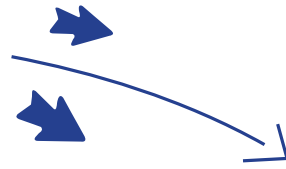


REVISED



CHOOSE SAFETY



student text



— Young People at Work —

An education programme on the principles of health and safety in the workplace for senior cycle and students in further education

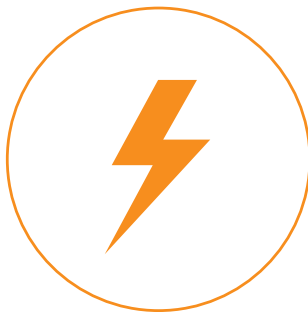


HEALTH AND SAFETY
AUTHORITY

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CHOOSE SAFETY



Young People at Work

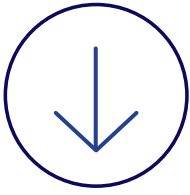


Table of Contents

Certification and awards		1
--------------------------	--	---



UNIT 1

Starting work	Unit contents	4
	Young workers' rights	5
	Induction	8
	Health and safety laws and your workplace	9



UNIT 2

Workplace hazards	Unit Contents	14
	Hazards and risk assessment	15
	Manual handling and ergonomics	24
	Slips, trips and falls	29
	Fire safety and first-aid	32



UNIT 3

Doing your job	Unit Contents	38
	Working at height	39
	Workplace transport safety	41
	Chemicals	43
	Farming	48
	Hospitality	51
	Personal protective equipment (PPE)	53



UNIT 4

Roles, tasks and you	Unit Contents	56
	Safety officer and safety representative	57
	Work environment	59
	Workplace health and well-being	61



UNIT 5

Communicating safety	Unit Contents	70
	Communicating the safety message	71
	Accident and incident reports	74
	Safety statement	77
	Safety signs	79



UNIT 6

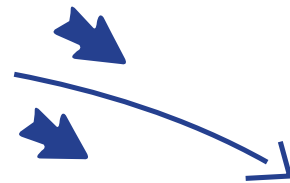
Reflections	Unit Contents	82
	Case studies	83
	Major assignment	90

**CHOOSE
SAFETY**

follow us



CHOOSE SAFETY



YOUNG PEOPLE AT WORK

An education programme on the principles of health and safety in the workplace for senior cycle and students in further education

Student Workbook

CERTIFICATION AND AWARDS

(INCLUDING DIGITAL BADGES)



In addition to getting a certificate of completion for Choose Safety programmes, you can also earn digital badges for each unit of the programme you complete. The section below on 'Learn Stuff - Get Badges' explains more about these badges.

LEARN STUFF - GET BADGES

WHAT ARE DIGITAL BADGES ABOUT?

A badge is a symbol or indicator of an accomplishment, skill, competency or interest. Badges can represent achievements and skills and communicate successes.

Learning can happen anywhere, in schools and also online. Badges provide a digital proof that this learning has taken place.

Upon completion of one of the Choose Safety programmes, or unit of the programme, an Open Badge can be awarded to you in recognition of your increased understanding of health and safety. Ask your teacher to facilitate this for you.

These are digital badges which you can collect in an online badge backpack and use on your website or CV.

HOW DO I EARN A DIGITAL BADGE FOR THE CHOOSE SAFETY LEARNING?

When you begin the Choose Safety course, or complete any one of six HSA Choose Safety Modules; Transition Unit or the 'Get Safe – Work Safe' online course, you will earn a Digital Badge. Your teacher will submit your details to the HSA Open Badge portal and you will be emailed details to accept your badge.

WHAT DO I DO WITH THE BADGE?

When you learn something with the HSA Choose Safety programme you can earn a badge. You can collect the badges you earn in your own online backpack so you can show the badges you have earned to your teachers, parents, potential employers and friends.

HOW DO I CREATE A BACKPACK?

To create your own backpack, all you need to do is to visit the <http://backpack.openbadges.org> website and sign up. You will need to use your own e-mail address and need to create a password for this site. This will then send you an email to confirm that it is really you!

Once you click the link in the email, you will have confirmed your registration and can access your backpack on <http://backpack.openbadges.org>

You can now collect badges from a number of sources. For example, if you are interested in making webpages you can check out the <https://badges.webmaker.org/> to earn more badges that recognise the skills that you learn in web-making projects.

If you would like further information about Open Badges and how they work, check out www.openbadges.org

Choose Safety Digital badges	Badge titles	Choose Safety Digital badges	Badge titles
	Unit 1 – Induction		Choose Safety (Master)
	Unit 2 – Workplace Hazards		Choose Safety (Apprentice)
	Unit 3 – Risk Awareness		Choose Safety Completion
	Unit 4 – Responsibility		Choose Safety Completion with Distinction
	Unit 5 - Communication		Get Safe – Work Safe Online Course Completion
	Unit 6 - Case Studies		Choose Safety Transition Unit Completion
	Unit 6 - Major Assignment		Choose Safety Work Experience Completion

ONLINE HEALTH AND SAFETY COURSES



A range of online health and safety courses are available on <http://hsalearning.ie>. These are short awareness raising courses, useful for increasing or refreshing your knowledge of health and safety in the workplace. All of the online courses are free and accessible 24/7. They cover the following sectors:

- ✓ Education
- ✓ Healthcare
- ✓ Transport
- ✓ Small business
- ✓ Farming
- ✓ Construction

Additional courses will continue to be added to the site.



UNIT 1

STARTING WORK

Unit Contents

- 1 Young workers' rights
- 2 Induction
- 3 Health and safety laws and your workplace

STARTING WORK

UNIT 1

PART 1



We all start new jobs at different times throughout our lives. This can be a nerve-wracking time, trying to learn the ropes, finding your way around and even remembering everyone's name can be difficult in the first few weeks. Health and safety laws are there to help you to have a safe, accident-free and happier time at work.

This programme will help you to learn more about what your responsibilities are in the workplace to help keep you and those around you safe. It will also give you a good idea of what you can expect from your employer and what should be in place to protect you.

In Unit 1 you will learn about young workers' rights and where to find further information and support. You will also learn about induction training and what it entails. Unit 1 will finish with an introduction to health and safety laws relevant to all workplaces. You will learn about the key responsibilities of employers and employees in the workplace.

YOUNG WORKERS' RIGHTS

All the relevant health and safety legislation and regulations apply to workplaces that employ young people. For example, under 18's are not allowed to operate lifting equipment. In addition, under 18's are not allowed to do work that:

- exceeds their physical or mental capacities
- exposes them to toxic substances
- exposes them to radiation
- involves extreme heat, noise or vibration
- involves risks that they are unlikely to recognise or avoid because of their lack of experience or training.

The Protection of Young Persons (Employment) Act, 1996 is designed to protect the health of young workers, and to ensure that work done during the school years does not put your education at risk.

"Young Person" means a person who has reached 16 years of age or the school-leaving age (whichever is higher) but is less than 18 years of age.

The law sets minimum age limits for employment, defines rest intervals and maximum working hours, and prohibits the employment of those under 18 years of age on work late at night – see below **Table 1:** Working Hours Under 16's and **Table 2:** Working Hours 16– 17 year olds.

Employers must also keep specified records for those workers aged under 18 years.

The Minimum Age for Employment

Employers may not employ those aged under 16 in a regular full-time job.



TABLE 1: WORKING HOURS: UNDER 16'S

Maximum Weekly Working Hours for Under 16's		
Age	14	15
Term-Time	Nil	8 Hours
Work Experience	40 Hours	40 Hours
Maximum Week (35 hours)	Maximum Day - 7 Hours	
Maximum Week (40 hours)	Maximum Day - 8 Hours	
Summer Holidays	At least 21 days free from work	
Early Mornings	After 8am	
Night (with school the next morning)	Up to 8pm	

Employers may take on 14 and 15 year olds on light work –

- during the school holidays, provided there is a minimum 3-week break from work during the summer
- part-time during the school term (over 15 years old, and for a maximum 8 hours in the week) or
- as part of an approved work experience or educational programme where the work is not harmful to their safety, health or development.

