

學校的職業安全及健康 Occupational Safety and Health in Schools



學校的職業安全及健康
Occupational Safety and Health in Schools

本指引由勞工處職業安全及健康部印製

This guide is prepared by the
Occupational Safety and Health Branch, Labour Department

二〇〇〇年 八月初版

First edition August 2000

本指引可以在職業安全及健康部各辦事處免費索取。有關各辦事處的詳細地址及電話，可致電二五五九 二二九七查詢。

本指引歡迎複印，但作廣告、批核或商業用途者除外。如需複印，請註明錄自勞工處刊物《學校的職業安全及健康》。

This guide is issued free of charge and can be obtained from offices of the Occupational Safety and Health Branch. Addresses and telephone numbers of the offices can be obtained by calling telephone no. 2559 2297.

This guide may be freely reproduced except for advertising, endorsement or commercial purposes. Please acknowledge the source as “Occupational Safety and Health in Schools”, published by the Labour Department.

1. 引言 Introduction	2
2. 安全及健康的管理 Safety and Health Management	4
3. 校舍管理 Housekeeping	5
4. 課室的通風 Ventilation in Classrooms	6
5. 照明 Lighting	8
6. 工作姿勢 Working Postures	10
7. 體力處理操作 Manual Handling Operations	12
8. 實驗室和工場 Laboratories and Workshops	15
實驗室和工場的良好工作指引 <i>Good Work Practice in Laboratories and Workshops</i>	16
通風 <i>Ventilation</i>	18
化學品的貯存和標籤 <i>Storage and Labelling of Chemicals</i>	21
化學廢物的處理和貯存 <i>Disposal and Storage of Chemical Wastes</i>	23
9. 教師的職業健康問題 Occupational Health Problems for Teachers	24
10. 參考資料 References	27
11. 進一步資料 Further Information	30

引言 Introduction

本港約有10萬名僱員在教育界工作。他們包括校長、教師、實驗室技術員和助理員、文書人員、工人、工場雜務員、學校社會工作人員、言語治療師、物理治療師等。他們都是為青少年的教育作出寶貴貢獻。

雖然學校的工作環境不似製造業或建築業般危險，但並非完全沒有危害安全及健康的因素。這些危害因素如未能適當地鑑別、評估和加以控制，學校僱員的安全及健康將會出現問題，學生和家長亦可能受到影響。

學校僱員的安全及健康，是受到《職業安全及健康條例》和其附屬規例所保障。僱主有責任在合理地切實可行範圍內，保障僱員的工作安全及健康。僱員亦須在合理地切實可行範圍內與僱主合作，遵從法例的規定，以保障自己和其他可能受影響人士的安全及健康。

本指引旨在喚起教育界僱主和僱員的警覺，留意學校內各種職業安全及健康的危害，並提供簡明的預防措施，以期防止意外及職業病的發生。

勞工處職業安全及健康部

二〇〇〇年八月

In Hong Kong, approximately 100,000 people are employed in the education sector. They include school heads, teachers, laboratory technicians and assistants, clerical staff, workmen, workshop attendants, school social workers, speech therapists, physiotherapists, etc. They have made valuable contribution to the education of our younger generation.

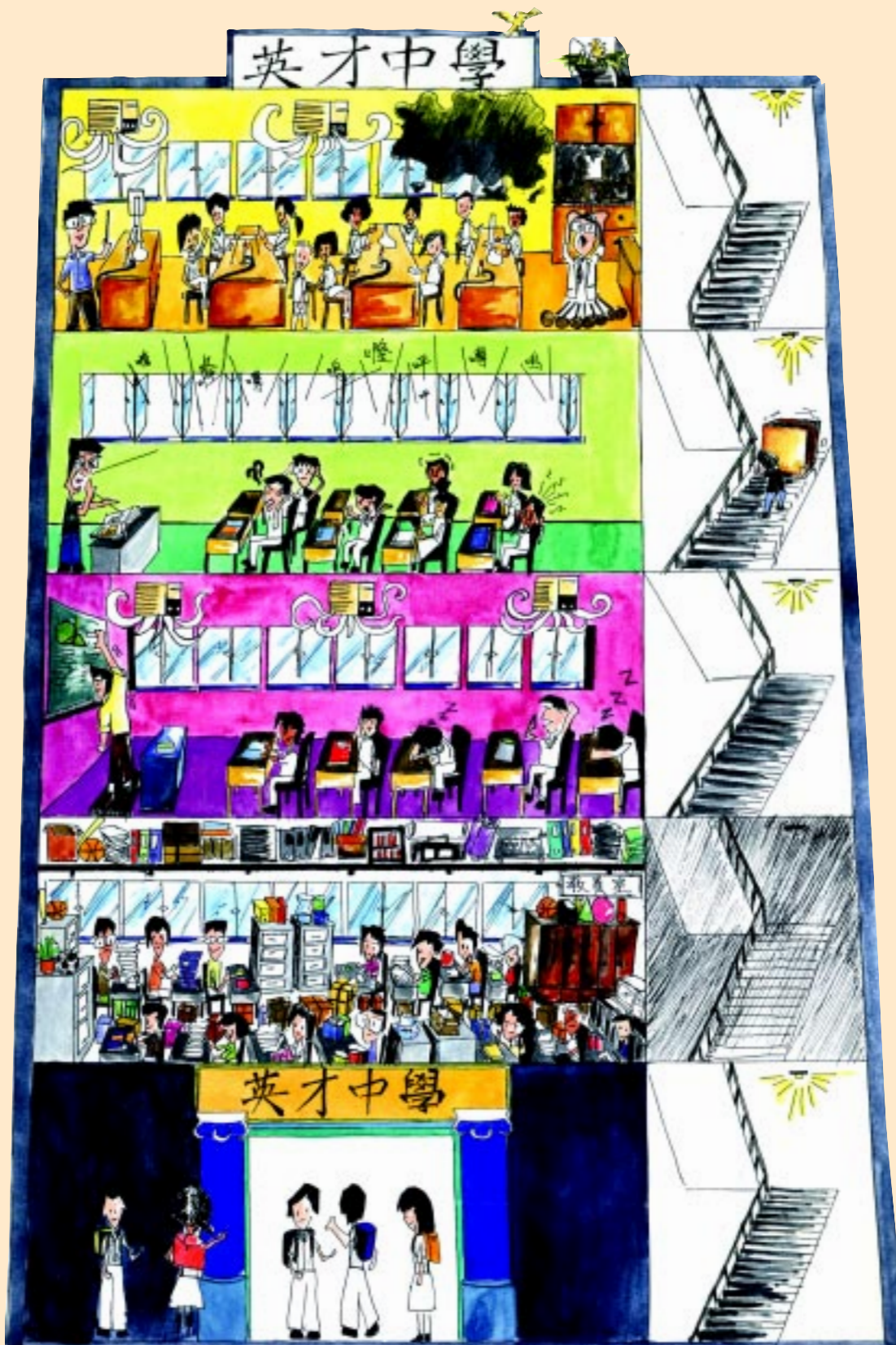
Although the working environment in schools is not as hazardous as in the manufacturing or construction industry, it is not entirely free of occupational safety and health hazards. If the hazards are not properly recognised, evaluated and controlled, the safety and health of school employees may be jeopardised. Pupils and parents may also be affected.

