead and other metals collect in the sludge which is pumped out at regular intervals and eventually recirculated to the environment.

3.20.11 CHEMICAL HAZARDS

The *Chemicals (Hazard Information and Packaging for Supply) Regulations 1994* commonly known as CHIP2), compel suppliers of chemicals to provide information about the hazards of chemicals to their customers. These Regulations include hazard data on many hundreds of chemicals and schools are supplied with such information on safety data sheets, on labels on the bottles and in the catalogues. This information may be printed in full, given as a hazard warning sign or conveyed via a code called a Risk number as used in *Table 'Hazards of Cobalt Chloride'*. The hazard information in CHIP2 is also conveyed on *Hazcards*.

**The existence of a hazard warning in any of these sources
should be treated as a trigger to consult a risk assessment.**

As research into the hazards of chemicals is continuing all the time, there may well be annual amendments to these Regulations (e.g. the CHIP96 (*Amendment*) Regulations which did not affect school science). Should there be any major changes which affect school chemicals, then that information and its consequences will be published in the *CLEAPSS Bulletin*.

Unfortunately, not all school chemicals with hazards are included in the Regulations. In this case, suppliers are under an obligation to pass on their own hazard information and this can vary between suppliers, especially if a company is based in a different country and exports to this one. *Table 'Hazards of Cobalt Chloride'* shows how different suppliers have classified cobalt chloride. These differences are brought about either by incomplete research or the prospect of litigation so that 'catch-all' hazards are used. CLEAPSS advice is to handle cobalt chloride as any other HARMFUL chemical.

There are two major classes of hazard, physico-chemical (e.g. explosive, oxidising and flammable hazards) and those which affect health. The latter has been recently expanded to cover not only the chemicals with poisonous properties but also those which are carcinogens, sensitisers and teratogens. A third class has recently been added covering those chemicals harmful to the environment. Each of these is considered in a sub-section below.

Table 'Hazards of Cobalt Chloride'

Supplier	Description of hazards	Risk No
Aldrich	Harmful by inhalation, in contact with the skin and if swallowed; irritating to the eyes, respiratory system and skin; possible risks of irreversible effects.	(R20/21/22) (R36/37/38) (R40)
Beecroft	Harmful by inhalation, in contact with the skin and if swallowed; irritating to the eyes, respiratory system and skin; possible risks of irreversible effects.	(R20/21/22) (R36/37/38) (R40)
Breckland Scientific supplies	Harmful by inhalation and if swallowed.	(R20/22)
Griffin and George	Harmful if swallowed; may cause sensitisation by skin contact; may cause cancer.	(R22) (R43) (R45)
Hogg	Harmful if swallowed; may cause sensitisation by skin contact; may cause cancer by inhalation.	(R22) (R43) (R49)
Merck	Harmful if swallowed; May cause sensitisation by skin contact and inhalation.	(R22) (R42/43)
Philip Harris	Harmful if swallowed; possible risks of irreversible effects; may cause sensitisation by skin contact.	(R22) (R40) (R43)
Scientific and Chemical Supplies	Harmful if swallowed; may cause sensitisation by skin contact.	(R22) (R43)
Timstar Lab Supplies	Harmful by inhalation and if swallowed	(R20/22)

3.20.12 PHYSICO-CHEMICAL HAZARDS

Explosive chemicals

These substances 'may react exothermically without atmospheric oxygen thereby quickly evolving gases, and which, under defined test conditions detonate, quickly deflagrate or upon heating explode when partially confined.

The information conveyed by this classification and risk numbers R1 to 6 is a little extreme for laboratory use; substances such as ammonium dichromate may explode when handled in bulk but it would probably be extremely difficult to persuade 200 g in a laboratory bottle to detonate. However, picric acid has been known to explode when dry and, in any case, is a chemical the use of which 'should be avoided if possible' since it would be used very rarely and hence would be likely to dry out.

It would be wise not to open any old bottle of picric acid that may be found hidden in long-forgotten cupboards: contact CLEAPSS for advice.