REST BREAKS: UNDER 16's

Half hour rest break after	4 hours work
Daily rest break	14 consecutive hours off
Weekly rest break	2 days off, as far as practicable to be consecutive

TABLE 2: WORKING HOURS: 16 AND 17 YEAR OLDS

Working hours, time off and rest breaks for 16 and 17 years olds	
Maximum working day	8 hours
Maximum working week	40 hours
Half hour rest break after	4 1/2 hours work
Daily rest break	12 consecutive hours off
Weekly rest break	2 days off, as far as practicable to be consecutive
Early Mornings	After 6am
Nights	Up to 10pm
During school holidays or weekends where student has no school the next morning*	

*May work up to 11pm (and not before 7 am next morning)
(Requires Ministerial Approval).

Further information on the Act is available from the National Employment Rights Authority (NERA) (visit www.employmentrights.ie/en/ or **Lo-call 1890 80 80 90**).



ACTIVITY 1.A CLASS DISCUSSION

Discuss the data in Table 1 and Table 2. Do you think these working hours, time off and rest breaks are reasonable? Are they adhered to?



ACTIVITY 1.B LOG ON

Search the web for more information on employment rights for young people. Look for information on minimum pay levels and on use of equipment. You could begin by looking at the following sites:

- www.irishstatutebook.ie
- www.citizeninformation.ie
- www.employmentrights.ie

Legal Reference

- Safety, Health and Welfare at Work (General Application) Regulations 2007, Protection of Children and Young Persons, Chapter 1 and Part 6
- The Safety, Health and Welfare at Work (General Application) (Amendment) Regulations.

Fast Facts

TRAINING

- Don't perform any task until you have been properly trained.
- Ask about anything in your training you are not sure about.
- Ask for more training if you feel you need it.
- Make sure you put into practice what you have been trained to do.
- The type and amount of training you receive will depend on the job you are doing and the risks associated with that job. For example, an office worker will require less safety training than a construction worker.



INDUCTION

Starting work for the first time can be a nervous and exciting time in a young person's life. Periods of work experience and work-based learning may be the first time that young people experience the work environment. But there are dangers in every workplace, accidents can and do happen. Some accidents cause serious injuries and even death – but most can be avoided. Make sure to ask plenty of questions as this is your opportunity to find out what is required of you and to protect yourself from an occupational related injury or illness.

- any known hazards and risks in your workplace
- what safety measures are in place
- what you must do to keep yourself and others safe.

Remember → Keep Cool – Stay Safe

Key Points to remember:

- Get to know your surroundings, your work base, the canteen, rest rooms, exits including fire exits, first-aid station if there is one, parking areas, etc.
- Know who your supervisor is and how to contact him/her if required.
- Know how to use your Personal Protective Equipment (PPE) if required. If you need replacements be familiar with the procedures for doing this.
- Training – what training do you require?
- Emergency procedures – fire drill, first-aid.

Fast Facts

When starting work for the first time, you are 50% more likely to be injured in the workplace than more experienced workers.

'Choose Safety' gives you the health and safety information you need to help keep you safe at work.

Should all new workers (including students on work experience) receive induction training?

Yes, employers legally must provide instruction, training and supervision. Induction training is an essential part of the learning process. When you start a job or work experience you should be given an induction and specific training for each new job.

This is when you are told basic information about the workplace so you can stay safe.

You should be told these things:

- the rules of your workplace. This should include an introduction to health and safety, first-aid arrangements and evacuation procedures in case of a fire or other emergency

Your employer may ask you to read important safety documentation/rules and ask you to sign a document stating you have read and understood these.

- See 'Student Checklist' in HSA Publication 'Health and Safety Matters for Students on Work Experience'



HEALTH AND SAFETY LAWS AND YOUR WORKPLACE

Health and Safety law is there to protect workers (this includes students on work experience) or those who may be affected by work activities. The Safety, Health and Welfare at Work Act, 2005 is the primary legislation covering safety, health and welfare in the workplace. The Health and Safety Authority (HSA) has overall responsibility for ensuring the 2005 Act is complied with.

Who is responsible for safety? The short answer is 'everyone is'. It is wrong to assume that employers are the only ones responsible for creating and maintaining a safe and healthy workplace. Everyone has a role to play. You will look at the key responsibilities of employers and employees in this final Part of Unit 1.

EMPLOYER RESPONSIBILITIES

Employers are responsible for providing a safe and healthy workplace. This includes, for example, the provision of safe plant and equipment, safe systems of work, training and supervision where required, and personal protective equipment where required.

There is also lots of health and safety legislation in place with some specifically for the Protection of Children and Young Persons. The Health and Safety Authority (HSA) has produced an eleven-page guidance document on the

'Protection of Children and Young Persons' which includes information on:

- ✓ the employment of young persons
- ✓ risk assessment
- ✓ circumstances prohibiting employment of a child or young person
- ✓ health surveillance
- ✓ hazardous substances and processes
- ✓ work young persons may require protection from.

The aim of the Guide is to protect you and your co-workers and to prevent occupational accidents or ill-health occurring. The document can be downloaded from www.hsa.ie

EMPLOYEE RESPONSIBILITIES

Employees have a duty to protect themselves and others. You must co-operate with your employer and ensure you are not a danger to yourselves or others at work. If you are provided with personal protective equipment such as gloves, mask, hearing protection, high visibility clothing, safety helmet, then you must use it as directed and look after it.

You should also report to your employer or supervisor any matter that could give rise to an accident occurring, for example, if you notice unsafe work practices or serious hazards. Never attempt to repair anything yourself – tell your supervisor.



ACTIVITY 1.C CLASS DISCUSSION

Read the following excerpts from the Safety, Health and Welfare at Work Act, 2005. Consider why these are in the 2005 Act. How effective do you think they may be in reducing accident rates at work?

EXCERPT A:

'an employer's duty extends to:

... managing and conducting work activities in such a way as to prevent any improper conduct or behaviour likely to put the safety, health or welfare at work of his or her employees at risk.

... preparing and revising adequate plans and procedures to be followed and measures to be taken in the case of an emergency or serious or imminent danger.

... reporting accidents and dangerous occurrences.'

Section 8 of the 2005 Act

→ Discuss how each of these three duties may be performed by an employer of your choice.

EXCERPT B:

'Every employer shall ... ensure that instruction, training and supervision is provided in a form, manner and language that is reasonably likely to be understood by the employee.'

Section 10 of the 2005 Act

→ Why is this provision in the Act? Discuss the difficulties of performing this duty in, say, a large hospital. Consider the implications of this law in an organisation employing workers of many different nationalities.

EXCERPT C:

'An employee must not engage in improper conduct or other behavior such as violence, bullying or horseplay, which could endanger another person at work or his or her safety, health and welfare.'

Section 13 of the 2005 Act

→ Why is this provision in the Act? How can 'violence, bullying or horseplay' affect another person's safety, health and welfare? What are the other effects of such behaviour?



END OF UNIT 1: SPEED TEST

- Q1.** List three responsibilities of an employer and three responsibilities of an employee?
- Q2.** What activities must your employer ensure you are not exposed to?
- Q3.** How many hours must you work before getting a 30 minute break?
- Q4.** What is the minimum age for regular full-time employment?
- Q5.** List three of the key items to be covered during induction training.



INFORMATION AND TRAINING

Fast Facts

The Health and Safety Authority provide lots of safety guidelines and resources to employers and employees.

The Authority's online learning portal hsalearning.ie is a useful resource for training purposes. The site includes a series of health and safety awareness courses for a wide range of work sectors including:

- education
- healthcare
- transport
- small business
- construction
- agriculture.