The safety and health of employees in schools is protected by the Occupational Safety and Health Ordinance and its subsidiary regulation. It is the responsibility of employers to ensure, so far as reasonably practicable, the safety and health of all employees at work. Employees should, so far as reasonably practicable, cooperate with their employers to comply with the requirements of the law so as to protect the safety and health of themselves and any other persons that may be affected.

The objective of this guide is to arouse the awareness of both employers and employees of the education sector about the various occupational safety and health hazards in schools. It also suggests precautionary measures to be adopted with a view to preventing accidents and occupational diseases.

Occupational Safety and Health Branch, Labour Department

August 2000



你的學校有沒有以上的安全及健康問題呢，例如照明不足、工作間擠迫、通風不足、不良工作姿勢、噪音、提舉重物和煙櫥漏氣等？

Are there any of the above safety and health hazards in your school, e.g. insufficient lighting, overcrowding, inadequate fresh air, poor working posture, noise, manual lifting of heavy loads and leakage from a fume cupboard?

安全及健康的管理 Safety and Health Management

要成功締造安全及健康的工作環境，學校應制訂一套職業安全及健康的管理制度。這制度應該包括以下重點：

- a) 一份安全及健康政策的聲明，顯示管方的承擔；
- b) 管理制度的組織，連同清楚的安全責任分配；
- c) 職業安全及健康的風險評估，是項評估應隨情況變遷而更新；
- d) 工作間的安全及健康規則；
- e) 職業安全及健康的教育、指引和訓練；
- f) 緊急應變計劃、演習和急救安排；
- g) 定期檢討管理制度，確保有效；
- h) 編製有關文件和保存紀錄，確保措施連貫。

To successfully manage safety and health at work, a school should establish an occupational safety and health management system which includes the following elements:

- a) a safety and health policy statement to show the management 's commitment;
- b) organisation of the management system, with a clear allocation of safety responsibilities;
- c) an assessment of the safety and health risks which should be updated when situations change;
- d) safety and health regulations to be observed in the workplace;
- e) education, instruction and training on occupational safety and health;
- f) emergency plans, drills and first aid arrangements;
- g) a regular review of the system to ensure its effectiveness;
- h) documentation to keep proper record and ensure continuity of activities.

校舍管理 Housekeeping

良好的校舍管理，是指保持工作間的器材和設施清潔和井然有序。這需要有計劃和各方面的合作。校舍管理是邁向良好職業安全及健康習慣的第一步。學校的校舍管理標準通常甚高，環境一般都能保持清潔。然而，仍有一些需要進一步關注的事項。

Good housekeeping refers to the cleanliness and the good order of equipment and facilities in a workplace. Housekeeping needs planning and cooperation of all staff and it is the first step towards good occupational safety and health practice. The standard of housekeeping and cleanliness in schools is generally quite high. However there are still some areas that need further attention.



通道和出口不應被物件阻塞，這些物件可能會令人絆倒，及妨礙火警時逃生。

Passageways and exits should not be blocked by obstacles which may cause people to trip and affect the means of escape in the event of fire.



充足的空間和貯存設施，有助工作間管理。

Sufficient space and storage facilities can facilitate good housekeeping.



提供足夠和適當的滅火筒，並放在易於取用的地方。

Suitable and sufficient fire extinguishers should be provided at locations where they are readily available for use when required.