Many other organisations provide practical information and assistance too.

Employers' groups are very active in promoting health and safety at work. These representative groups

provide information, training and support to businesses throughout the country. Bringing managers of different businesses together for training or discussion helps to keep health and safety matters high on everyone's list of priorities. As new regulations are set (such as those for construction, for working at height or for use and storage of chemicals), the employer representative bodies play an important role in getting the message across.

Similarly, the unions and other groups who represent employees play an equally important role in informing their members of health and safety matters. As it is the employee who is most at risk of injury from workplace accidents, it is in the unions' interest that their members are well trained and know about best practice.

The safest places to work are those where managers and staff communicate and co-operate effectively. Best practice occurs where managers and staff meet regularly to discuss how the 'system of work' can be improved and made safer. This is most important when a machine or a new work practice is introduced into a company.

Make Notes



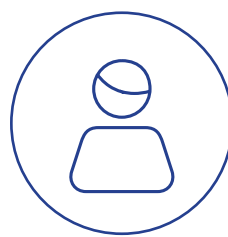
UNIT 2

WORKPLACE HAZARDS

Unit Contents

- 1 Hazards and risk assessment
- 2 Manual handling and ergonomics
- 3 Slips, trips and falls
- 4 Fire safety and first-aid

WORKPLACE HAZARDS



HAZARDS AND RISK ASSESSMENT

Your new workplace could be very busy. You will be exposed to new and unfamiliar tasks which may involve for example using machinery, working with hand tools, or handling chemical products. You must be given training and shown how to complete the task correctly and informed of any hazards/dangers associated with the task.



Your Workplace may have



Machines or Vehicles



Hand Tools



Chemicals

Hazards are everywhere and not always easy to manage. Everyday activities involving hazards include chopping vegetables, mowing the lawn, and crossing the street. You know that due care is required when carrying out any of these tasks. You carry them out responsibly and safely. However, preventable accidents happen from time to time. We need to take stock and decide how can we prevent something similar happening again.

In this Unit you will look at workplace hazards and the role of risk assessment in accident prevention. Later in the Unit, and to understand the concept of 'risk assessment' better, you will concentrate on some hazards common to most workplaces: **manual handling and ergonomics, slips, trips and falls, and fire.**

Risk assessment is fundamental to good health and safety management. It is simply about looking at workplace activities to see what could potentially cause an accident or ill-health, and to make it safe.

It is the employer's responsibility to ensure risk assessments are carried out and written records of such assessments kept by the company and updated as required. The employer must also consider visitors to the workplace, for example, customers, suppliers, sales representatives, and will also consider those working nearby who may also be affected by the work activities being carried out.

Completed risk assessments are included in a document called the Safety Statement. You may be directed to this information during your induction training.

Risk assessment is a three-step process.

- step 1** Identify the hazard
- step 2** Assess the risk
- step 3** Apply the Control

step 1 IDENTIFY THE HAZARD

The first step in the risk assessment process is the identification of hazards. This is simply identifying what could cause an accident or ill-health in the workplace. Remember it is the employer's responsibility to ensure that this work is adequately done. In some instances the employer may decide to delegate the work to a competent person like a safety officer or a health and safety consultant.

Some hazards are obvious, such as unguarded moving parts of machinery, dangerous fumes, electricity, working at heights, or moving heavy loads. Less obvious, but at the root of many accidents, are hazards presented by untidy workplaces and poor maintenance.

It is important that hazard identification does not become over-complicated. Some workplaces will have fewer hazards and hazardous activities than others.



A hazard is anything that could cause harm.



ASSESS THE RISK. IS THERE A HIGH RISK OF INJURY, MEDIUM RISK, OR LOW RISK?

Risk means the likelihood, great or small, that someone will be harmed by a hazard, together with the severity of the harm suffered. Risk also depends on the number of people who might be exposed to the hazard. The employer must consider the following:

1. Who is exposed to the hazard?
2. Is the hazard likely to cause injury to my workers or others?
3. How serious could the injury be?
4. Is the hazard well-controlled? For example is there adequate information, instruction and training? Are there adequate systems and procedures?

This helps employers to decide which risks need immediate attention. Those with the highest rating need to be dealt with first.

Risk can be measured using the following formula:

$$\begin{array}{c} \text{Risk} \\ = \\ \text{Likelihood} \\ \times \\ \text{severity of the potential injury} \\ \times \\ \text{number of people exposed} \end{array}$$

Some people like to measure risk numerically, using the above formula. For example, if you assign a number from 1 to 3 for each of the above, with 1 meaning low and 3 high, the risk rating may range from 1 to 27.

Others use plain words to describe the level of risk as low, medium or high. This is what the rating means:

LOW RISK

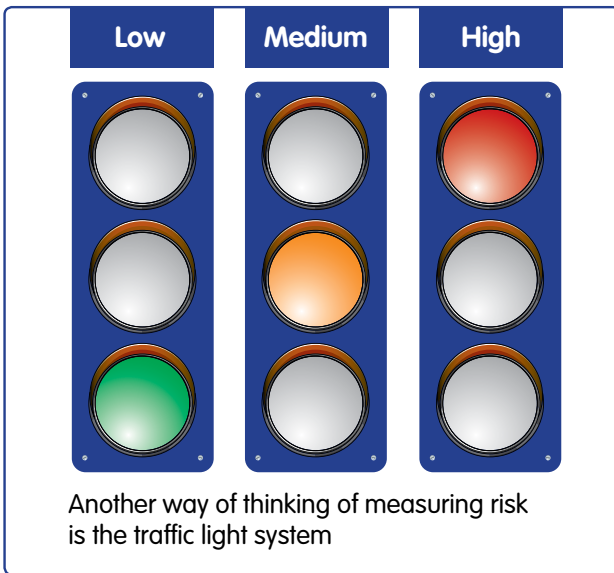
Very little chance of injury and, if injury were to happen, it would be very minor.

MEDIUM RISK

Some chance of it happening, and the injury could be quite severe (e.g. injury to limb).

HIGH RISK

A good chance of injury occurring, and the injury could be serious or very serious.



! Risk is the likelihood, great or small, that someone will be harmed by a hazard.

RECAP

Risk assessments must be reviewed and updated as required, e.g. on the introduction of new technology, new work procedures, or processes. In addition, they may need to be reviewed after organisation mergers, takeovers, or after downsizing. Employees may also be asked to carry out a risk assessment of their own work activities.

step 3 APPLY THE CONTROL

The final step in carrying out a risk assessment is to decide what can be done to reduce the risk of injury. This is called 'controlling risk'. During this step the employer ensures appropriate safeguards or controls are put in

place to reduce accidents and ill-health in the workplace.

As already mentioned the best control is removing or avoiding the hazard altogether. For example, mop up a spillage as soon as it occurs, do not overstack shelves or place goods in hard to reach areas, take regular breaks from VDU work. However, it is not always possible to remove the hazard completely, so other means of reducing the risk of injury or ill-health must be considered. To do this most workplaces apply the Nine Principles of Prevention.

You will see from the list below that removing the risk altogether is the first course of action. If this is not possible then the next principle is considered and so on until Principle 9 is reached. Training is important but only required if the risk assessment deems it necessary and all other necessary controls are in place.

PRINCIPLES OF PREVENTION



The core principles that we should keep in mind when considering the correct approach to reducing or eliminating risk are:

- 1) Remove the risk altogether, where possible.
- 2) Calculate the level of risk that exists and cannot be avoided.
- 3) Immediately take corrective action that reduces the risk.
- 4) Adapt the work to the individual.
- 5) Make changes to the work area.
- 6) Replace dangerous items.
- 7) Look after everyone and not just the individual.
- 8) Develop a safe policy relating to this kind of risk.
- 9) Provide training or instruction and, where appropriate, provide personal protective equipment.

The logic of the procedure above is to take immediate action, first to remove or minimise the risk, then to consider the long-term solution. Training is very important but comes late in the list, as all other controls must be put in place before time is spent training staff.