課室的通風 Ventilation in Classrooms

教師大部分工作時間是在課室渡過，每個課室通常容納30至40名學生。如課室的通風不足，體味和其他污染物很快便會積聚至令人感到不適甚至生病的水平。通過空氣傳播的傳染病，如結核病、德國麻疹和流行性感冒等，會很容易在這情況下散播。此外，通風不足亦會影響教學和學習的表現。故此，課室應維持有足夠的新鮮空氣供應，理想的新鮮空氣供應量是每人每分鐘 0.43 立方米。

A teacher spends most of his/her working time in a classroom which usually holds 30 to 40 pupils. If a classroom is not adequately ventilated, body odour and other contaminants can easily accumulate to a level that causes discomfort and even illness. Communicable diseases that are transmitted through air, e.g. tuberculosis, German measles and flu, may easily spread under such conditions. The quality of teaching and learning will also be adversely affected. A fresh air supply of 0.43 m³/minute per person is recommended.



若工作環境內沒有燃燒或可產生二氧化碳的工作，例如課室，我們可透過量度空氣中的二氧化碳含量來評估通風是否充足。在日常活動中，人們會呼出二氧化碳。在通風適量的環境中，二氧化碳的濃度會保持於適當的低水平。當二氧化碳含量經常超越百萬份之一千水平時，便顯示通風可能不足，需要仔細檢查通風系統，查看是否有新鮮空氣供應不足或分佈不均的問題。空氣中的「二氧化碳水平」可使用一些簡單直讀式儀器進行評估。

In a workplace without burning activity or a source of carbon dioxide contamination, such as a classroom, the adequacy of ventilation can be measured indirectly by checking the carbon dioxide level in the air. During normal work activity, people breathe out carbon dioxide. If there is sufficient fresh air supply for the workplace, the concentration of carbon dioxide will remain at a low level. When the carbon dioxide level frequently exceeds 1,000 ppm, it suggests that the ventilation system should be examined to check whether there is any air distribution problem or the fresh air supply is adequate. The measurement can be made by using a direct reading instrument which responds specifically to the level of carbon dioxide in air.



天然通風（打開門窗）配合循環風扇能提供足夠的新鮮空氣。缺點是受外間噪音的滋擾，和會受夏季的高溫影響。

Natural ventilation (keep the windows and doors open) coupled with circulating fans can provide sufficient fresh air supply. The drawbacks are noise nuisance from outside and a high temperature in summer.

如使用空氣調節系統，應裝設足夠的抽氣扇和新鮮空氣抽入扇，確保課室內的空氣與室外的新鮮空氣有足夠交換。

If an air-conditioning system is used, sufficient exhaust fans and fresh air intake fans should be installed to ensure an adequate exchange of indoor air with fresh air outside the classroom.



所有機械通風系統都應有定期的檢查和維修，以避免故障和確保效能良好。隔塵網、風扇、冷凝器圈和風管都要定期清潔或更換。

Regular checks and maintenance should be made to any mechanical ventilation system to ensure their efficiency and prevent breakdown. Air filters, fans, cooling coils and ducting should be regularly cleaned.



照明 Lighting

要能舒適地閱讀和增加工作效率，便必須有良好的照明。良好的照明能減少意外、眼部疲勞和消除不適。

天然光是最好和最廉宜的光源。但由於它的不穩定性，以及其他不能控制的因素，如天空的光度、季節變化和與窗戶的距離等，我們必須提供足夠的人工照明作輔助。

工作環境的照明度應配合工作性質。此外，工作間內的照明亦要平均分佈。下表列出不同工作地點的建議照明度。

Good lighting is necessary for comfortable reading and increasing efficiency at work. It helps to reduce accidents, eye strain and discomfort.

Natural lighting is the best and cheapest source of illumination. However, due to its unreliable nature and uncontrollable factors such as sky brightness, seasonal variation, distance from windows, etc., adequate artificial lighting should be used as a supplement.

The intensity of the lighting should match the nature of the job. The illumination in a workplace should also be uniform. The recommended illumination for various processes in different locations is given below:

地點 Location	理想的照明度 Optimum Illuminance (勒克斯 lux)	最低要求的照明度 Minimum Required Illuminance (勒克斯 lux)
Corridors 走廊	100	10 ⁽¹⁾
Classrooms 課室	500	150 ⁽²⁾
Offices 辦公室	500	150 ⁽²⁾
Libraries 圖書館	300	100 ⁽²⁾
Laboratories 實驗室	500	150 ⁽²⁾
Workshops 工場	300	100 ⁽²⁾

註 Note:

- (1) 適用於通常不需仔細察看物件，不致造成眼部疲勞的地點。在建議最低要求的照明度時，只考慮一般安全因素。然而，如須察看細微要點以識別危險；或者，如工作出錯會影響別人安全，則為了安全著想，上述最低要求的照明度應增至最少 100 勒克斯。

Applicable to situations where no perception of details is required and visual fatigue is unlikely. In recommending the minimum required illuminance, only general safety factors are considered. However, where it is necessary to inspect details to recognise a hazard, or where errors in performing the task could put someone else at risk, the above minimum required illuminance should be increased to a minimum of 100 lux.

- (2) 最低要求的照明度可避免眼部疲勞及保障安全。對需察看極仔細的工作，如電子零件裝配或人手縫紉，應提供局部照明或比最低要求的照明度更高。

The minimum required illuminance is to avoid visual fatigue and for safety purposes. For jobs requiring perception of very fine details, e.g. electronic component assembly or hand sewing, local lighting or a higher illuminance should be provided.