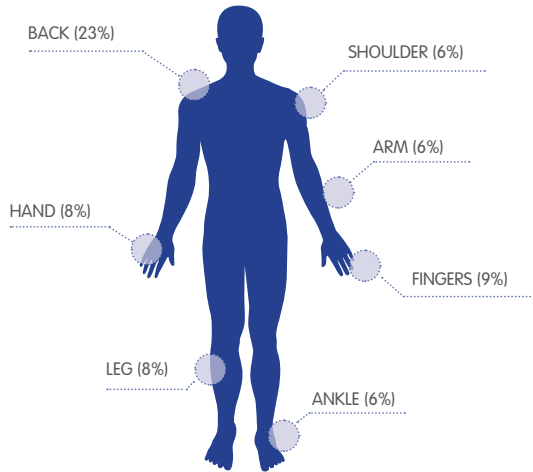


RECAP

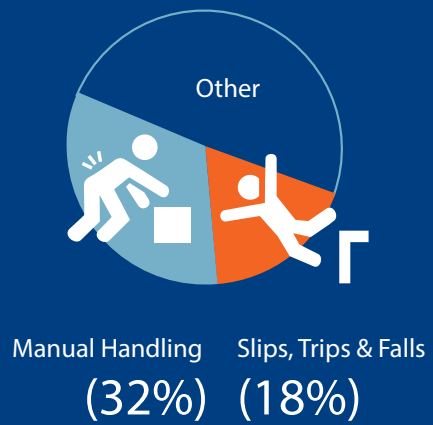
Remember you are carrying out risk assessments all the time in your everyday life so it's not new to you. The terms 'hazard', 'risk', and 'control' may be new but if you really think about this you will see that risk assessment is something we all do, sometimes without even consciously thinking about it.

Fast Facts

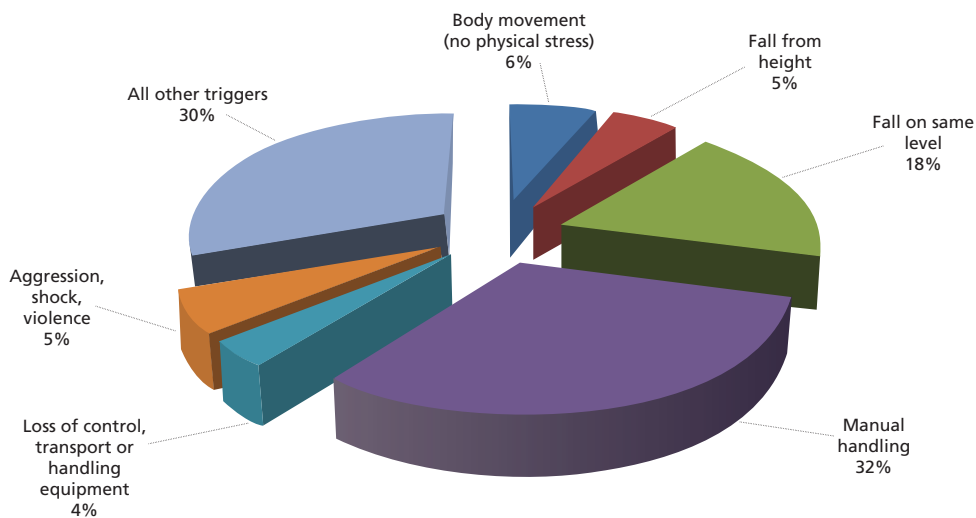
Most injured body parts, Workers 2013 (HSA)



Main causes of non-fatal accidents



Non-fatal injuries by trigger 2013 (HSA)





ACTIVITY 2.A BRAINSTORM

List 25 hazards that can be found in a school. Remember hazards are everywhere, all workplaces have hazards.

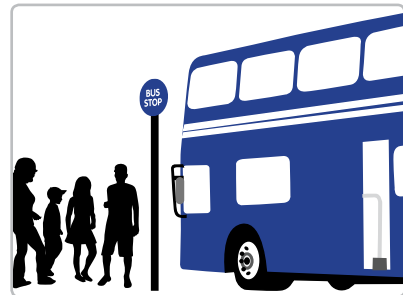
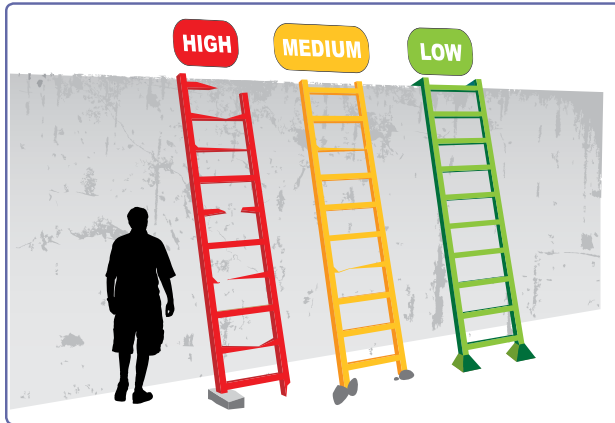


ACTIVITY 2.B CLASS DISCUSSION

These illustrations (below) give some idea as to how risk can be judged low, medium or high.

Think of the reasons why these ratings are applied.

Are there other things that should be taken into account that are not obvious in the drawings (for example, the location of the bus stop or the time of day)?



ACTIVITY 2.C IN PAIRS

Using the formula below, calculate the risk of each of the above activities.

Risk = Likelihood (1 for unlikely, 2 for likely, 3 for very likely)

Severity of the potential injury (1 for little harm, 2 for harmful, 3 for very harmful)

Number of people exposed (1 for one person, 2 for a few, 3 for many)

Your answers will range from minimum risk 1 to maximum risk 27.



ACTIVITY 2.D INDIVIDUAL EXERCISE



- i.** Suppose you are working in an office and are required to sit at a computer for most of the day.
- List all the hazards on and around your desk in the office.
 - Rate the risk of each hazard that might cause harm. Say whether each one is:
 - Likely to cause injury (high risk)
 - Could possibly cause injury (medium risk)
 - Very unlikely to cause injury (low risk)
 - Calculate a numerical value (1 to 27) for each risk.

Hazard	High risk (value) ●	Medium risk (value) ●	Low risk (value) ●

- ii.** Imagine you are working as a dental assistant. Repeat questions a, b and c above.

Hazard	High risk (value) ●	Medium risk (value) ●	Low risk (value) ●



ACTIVITY 2.E IN PAIRS

Compare your list with that of another student in your class. Try to agree a common list of hazards and the level of risk associated with each. One of you will report back to the class.



ACTIVITY 2.F INDIVIDUAL EXERCISE

Do you consider each of the following to be true or false?

		True	False
1	The most common injury by body part (in workplace accidents) is the back.		
2	Slips, trips and falls are the least-common cause of workplace accidents.		
3	It is the employee's responsibility to ensure risk assessments are carried out.		
4	A hazard is anything that could cause harm.		
5	Hazards are not always obvious.		
6	Manual handling causes almost one-third of accidents in the workplace.		
7	The first principle of prevention is adapt the work to the individual.		
8	The top three non-fatal accident triggers (2013) were fall from height, manual handling, and fall on the same level.		



ACTIVITY 2.G INDIVIDUAL EXERCISE

List the activities you normally do in your everyday life where there is some risk of injury, then complete the rest of the table.

Typical activity	What could go wrong	How likely is this to happen	Controls
cycling to school	falling, crashing, becoming entangled, being knocked down, equipment failure, loss of control	medium to high risk (fair possibility of an accident and the injury could be severe or fatal)	Wear a helmet and protective gear Be clearly visible Follow every rule of the road Avoid dangerous routes Slow down Maintain your bike
computer games	eye trouble muscular pain electrocution headaches stress, obsession	low risk (minor discomfort likely, unless used excessively)	Use for short period only Take frequent breaks Adjust chair, desk and VDU heights Wear glasses if required Adjust VDU controls Consider room lighting



ACTIVITY 2.H IN GROUPS

In a group of three, select a classroom in your school with practical tasks for example, Art room, Home Economics room, ICT room, Science Laboratory, Technology room.

1. Compile a hazard checklist for the classroom selected – see sample checklist (to be provided)
2. Using the checklist identify and categorise the hazards in the room, referring back to what you have learned so far.
3. Once completed, assess the level of risk by determining who might be harmed and how. Consideration should be given to:
 - the number of persons exposed to the hazard
 - the frequency of exposure to the hazard
 - duration of exposure to the hazard
 - potential failure modes
 - routes of exposure.
4. Calculate the level of risk and identify if the hazard is a high, medium or low risk.
Confirm what controls are in place to manage the hazard and what other controls need to be put in place to reduce the risk of injury and ill-health. Remember legislation, code of practices and standards state the minimum requirements for the workplace.

Once the above project is completed, your teacher will be able to use the hazard checklist to ensure the classroom your group selected, is safe for students, staff and visitors. Well done!



ACTIVITY 2.1 SPOT THE HAZARD

Can you spot what has the potential to cause an injury – the 'hazard'?



What's wrong with this picture?

THERE ARE FIVE POTENTIAL SAFETY RISKS. CAN YOU FIND THEM?

Spotting all the dangers in the workplace can be tricky, which is why the Health and Safety Authority has set up BeSMART.ie. This free online resource is available to small business owners so that you can be smarter about health and safety in your workplace and save your business money.

Oh, and for the five things that are wrong, turn this page sideways. Protect your employees. Protect your business.

VISIT **BeSMART**.ie

HEALTH AND SAFETY AUTHORITY



MANUAL HANDLING AND ERGONOMICS

The lack of effective management of the hazard of manual handling results in one third of all reported workplace accidents. Injury can occur when workers are requested to handle heavy loads without being provided with suitable lifting equipment. Such injury can impact on many parts of the body as a result of the heavy or awkward loads that may have to be handled. The main risk factors relating to manual handling include force (e.g. heavy loads), high repetition, and awkward postures. Manual handling is not just about lifting. It includes lowering, pushing, pulling and restraining. Activities such as these occur in jobs on farms, in hospitals, construction, retail and elsewhere.

The most important aspect of safe manual handling is the risk assessment. That is, consideration and planning is needed before the lifting or handling takes place. It is worthwhile spending time to understand the work that has to be completed to identify the manual handling that has to be carried out, the potential risks and the potential solutions. This could result in reduced risk of injury, smarter systems of work and reduced absence from work. It may be your best moment's work all week!

The following factors should be considered for manual handling activities:

- Task
- Individual
- Load
- Environment

Task

- Do I need to lift this? Is there another way of doing this work?
- Is it repetitive lifting?
- Too strenuous?
- Twisting
- Bending the trunk
- Reaching with outstretched arms
- Reaching overhead
- Insufficient bodily rest or recovery

Individual

- Previous back pain or injury
- Posture
- Physical capability
- Clothing – are they loose, avoid neck accessories e.g. scarves, ties, jewellery
- Gloves – have they grips?
- Footwear - shoes/ boots – steel-toe caps, flat, non-slip soles?
- Check guideline weights for male and females

Load

- Is load too heavy? There are guideline weights which can be used to determine if the load is safe.
- Too large? If the load is large, it is not possible to follow the basic rules for lifting and carrying (keep the load as close to the body as possible); thus, the muscles will tire more rapidly.
- Difficult to grasp: this can result in the object slipping and causing an accident; loads with sharp edges or with dangerous materials can injure workers.
- Unbalanced or unstable: this leads to fatigue and uneven loading of muscles, because the object's centre of gravity is not in the middle of the worker's body.
- Difficult to reach: reaching with outstretched arms, or bending or twisting the trunk takes greater muscular force.
- Of a shape or size that obscures the worker's view, thus increasing the possibility of slipping/tripping, falling or colliding with something.

Environment

Answering **YES** to any of the following questions indicates an increased risk, particularly of back injury:

- Are the floors and surfaces underfoot uneven or slippery?
- Are there different floor levels in the workplace?
- Is the workplace untidy with a lack of attention to housekeeping details?
- Are there extremes of heat, cold, wind and humidity?
- Are there high levels of fumes, dusts, gases or vapours?
- Is there excessive vibration?
- Is the task performed in a confined space?
- Is the lighting inadequate?

Reference 'Ergonomics in the Workplace – HSA'
ISBN 1-84496-036-6



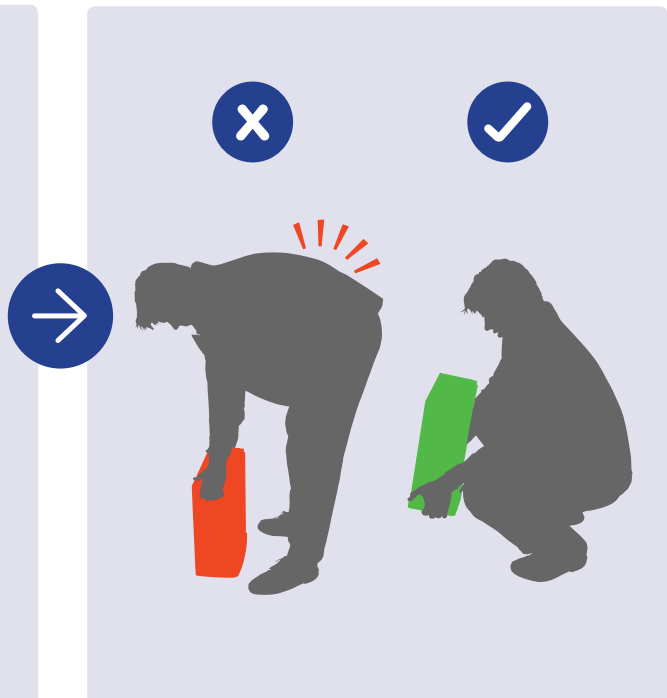
The question in your mind should not be 'How do I lift this?' It should be, 'Do I need to lift this? Is there another way of doing this work?'

If you choose to go ahead with the lifting or moving, you should consider the following:

- Is this load likely to be heavy, or very heavy?
- How should I grip this thing?
- How should I stand and bend?
- Are there obstacles along my intended route?
- Do I need help?
- Do I need advice?
- Have I received training in handling it?

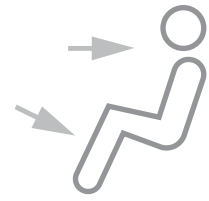
Principles of safe lifting:

1. Clear the area of obstacles
2. Give yourself plenty of room
3. Consider the weight and shape of the load
4. Keep feet hip-distance apart
5. Stand with feet in direction of where you are going
6. Place feet firmly on the floor
7. Bend your knees, not your back
8. Grip firmly using palm of your hand
9. Keep close to the load, arms in line
10. Keep load close to your centre of gravity



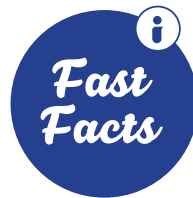
WHAT IS ERGONOMICS?

Ergonomics is a set of ideas on how to design tasks, tools and equipment to allow for comfortable and safe use. Ergonomics is simply about fitting the task to the person.



The core principles of ergonomics are:

- plan the work in advance
- always complete a risk assessment before work begins
- avoid over-stretching joints (e.g. elbows)
- limit the weight of any load that requires lifting
- avoid repetitive bending
- avoid twisting of the upper body
- vary your posture as often as you can
- avoid over-reaching or working above shoulder height
- keep loads close to your body when lifting
- avoid lifting loads above shoulder height
- seek training in 'manual-handling techniques'.