適當地安排光源的位置，避免因產生強烈投影而增加絆倒的危險和令眼睛疲勞。應採用適當的燈罩和窗簾以減眩光。

Lamps should be arranged to avoid heavy shadowing effect which will increase the risk of tripping and eye strain. Glare should be minimised by suitable lamp shades and blinds.



損壞的燈應盡快更換。校方宜制訂保養措施，以保持燈、照明裝置和窗戶的整潔和效能。

Damaged lamps should be replaced as soon as possible. A maintenance programme should be set up to ensure the cleanliness and effectiveness of lamps, lighting fixtures and windows.

玻璃桌面會產生反射眩光，令注意力分散。桌面宜採用不反光表面。

A desk with a glass surface can produce reflected glare and cause distraction. A desk should have a matt surface to avoid reflected glare.



使用測光錶可量度照明度。

The intensity of lighting can be measured by a light meter.

工作姿勢 Working Postures

工作環境和使用的工具應能令僱員採用舒適自然的工作姿勢。姿勢和活動受限制都可能導致職業性筋骨勞損。適當地根據人體功效學原理設計的工作間，可確保不同身材的員工均能採取舒適自然的工作姿勢，設計時要照顧身材矮小和高大僱員的實際需要。

The working environment and tools should enable employees to adopt a comfortable working posture. Constraints on postures and restrictions on movement can result in work-related musculo-skeletal disorders. A workplace properly designed according to ergonomic principles could help staff of different build to adopt comfortable working posture. Special attention should be given to short and tall employees at the design stage.



抹窗時，如沒有使用適當工具和工作姿勢受限制，肩膀和背部很容易受傷。清潔雙重玻璃或裝有窗花的窗戶會增加受傷的風險。若要清潔窗戶外面，可考慮聘用專業承辦商；否則應向僱員提供適當的工具。

Window-cleaning without appropriate tools and with postural constraints might cause shoulder and back injuries. The risk is even higher when cleaning a double-glazed window or a window with a grille. It is advisable to consider the employment of a specialised contractor to clean the outside surfaces of windows. Alternatively, suitable tools should be provided.



幼稚園教師為幫助學生學習要經常彎腰。背痛是幼稚園教師常見的健康問題。

Kindergarten teachers are always required to bend their backs in teaching pupils. Back pain is common among kindergarten teachers.

使用適當凳子可避免彎身。

Use a suitable stool to reduce the need for bending the body.



為盡量減少因連續操作電腦工作而產生不符合人體功效學的問題，學校員工可遵照有關使用電腦或顯示螢幕設備的指南。該等指南可向勞工處職業安全及健康部免費索取，有關書刊請參閱本指引的第 27 - 28 頁。

無論工作姿勢是如何良好，亦不應長期使用同一姿勢；否則亦會引致肌肉疼痛和妨礙血液流通。僱員應不時改變工作姿勢以便舒展身體不同的部位。

To minimise ergonomic problems resulting from working continuously at computer units, staff in schools should observe guidelines concerning the use of computer or display screen equipment. These guidelines are available free of charge from the Occupational Safety and Health Branch of the Labour Department. For the list, please refer to pages 27 - 28 of this guide.

No matter how good a working posture is, it should not be maintained for a long time as it can result in muscular strain and restrict blood circulation. An occasional change of work postures for exercising different parts of the body is recommended.

體力處理操作 Manual Handling Operations

體力處理操作是指用人手或身體部份移動或承托物件，包括提舉、放下、推動、拉動和搬運物件。

不適當地提舉物件，可能會損害健康或引致受傷。用不自然的姿勢或經常重複同一動作提舉物件，則會增加受傷的機會。學校內有可能令健康受損的體力處理操作包括運送大量書籍、搬運實驗室和工場的重型儀器、搬移桌椅，以及在特殊學校搬移傷健學童。教師、教師助理、實驗室技術員、工場雜務員和工友是最受影響的一群。

進行任何體力處理操作前，應由工作間負責人安排合適人員進行初步的安全及健康風險評估。在合理地切實可行範圍內，應盡可能避免具危害的體力處理操作，若無法避免，則需要作進一步評估。工作間的負責人應根據評估的結果制定預防措施，如採取適當的工作姿勢、提供機械輔助器材及鋪設防滑地板，盡量減少有關風險。

體力處理操作的風險評估應包括下列因素：

- a) 工作 b) 負荷物 c) 工作環境 d) 個人能力 e) 其他有關事項

Manual handling is an operation which involves moving or supporting a load by hands or by bodily effort, including lifting, lowering, pushing, pulling and carrying the load.

Manual handling operations can be hazardous and cause injury if not properly carried out. Awkward movements during manual handling operations and repetitive movements make people particularly prone to injury. The potentially hazardous manual handling operations in schools include carrying a large quantity of books, moving heavy equipment in laboratories and workshops, moving chairs and desks, and moving physically handicapped pupils in special schools. Teachers, teacher assistants, laboratory technicians, workshop attendants and workmen are most vulnerable to injury from manual handling operations.

Before any manual handling operation is undertaken, a preliminary assessment of its safety and health risks must be arranged by the person responsible for the workplace. Hazardous manual handling operations should be avoided as far as reasonably practicable. A further assessment should be made to assess the risks of any unavoidable hazardous manual handling operations. Preventive measures, such as adopting proper working postures and providing mechanical aids and non-slippery floor tiles, should be implemented to minimise the risks.