Musculoskeletal disorders is the technical term for any pain or injury that affects muscles, ligaments, joints or nerves. This is the most common form of work-related injury. They may be caused by an accident or by long-term exposure to low-intensity repetitive tasks. In this case, the injury builds up over time, often without the worker's knowledge.

Typical risk factors of musculoskeletal disorders are:

- poor posture including twisting
- lifting, carrying, pushing or pulling heavy loads
- repetitive work
- vibration
- excessive heat or cold.

WRULDs are a particular type of musculoskeletal disorder: 'work-related neck and upper limb disorders' caused by work or the environment in which the work takes place. Though symptoms develop over a long time, they can be very severe and may force sufferers to change job or to retire. Workers on an assembly line and on supermarket check-outs and those who spend a long time in front of a computer may be particularly at risk to this injury.

Overuse of the muscles of the hands, wrists, arms or shoulders on a repeated, often daily, basis causes injury to these muscles.

This results in inflammation that is never given a chance to recover, as these everyday activities invariably continue.

The computer keyboard and mouse are often blamed for *WRULDs*, but cannot be charged with sole responsibility. The human body was not designed to sit hunched over a desk. Poorly positioned and organised workstations add to the problem. Do not forget: the longer someone puts a strain on muscles by sitting incorrectly without taking a break, the more likely the body will suffer the consequences.

WRULDs can also occur at home. Computers are ever present, and everyone is at risk of injury by repeated use of computer games, whether they are hand-held, on mobile phones or played on the TV or computer. Text-messaging, too, may cause problems in the long-term. A good rule of thumb is 'keep changing what you are doing'.

Tense muscles do not function correctly. This means that someone under stress is much more likely to suffer muscle damage.

'Tennis elbow' and 'golfer's elbow' are two common examples of other overuse syndromes. They have been around for a long time and you don't have to play tennis or golf to suffer from them.



ACTIVITY 2.J CLASS DISCUSSION

1. What is happening here?
2. Is the workstation suitably set up?
3. Do you think the screen, keyboard, and mouse are positioned correctly?
4. Do you consider the office to be a low risk work environment?
5. List four hazards associated with working in an office.



ACTIVITY 2.K IN GROUPS

Source an awkward load (not a heavy one) from somewhere in your school. You could use a combination of empty cardboard boxes or plastic containers. Place some light contents in one or more of the boxes/containers such as plastic bottles, tennis balls, or similar. Think about how the activity could be improved to reduce or avoid manual handling risk factors.



ACTIVITY 2.L INDIVIDUAL EXERCISE

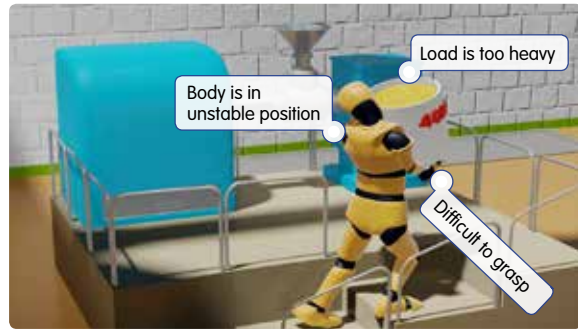
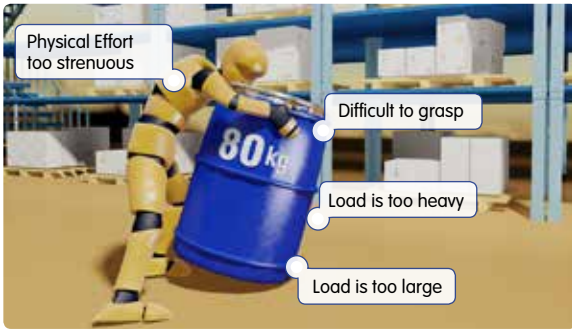
Consider this shelving unit that may be found in a storage area. There are four shelves. The unit reaches eight feet from floor level. Decide where the following categories of storage box should be placed.





ACTIVITY 2.M IN PAIRS

View both pairs of illustrations below. Explain how the work system in each environment has been improved by applying the principles of ergonomics.



To see more illustrations like those above visit www.hsa.ie and search for 'manual handling case studies'.





SLIPS, TRIPS AND FALLS

new

Slips, trips and falls are the second most common cause of workplace injuries. In 2013 there were more than 1,200 slips, trips and falls reported to the Health and Safety Authority. A quarter of those incidents led to the injured person missing over a month from work.

Help prevent slips, trips and falls.

- Spills should be reported and removed straight away.
- Avoid wet floors as far as possible.
- Avoid floors that are being cleaned.
- Be careful and pay attention on steps and stairs.
- Exercise caution entering buildings in the rain.
- Keep floors and access routes clear.
- Wear the correct anti-slip footwear.
- Do not create any trip or slip dangers.
- Report trailing cables, uneven walkways, or poor lighting.



Key areas to consider include:

- Spills
- High risk areas
- Over-used warning signs
- Environmental cleanliness
- Shoes & Footwear
- Pedestrian Surfaces

1. Spills

Spills can occur in every workplace and the resulting wet surface increases the likelihood of a slip or fall occurring.



Areas close to sources of liquid require particular attention, e.g. food preparation areas, self-service drink areas, watering areas such as those in florists or garden centres, wash-up areas such as those in hotels and restaurants, workplaces where sinks are used, welfare facilities and wash rooms.

Walk-in chiller and freezer floors can be particularly hazardous if wet.

2. High risk areas

The floor in a workplace must be suitable for the type of work activity that will be taking place on it. Where a floor can't be kept dry, people should be able to walk on the floor without fear of slipping. It should be slip resistant and fitted correctly to avoid slip hazards. Small fruit/vegetable items, some with a high liquid content e.g. grapes, tomatoes, may be a high slip risk if they fall onto the floor. Wet floors may be more common in workplaces such as hairdressers, grocery shops, restaurants and eateries, canteens, hospitals and similar work environments. **Slip resistant flooring should be used, especially where a floor may get wet/contaminated.**



High risk areas include transition areas, where pedestrians move between surfaces with very different levels of grip, the most obvious being pedestrians going from wet to dry at entrances and exits. Areas where levels change, e.g. slopes, ramps, steps/stairs, unexpected holes, bumps, drainage channels, are another high risk area.

Control measures include:

- the provision of slip resistant surfaces
- proper lighting
- changes in level are highlighted
- the provision of proper drain covers
- the top and bottom of stairs are kept clean and tidy.
- avoidance of carrying items on stairs, e.g. by use of dumb waiters.



Rule of Thumb:
High gloss, highly reflective = high risk

Particular attention must also be given to areas that may become slippery during severe weather. Grit or salt may be helpful to deal temporarily with snow or ice.

3. Over-used warning signs

Warning signs do not physically keep people away from wet floors and do not substitute for necessary protective measures. For programmed/routine floor cleaning, a system that keeps pedestrians away from wet/ moist floors, e.g. physical barriers or cordons should be used. Segregation must not prevent emergency access/egress.



Warning signs must be removed when they no longer apply.

4. Environmental cleanliness

Good housekeeping standards are everyone's responsibility; therefore procedures to ensure good housekeeping are vital.

These may include:

- Ensure the walkways through the workplace are kept clear – no trailing cables, no obstructions.
- Tidy as you go - don't leave tidy up until the end of shift.
- Keep floors and access routes clear.
- Keep particularly messy operations away from pedestrian routes.
- Dispose of packing material and other wrappings carefully. Do not leave them lying around the floor.
- Use the correct type and right amount of floor cleaning chemical – too little may not remove soiling and too much may leave a slippery residue.

5. Shoes & Footwear

Suitable footwear is important. The footwear worn in an office is considerably different to the footwear worn in a leisure centre or by somebody who is moving around a lot as part of their job. Additionally, some jobs require special safety footwear such as construction or manufacturing work. The type of safety footwear required is determined by a risk assessment and the employer provides this where necessary. Safety footwear is usually classified as personal protective equipment (PPE). There is more information on this in Unit 3.