An assessment of the risks of undertaking manual handling operations should include the following factors:

- a) the tasks b) the loads c) the working environment
d) individual capability e) other relevant matters

容易導致受傷的不自然動作：

Awkward movements that may easily lead to injuries are:



彎身
Stooping



向上伸展
Reaching



扭動身軀
Twisting



在短時間內搬移大量椅子、書桌等是會引致體能大量消耗，肌肉與骨骼系統會承受巨大壓力，很容易受傷。這些工作宜預早安排充足人手、設備和時間來進行。

Moving a large quantity of chairs, desks etc. in a short period of time will cause physical stress. The musculo-skeletal system will be put under great strain and may be easily injured. Sufficient manpower, mechanical aids and time should be made available.

特殊學校的員工移動傷健學生時，如姿勢不正確，可能會導致背部受傷。因此最好利用機械輔助器材，或合力提舉，把風險減至最低。

Staff moving physically handicapped pupils in special schools may suffer back injuries if an improper posture is adopted. It is advisable to minimise the risk by using mechanical aids or by working as a team.





搬移物品上落樓梯，會增加搬運的難度和受傷的風險。使用坡道或正確的體力處理操作方法可減少風險。

Moving loads up and down stairs increases the difficulty of movement and the risk of injuries. A gentle ramp or proper manual handling operation can reduce the risk.

重型器材宜存放在腰部高度，避免員工彎身或向上伸展去拿起器材。

It is advisable to store heavy equipment at waist level to avoid stooping or reaching upwards during lifting.



所有僱員都應接受指導，學習安全的體力處理操作方法。

All employees should be instructed on the safety of manual handling operation.



實驗室和工場

Laboratories and Workshops

實驗室和工場是學校內最經常使用化學品、設備和機器的地方，因此應特別注意在這些地方內有關職業安全及健康的危害。

空氣中的污染物可能影響學生和僱員的健康。在合理地切實可行範圍內，應盡可能把散發於空氣中的污染物減至最少，並不應超過勞工處建議的職業衛生標準。詳細資料，可參閱勞工處出版的「控制工作地點空氣雜質（化學品）的工作守則」。

In any school, laboratories and workshops are places where chemicals, equipment and machines are mostly used. Special attention should be paid to the potential occupational safety and health hazards in these locations.

Air-borne contaminants may affect the health of pupils and employees. Their exposure to air-borne contaminants should be kept as low as reasonably practicable and should not exceed the Occupational Exposure Limits recommended by the Labour Department. Useful information on Occupational Exposure Limits can be found in the booklet "Code of Practice on Control of Air Impurities (Chemical Substances) in the Workplace" published by the Labour Department.

實驗室和工場的良好工作指引 Good Work Practice in Laboratories and Workshops

所有技術員、工場雜務員、工友和理科、實用科目和工藝科目的教師均應先接受適當的安全及健康訓練或指導，然後才可在實驗室或工場工作。有關實驗室安全的訓練可透過參加勞工處、職業安全健康局、教育署和工業學院等機構舉辦的課程和研討會獲得。

實驗室和工場都應有一套安全及健康工作指引。

All technicians, workshop attendants, workmen and teachers of science, practical and technical subjects should have received suitable safety and health training or instructions before working in a laboratory or workshop. Such training can be obtained through courses and seminars organised by the Labour Department, the Occupational Safety & Health Council, the Education Department, and technical institutes, etc.

Guides on good safety and health practices for working in a laboratory or workshop should be developed.



在當眼處張貼關於安全及健康指引的海報，提醒員工和學生關於一般安全及健康的規定和應採取的預防措施。

Posters with safety and health instructions should be displayed in prominent positions to alert staff and pupils on general safety and health requirements and the precautions to be adopted.

洩漏的化學品應立即清理。實驗室和工場應常備一套處理化學品洩漏的工具和所需的個人防護裝備。

All spilled chemicals should be cleaned up immediately. Suitable spillage-handling kits and personal protective equipment should be readily available.



機器和設備的危險部份要安裝適當護罩。操作員要有適當的訓練和合乎操作有關設備的資格。其他人士只可在合資格操作員的指導下，使用這些設備。

All dangerous parts of plant and machinery should be effectively guarded. Operators should be properly trained and competent. Other persons should operate the plant or machinery only when under the supervision of a competent operator.



應經常保持良好的工作紀律和遵照實驗室/工場的安全及健康工作指引：

- 在實驗室、工場或準備室內不得吸煙和飲食；
- 工作前後要洗手；
- 需要時使用適當的個人防護衣物和設備，例如護眼罩、手套和保護聽覺器具等；
- 處理化學品、儀器、器材或機械時遵從良好和安全的工作程序。

Good work discipline and laboratory/workshop practices should always be followed:

- *no smoking, eating or drinking in laboratories, workshops or preparation rooms;*
- *wash hands before and after work;*
- *use appropriate personal protective clothing and equipment such as eye protectors, suitable gloves, hearing protectors, etc. when required;*
- *follow good and safe working procedures while handling chemicals, apparatus, equipment or machinery.*

應常備一套化學品的物料安全資料單，以便在有需要時可即時查閱化學品的特性、對健康的影響、所需的預防措施和緊急處理程序。

A set of Material Safety Data Sheets for all chemicals used should be readily available so that the properties, health effects, precautions required and emergency-handling procedures of the chemicals are known whenever required.