Note: Not all safety footwear is slip-resistant. "Safety" may refer to impact protection, chemical protection, thermal protection, etc.

6. Pedestrian surfaces

Slip resistant pedestrian surfaces are important especially in areas where there is heavy traffic and a risk of spillages or wet surfaces. Designers, suppliers and installers of flooring have obligations under safety, health and welfare legislation. They must ensure flooring is:

- designed and constructed to be used safely and without risk
 - compliant with relevant legislation
 - tested and examined to meet requirements.
- Information and updates on safe installation, use, maintenance and cleaning must also be provided.

Fact

As a member of the restaurant service staff, Cormac a student, slipped on a wet floor that had just been mopped The tray of crockery that he was carrying broke and he suffered deep lacerations to his left hand. This injury required three separate surgical operations to fully repair the damaged tendons and Cormac was unable to work for several months. He still has reduced movement in his hand

Injuries from a slip or a trip may not seem very serious, but they can be extremely painful and could stop you enjoying your leisure time for a long time. A quarter of those injured in notified slips, trips and falls are off work for over a month.

Remember... Get a grip, don't slip or trip.



ACTIVITY 2.N CLASS DISCUSSION

If this was your workplace what could you do to stop people slipping?



ACTIVITY 2.O IN GROUPS

In groups of two complete a slips, trips and falls survey of your workplace, your Home Economics or other practical classroom using the approach in the Mapping Tool (see link below) and complete a slips, trips and falls risk assessment.

See www.hsa.ie/slips for useful information. For the Mapping Tool see www.hsa.ie/eng/Topics/Slips_Trips_Falls/Mapping_Slips_Trips_and_Falls/Mapping_tool_rev1.pdf.



www.hsa.ie/slips



FIRE SAFETY AND FIRST-AID

Fire causes many injuries and deaths each year. Employers must take all reasonable measures to guard against the outbreak of fire and plan measures to protect people's safety if fire breaks out. All businesses should have a fire safety management system that is based around the three key stages:



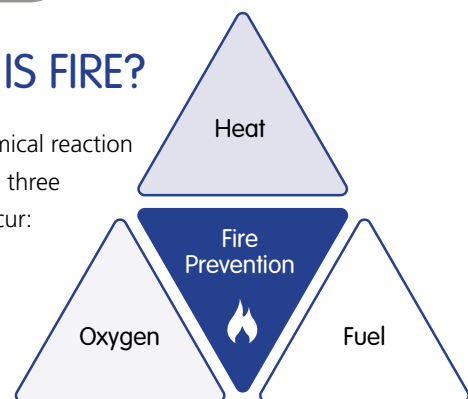
Protection → Detection → Evacuation

Fire precautions include:

- all employees must be instructed on what to do in the event of a fire
- escape routes must be clearly marked and assembly points easily identifiable
- evacuation procedures must be well known to everyone and regularly practiced
- all equipment must be inspected regularly. Smoke detectors, fire alarms, fire doors and fire-resistant building material assist in preventing the rapid spread of fire
- fire safety certificates are required for all new buildings and for most renovations or extensions to business premises
- emergency lighting and fire-fighting equipment can help save lives when fire breaks out
- in the event of a fire evacuate the building immediately and call the fire brigade.

WHAT IS FIRE?

Fire is a chemical reaction which needs three things to occur:



Oxygen + Heat + Fuel = Fire

If one of these is not present, the fire cannot start. If one of these is taken from a fire, it will go out. But how does a combination of the three create fire?

OXYGEN

You breathe oxygen (O₂) every day. Without it you would suffocate. But did you know that fire breathes oxygen too? And, like you, without oxygen, a fire will suffocate. When oxygen in the air combines with vapours given off by fuels, they create a flammable atmosphere. Then, a source of ignition (a match or spark, say) can cause it to combust.

Without enough oxygen, ignition cannot occur. In the opposite way, if there is too much oxygen, the vapours won't be concentrated enough to ignite. The ratio of vapour to oxygen needed is known as the 'explosive' or 'flammable' limit and is different for each gas or vapour.

HEAT

Combustion occurs when flammable vapours mix with air (oxygen) and are ignited by a spark or flame. Solids give off flammable vapours by being heated. Certain solids such as paper or flour appear to ignite almost instantly. This is because they give off vapours and reach a flammable temperature almost immediately. In fact, fine dusts dispersed in the air can explode. They give off vapours and ignite so quickly it appears to happen instantly. Other solids such as timber take longer to ignite, because they are more dense and don't give off flammable vapours so easily. Liquids are different. They are more runny, for a start. Where solids need to be heated to give off flammable vapours, some liquids give off vapours even in cold weather.

The name for the lowest temperature at which vapour from a liquid can be ignited is known as its 'flashpoint'. The flashpoint of petrol is 43°C below zero, meaning that, even on a very cold day, petrol can still ignite easily.

FUEL

We've got oxygen and heat, but we also need something that will burn – this is our fuel. Different fuels burn at different rates and with different intensities. Some types of fuel, under certain conditions, can burn at over 1000°C – that's hot enough to melt aluminium! (By contrast, the temperature of the surface of the sun reaches around 6000°C.)

The table below shows the temperatures that some types of fuels reach when they burn.

The burning temperatures of various fuels 

Fuel	°C	Fuel	°C
Coal	300	Methane	580
Butane	420	Natural gas	600
Carbon	700	Peat	227
Carbon monoxide	300	Petroleum	400
Coke	700	Propane	480
Ethane	515	Wood	300
Hydrogen	500		

Fire Safety Statistics

Fast Facts

- around 50 people die every year in the Republic of Ireland from fires, mostly in their own homes
- most at risk are the under-12's and over-60's
- most fire deaths occur during winter
- most deaths by fire occur in homes with no fire alarms
- over 50% of fires in the home occur at night (8pm – 8am)
- most fires start in the living room or bedroom.

Fire detectors and alarms are necessary in many situations such as where

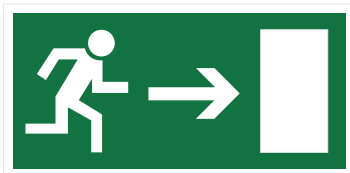
- fires could break out without being detected
- students, staff or visitors to the school are isolated and may not be aware of incidents elsewhere in the building
- there is a risk of rapid fire spread
- evacuation of large numbers of people required
- means of escape are not ideal
- people will not be able to make their own way out of buildings
- there are legal requirements for such equipment

WHAT SHOULD I KNOW?

When you start work you must know what to do if there is a fire or other emergency. This will usually be covered during your induction training. Make sure you know:



- how to raise the alarm if you see a fire or other emergency



- where the exit routes are and where they lead to



- where the fire assembly point is.

Make sure to follow the procedures in place for safe evacuation of your workplace. Workplaces usually carry out fire drills at least twice annually.



IDENTIFY SOURCES OF IGNITION

You can identify potential ignition sources by looking for possible sources of heat which may get hot enough to ignite material located close by.

These include:

- electrical, gas or oil-fired heaters
- hot processes, e.g. welding or use of Bunsen burners
- cooking equipment, hot ducting, flues and filters
- naked flames
- poor electrical installation, including overloaded or damaged cables
- chemicals
- cigarettes, matches, lighters
- light fittings and lighting equipment
- obstruction of ventilation equipment.

FOUR TYPES OF FIRE EXTINGUISHERS ARE IN GENERAL USE:

Fire Extinguishers

Water	Dry Powder	CO ₂	Foam
<ul style="list-style-type: none"> • wood • paper • fabric 	<ul style="list-style-type: none"> • all fires including electrical, may not extinguish outdoor fires due to windy weather, very messy 	<ul style="list-style-type: none"> • flammable liquids • electrical 	<ul style="list-style-type: none"> • flammable liquids • oils • fats

Never interfere with any fire-fighting equipment. It's there to keep you safe!