應備有足夠的急救設施，並存放在容易取得的地方、經常檢查和增添，以維持良好備用狀況。

Adequate first-aid facilities should be readily accessible. They should be fully stocked and maintained in good conditions at all times.

通風 Ventilation



工場和實驗室內要有足夠的通風，使實驗過程釋出的污染物能即時抽走。

Sufficient exhaust ventilation should be provided in workshops and laboratories so that any contaminants released during experiments can be readily removed.

實驗室或工場的窗戶不得被任何物件阻擋，在實驗過程中要能完全打開，確保有足夠的通風。

The windows in a laboratory or a workshop must not be obstructed and must be able to be fully opened during experiments to ensure sufficient ventilation.



若沒有合適的抽氣設施，室內不應進行有危害性的操作如噴油，應在有足夠通風的地方進行，並佩戴合適的個人防護裝備。

If not performed under exhaust ventilation, hazardous operations such as paint-spraying, should not be conducted indoors. Such operations should be done in properly ventilated areas with suitable personal protective equipment.

在設有空氣調節的實驗室、準備室和工場，使用本生燈、氣體裝置或化學品時，應把所有冷氣機關掉，開動抽氣扇，並把所有窗戶打開。

In air-conditioned laboratories, preparation rooms and workshops, when Bunsen burners, gas appliances or chemicals are used, all air-conditioners should be switched off, the exhaust fans be switched on and the windows be kept open.





有些實驗可能令員工或學生暴露於高水平的懸浮污染物中。實驗室應提供足夠而效能良好的煙櫥以便進行這類實驗。

Sufficient and effective fume cupboards should be provided in laboratories so that all experiments that would expose staff or pupils to a high level of airborne contaminants can be conducted in a safe manner.

產生大量塵埃的工序如刨木、磨石和焊接，應在設有局部抽氣裝置的地方進行，以盡量減低空氣污染。

Dust-producing processes, such as wood machining, stone grinding and welding, should be performed under local exhaust ventilation to minimise air contamination.



所有煙櫥和局部抽氣系統應定期檢查和保養，確保效能良好。污染物可能由保養差的煙櫥或局部抽氣系統中洩漏。

All fume cupboards and local exhaust ventilation systems should be regularly checked and maintained to ensure their effectiveness. Contaminants may escape from poorly maintained fume cupboards or local exhaust ventilation systems.



為確保煙櫥的效能，煙櫥不應用作貯存化學品或器材。

To ensure the effectiveness of a fume cupboard, it should not be used for the storage of chemicals or equipment.

室內的氣流會嚴重影響煙櫥的性能。使用煙櫥時，應避免氣流橫過煙櫥口，例如避免風扇直接吹向或橫向吹過煙櫥口。

Room air currents have a significant effect on the performance of a fume cupboard. When a fume cupboard is used, the air current across the face opening should be minimised, e.g., no fans should blow at or across the face opening.



化學品的貯存和標籤

Storage and Labelling of Chemicals



應盡量減少存放於實驗室或工場的化學品的數量，以僅足夠用於日常用途為限。在準備室貯存大量化學品，會增加員工接觸化學品的風險。

The quantity of chemicals kept in a laboratory or workshop should be as low as possible and just sufficient for routine usage. The storage of a large quantity of chemicals in preparation rooms will increase the risk of chemical exposure to staff.

貯存的化學品應放在穩固的櫃裡或架上，並存於上鎖的貯物室內。鎖匙應由負責貯物室的教師或實驗室技術員保管。不相容的化學品應互相隔離。貯物室應有足夠通風，避免危險的煙霧或氣體積聚。貯物室應位於方便但遠離走火通道的地點，以盡量減少運送化學品的距離。

The bulk of chemicals should be stored in suitable cupboards or shelves in a locked chemical storeroom. The key should be kept by the teacher or laboratory technician in charge of the storeroom. Incompatible chemicals should be isolated from each other. The storeroom should have adequate ventilation to avoid the accumulation of hazardous fumes or vapours. The storerooms should be at locations convenient but far away from all means of escape so as to minimise the distance for carrying of chemicals.





化學品容器應整齊及穩固擺放，防止意外倒翻。容器應定期檢查，防止洩漏或破損，並查看是否有已過期的化學品。除實驗室化學品外，不應有其他物品貯存於化學品貯物室。

Chemical containers should be kept secure and tidy to prevent accidental tipping over. They should be inspected periodically to avoid leakage or breakage and to check for expired chemicals. Articles or substances other than laboratory chemicals should not be kept in a chemical storeroom.

從貯物室運送化學品往實驗室應使用適當的運送設備，以減少意外破損的機會。

Suitable bottle carriers should be used for carrying chemicals from the storeroom to the laboratory to minimise the risk of accidental breakage.



沒有貼上適當標籤的化學品可能會被誤用，造成意外。

Chemicals not properly labelled may be misused and cause accidents.

化學品標籤有助提醒使用者有關化學品的危險特性及安全措施。

Chemical labels help to remind users on the hazardous nature of chemicals and their safety precautions.



化學廢物的處理和貯存

Disposal and Storage of Chemical Wastes

不適當處理和貯存化學廢物，例如把化學廢物倒進洗手盆，或將不相容的化學品混合，會增加產生化學作用的風險。過期的化學品可能會不穩定，或性質已改變。這些化學品應盡快移走並作適當處理。

Improper disposal and storage of chemical wastes, e.g. pouring down the sink or mixing incompatible chemicals will increase the risk of exposing to chemical reaction. Expired chemicals may be unstable or have denatured. They should be removed for proper disposal as soon as possible.



積聚於洗手盆下面稀釋槽的化學品會繼續釋放至空氣中，會增加員工暴露於化學品的風險。清潔稀釋槽時更要小心。

Chemicals trapped in a dilution tank below a sink will continue to escape into the air and cause unnecessary exposure. Cleaning the tank requires special precautions.



密封的收集瓶消除了大部分開放式稀釋槽的問題。

A sealed catchpot recovery trap eliminates most of the problems associated with an open type dilution tank.



應提供足夠的設施，以適當處理和暫時貯存化學廢物。這包括使用不同的容器裝載經使用的酸、鹼和有機化學品。過期的化學品千萬不要隨意棄置，棄置前仍應整齊擺放和保持整潔。

Adequate facilities should be made available for the proper disposal and temporary storage of chemical wastes, including separate containers for spent acids, alkalis and organics. Expired chemicals should never be dumped in a messy manner. They should also be kept tidy before disposal.

教師的職業健康問題 Occupational Health Problems for Teachers

教師獨特的工作性質，令他們會遇上一些常見的職業健康問題。

The special job nature of teachers exposes them to a number of common occupational health problems.

長期在課室講課，特別是在高噪音的環境，可引致聲音沙啞。

Prolonged speaking in classes, especially in a noisy environment, can lead to voice hoarseness.



肩背痛是教師常見的健康問題。這是由於不正確的工作姿勢導致，如幼稚園教師在學生的桌子上批改功課和長時間在黑板上方書寫等。

Shoulder / back pain is common among teachers. It can be caused by incorrect working posture, e.g. marking homework at a pupil's desk in a kindergarten, or prolonged writing on the upper part of a blackboard.



建議的預防措施：

- 使用擴音器；
- 關閉窗戶把外間的噪音源隔絕；
- 接受聲音控制和正確發音技巧的訓練；
- 給嗓子充分休息；
- 日常生活中適當保護嗓子。

Suggested precautions:

- use loudspeaker;
- isolate exterior noise sources by closing windows;
- receive training on voice management and correct speech-production techniques;
- sufficient rest;
- proper protection of the voice in daily life.

建議的預防措施：

- 提供可調校高度的黑板；
- 使用投影機代替黑板；
- 為案頭工作提供合適的桌椅；
- 準備適當的教具，以盡量減少使用黑板；
- 保持正確的工作姿勢；
- 下課後做一些鬆弛的運動。

Suggested precautions:

- provide a height-adjustable blackboard;
- use an overhead projector instead of a blackboard;
- provide suitable desks and chairs for desk-top work;
- prepare appropriate teaching aids so as to minimise the use of blackboards;
- maintain a correct working posture;
- do relaxation exercises after classes.

長時間站立可導致腳部和腰背疼痛，亦可能影響血液從腳部流返心臟，以及加劇靜脈曲張的情況，雙腳表面的靜脈因而出現擴張、拉長和彎曲的現象。

Prolonged standing may cause leg and lower back pain. It may also restrict blood flow from the legs back to the heart and exacerbate varicose veins. The superficial veins of the legs are distended, lengthened and tortuous.



長時間接觸粉筆，可能導致接觸性皮炎，患有皮膚敏感的教師情況會較嚴重。

Prolonged contact with chalks may cause contact dermatitis, especially for susceptible teachers.



建議的預防措施：

- 適當時間給腿部休息；
- 按摩腿的下方，改善血液循環；
- 穿著舒適的鞋子。

Suggested precautions:

- rest the legs at suitable time;
- improve blood circulation by massaging the lower legs;
- wear comfortable shoes.

建議的預防措施：

- 使用不同的教具；
- 把粉筆包裹，避免與皮膚接觸；
- 使用白板或投影機代替黑板；
- 護理雙手。

Suggested precautions:

- use various teaching aids;
- wrap the chalks to avoid contact;
- use a white board or an overhead projector instead of a blackboard;
- care for the hands.

有些特殊學校教師需經常近距離教導一些體質較弱，容易失禁的學生，這些教師須特別保持個人清潔，注重衛生。

Some teachers at special schools have to take care of students who are incontinent. They should therefore pay extra attention to personal cleanliness and hygiene.



壓力是教師日常面對的職業健康問題。處理不當會影響教師的生理和心理健康，以及教學表現。校方應與教師共同努力，改善工作環境和條件，消除工作壓力。

Stress is a common occupational health problem among teachers. Improper stress management can affect physical health, psychological health and the performance of teachers. Management and teachers should work together to improve the working environment and conditions so as to combat stress.

壓力來源 Sources of stress	建議的預防措施 Suggested precautions
a. 工作量大 heavy workload	a. 找出壓力來源，並加以適當控制 identify the sources of stress and manage them properly
b. 工作環境惡劣，如嘈雜和擠迫的工作間 poor working environment e.g. noisy, cramped workplace	b. 制訂合理的作息時間表 develop a reasonable work and rest schedule
c. 人際關係欠佳 poor interpersonal relationship	c. 向人傾訴 talk with others
d. 維持學生的紀律 keep student discipline	d. 學習自我放鬆運動 learn self-relaxation exercises
e. 來自學生家長的壓力 pressure from pupils' parents	e. 發展適當的人際關係和溝通 develop proper interpersonal skills and communication
	f. 需要時尋求專業意見 seek professional advice if needed

參考資料 References

以下刊物可提供有關學校內職業安全及健康的進一步資料：

The following publications provide further information on the occupational safety and health in schools:

A) 勞工處職業安全及健康部印製的免費刊物

Free publications produced by the Occupational Safety and Health Branch of the Labour Department

1. 職業安全及健康條例簡介
A Brief Guide to the Occupational Safety & Health Ordinance
2. 職業安全及健康規例簡介
A Brief Guide to the Occupational Safety & Health Regulation
3. 職業環境衛生指引
Guidelines for Good Occupational Hygiene Practice in a Workplace
4. 通風及通風系統保養指引
Guidance Notes on Ventilation and Maintenance of Ventilation Systems
5. 體力處理操作指引
Guidance Notes on Manual Handling Operations
6. 預防背部損傷
Prevention of Back Injury
7. 例須補償的職業病指南
Guide to Occupational Diseases Prescribed for Compensation Purposes
8. 急救簡介 —— 應用於 (A) 應呈報工場 (B) 貨物及貨箱經營 (C) 建築地盤 (D) 石礦場 (E) 所有其他工作場所
A Brief Guide to First Aid in (A) Notifiable Workplaces (B) Cargo and Container Handling Undertakings (C) Construction Sites (D) Quarries (E) All Other Workplaces
9. 急救指南 (適用於：應呈報工場，石礦場，貨物及貨箱經營，建築地盤及所有其他工作場所)
Hints on First Aid (For: Notifiable Workplaces, Quarries, Cargo & Container Handling Undertakings, Construction Sites, and all other Workplaces)
10. 控制工作地點空氣雜質（化學品）的工作守則
Code of Practice on Control of Air Impurities (Chemical Substances) in the Workplace
11. 職業健康圖文簡介 —— 辦公室環境的職業健康
Occupational Health Pictorial Guide - Occupational Health in Office Environment

12. 職業健康風險評估簡易指南 - 辦公室環境系列「引言及工作間管理」
A Simple Guide to Health Risk Assessment - Office Environment Series
Introduction and Housekeeping
13. 職業健康風險評估簡易指南 - 辦公室環境系列「辦公室照明」
A Simple Guide to Health Risk Assessment - Office Environment Series
Lighting in Offices
14. 職業健康風險評估簡易指南 - 辦公室環境系列「複印」
A Simple Guide to Health Risk Assessment - Office Environment Series
Photocopying
15. 職業健康風險評估簡易指南 - 辦公室環境系列「辦公室通風」
A Simple Guide to Health Risk Assessment - Office Environment Series
Ventilation
16. 職業健康風險評估簡易指南 - 辦公室環境系列「辦公室工作間的設計」
A Simple Guide to Health Risk Assessment - Office Environment Series
Office Workstation Design
17. 職業健康風險評估簡易指南 - 辦公室環境系列「化學品的使用」
A Simple Guide to Health Risk Assessment - Office Environment Series
Use of Chemicals
18. 職業健康風險評估簡易指南 - 辦公室環境系列「體力處理操作」
A Simple Guide to Health Risk Assessment - Office Environment Series
Manual Handling
19. 預防職業性皮膚炎 - 給僱主和僱員的指引
Prevention of Occupational Dermatitis - Guidelines for Employers and Employees
20. 工作地點防火指引
Guidance Notes on Fire Safety at Workplaces
21. 使用電腦工作的指南
A Guide to Work with Computers
22. 學校的職業安全及健康管理
Managing Occupational Safety and Health in Schools



B) 教育署印製的免費刊物

Free publications produced by the Education Department

1. 科學實驗室安全手冊
Safety in Science Laboratories
2. 血液傳染病在校內的預防指引（衛生署及教育署編印）
Guidelines on the Prevention of Blood Borne Diseases in Schools (Prepared by the Department of Health and the Education Department)
3. Safety in School Workshops
4. 實驗室安全海報
Laboratory Safety Posters
5. 化學品安全教材（教育署及職業安全健康局製作）
Teaching Kit on Chemical Safety (Prepared by the Curriculum Development Institute of the Education Department and the Occupational Safety & Health Council)
6. 中學家政科教學安全手冊
Safety Booklet for the Teaching of Home Economics in Secondary Schools
7. 在學校使用密封放射源作教學用途
Use of Sealed Radioactive Sources for Teaching Purposes in Schools

進一步資料 Further Information

如擬索取進一步資料或尋求協助，請與勞工處職業安全及健康部聯絡。

地址：香港中環統一碼頭道 38 號
海港政府大樓 15 字樓

電話：2852 4041

傳真：2581 2049

網址：<http://www.info.gov.hk/labour>

電子郵件：enquiry@labour.gov.hk

For further information about the subject or assistance, please contact **Occupational Safety and Health Branch, Labour Department**

Address : 15/F, Harbour Building
38 Pier Road, Central, Hong Kong

Tel : 2852 4041

Fax : 2581 2049

Home Page address: <http://www.info.gov.hk/labour>

E-mail address : enquiry@labour.gov.hk

這本指引是由香港勞工處編印。內容提供了一些有關職業安全及健康的意見予各讀者參考。

THIS GUIDE IS

The Labour Department's contribution towards safety and health - a shared responsibility and the Department's endeavour to serve the community.



勞工處職業安全及健康部
Occupational Safety and Health Branch
Labour Department