UNIT 2

PART 4.1



FIRST-AID



Every workplace should have first-aid procedures in place. These will vary from workplace to workplace depending on the size of the business and the nature of the work. Some workplaces will have a designated first-aider who will have undergone occupational first-aid training. This is not a mandatory requirement and the decision to appoint an occupational first-aider is made following a risk assessment.

When you start work it is important you know:

- who is in charge of first-aid, who manages the first-aid kit
- who to go to if you require first-aid
- what to do in the event of an emergency.



ACTIVITY 2.P
CLASS DISCUSSION

What emergency procedures are in place in your school or workplace?
Where is the fire assembly point?



ACTIVITY 2.Q
INDIVIDUAL EXERCISE

Find the twelve words associated with fire and heat that are hidden in the grid below.

C	E	E	T	U	S	R	U	O	P	A	V
O	S	D	R	D	I	O	X	I	D	E	C
M	D	F	I	Y	O	P	A	Y	Z	B	V
B	C	L	E	C	W	E	S	H	X	E	G
U	O	X	W	D	Q	D	R	F	T	D	A
S	P	A	R	K	U	Z	W	I	E	O	S
T	N	I	O	P	H	S	A	L	F	L	N
I	G	N	I	T	E	Z	T	B	O	P	M
O	W	K	U	W	E	D	P	P	A	X	I
N	E	R	U	T	A	R	E	P	M	E	T



ACTIVITY 2.R IN GROUPS

Organize your class into small groups. Seek permission to locate and inspect all fire extinguishers in the school. Report your findings to the class.

Or

Consider the fire evacuation drill in your school. Is it followed? Do you think it is sufficient? What improvements would you make?



ACTIVITY 2.S CLASS DISCUSSION

What's wrong with this fire exit?

To find out more about fire safety, visit the fire safety section of the Department of the Environment's website, www.environ.ie.




END OF UNIT 2: SPEED TEST

- Q.1** What is meant by a hazard?
- Q.2** Why are controls necessary?
- Q.3** Give five examples of slips, trips and falls hazards that exist in many workplaces.
- Q.4** Why is it important to learn about handling and lifting items?
- Q.5** How can work activities be improved to reduce or avoid manual handling risk factors?
- Q.6** Explain the fire triangle.
- Q.7** List four kinds of extinguishers and the type of fires they are designed to extinguish.
- Q.8** Is it mandatory to have a trained occupational first-aider in every workplace?



Make Notes



UNIT 3

DOING YOUR JOB

Unit Contents

- 1 Working at height
- 2 Workplace transport safety
- 3 Chemicals
- 4 Farming
- 5 Hospitality
- 6 Personal protective equipment (PPE)

DOING YOUR JOB

UNIT 3

PART 1



Doing your job may involve several activities. Some of these may involve working at height, working in or around vehicles, or working with chemicals. In this unit you will learn more about these activities and how they may impact on you. This Unit will also focus on two very different sectors where many young people work, the farming sector and the hospitality sector. Unit 3 will heighten your awareness of the hazards associated with these sectors and will provide you with information on how to protect yourself and others.

WORKING AT HEIGHT

Falls from height result in many serious injuries and deaths every year. You don't have to be working very high up to be killed or seriously injured if you fall.

Working at height is work in any place from which an employee could fall a distance liable to cause personal injury. This includes working on a scaffold or mobile platform, working on the back of a lorry, on a telephone pole, a ladder etc.

Some examples of activities that are classified as working at height and are covered by the Work at Height Regulations include:

- using a kick-stool or step ladder in a stock room or library
- using a mobile elevating work platform to erect steel work
- using working platforms and ladders to paint or clean
- changing lamps or ceiling tiles in an office
- working on the back of a lorry to sheet a load
- working on top of a fuel truck
- climbing masts or poles
- rigging lighting for a concert or stage production
- using harnesses and ropes professionally to instruct in abseiling or rock climbing
- working close to an open excavation or cellar trap door
- erecting bill posters at a height
- erecting or working on a scaffold
- working on formwork at height.

Activities not covered by the Work at Height Regulations include:

- walking up and down a staircase in an office
- working in an office on the upper floors of a temporary accommodation building
- sitting in a chair.



Cellar hatches are found in many premises. Cellar hatches can pose a serious danger and it's very important that proper precautions are taken. Organisational measures are vital in ensuring that cellar hatches can be used safely.

CONSIDERATIONS:

- Avoid working at height if you can
- ask your boss if the job can be done from the ground, for example, by using an extendable brush to clean an upstairs window
- select suitable work at height equipment. If you have to use ladders ensure it is safe to use them. Check they are in good condition before you use them, and set up and secured correctly
- if work at height is outside, consider the weather conditions.



ACTIVITY 3.A IN PAIRS

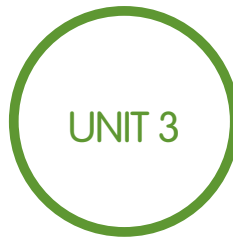
In Pairs

1. List seven workplaces where working at a height is a regular occurrence.

2. List the type of injuries that may result from working at a height.

3. Consider the controls that could be put in place for two of the workplaces you listed in no.1 above

4. List the personal protective equipment (PPE) that may help to prevent an accident or injury while working at a height.



WORKPLACE TRANSPORT SAFETY

new

Every year, a substantial number of accidents are caused by vehicles at work. It is because vehicles are widely used as part of daily life, that employers, managers and employees often fail to recognise that vehicles' activities can be dangerous in a workplace and need to be effectively controlled and managed to prevent injury to persons. Some accidents are due to the vehicle being unsuitable for the task, faulty or poorly maintained or maintained using untrained staff or unsafe practices. Accidents are also often caused by failing to control pedestrian access to vehicle areas or lack of training of drivers.

Employers and the self-employed need to be aware of the main risks associated with vehicles that need to be managed to protect workers and members of the public in the workplace.

The activities most commonly associated with vehicle related deaths and injuries are:

- driving for work
- reversing and slow speed manoeuvres
- coupling and uncoupling
- vehicle maintenance and repairs
- loading, unloading and load securing.

Features of a Safe Workplace

A well-designed and maintained workplace should include appropriate traffic routes, signage and markings. Keeping pedestrians and vehicles apart, a one way system and good visibility will also be key features.

Traffic Routes

Suitable, clear, signed and well-marked traffic routes will help ensure safe movement for all around the workplace.

Signage

Appropriate signage will help drivers and pedestrians follow site rules.

Pedestrian Safety

Pedestrians are people who travel on foot in the workplace. Effective separation of pedestrians from vehicles (as far as possible), helps eliminate possible risks. Suitable, clear, signed and well-marked pedestrian routes will help make sure that pedestrians can move around safely and without risk of injury.

WHAT SHOULD PEDESTRIANS DO?

- always report to workplace reception, site office or person in charge
- wear high visibility clothing when working in the vicinity of moving vehicles and equipment. Remember - you are not always visible to drivers
- follow signs, road markings, speed limits and one-way systems
- do not enter 'No Pedestrian' zones or 'Vehicles Only' zones
- do not walk beside moving vehicles
- do not approach a moving vehicle; wait until the driver acknowledges your presence
- never walk behind a reversing vehicle. Remember: vehicles can have blind spots
- keep a safe distance from moving vehicles.

One Way System

A one way system with safe crossing points helps ensure that pedestrians and drivers are more aware of likely movements.

Good Visibility

Good lighting and visibility will help drivers and pedestrians see possible dangers and each other.



FORKLIFT SAFETY

A forklift is a powered truck used to carry, lift, stack or tier materials. They include pallet trucks, rider operated forklifts, fork trucks, or lift trucks. They can be powered by electric battery or combustion engines.

Forklifts are extremely useful workplace vehicles, as long as they are used safely and appropriately by operators who are appropriately trained and competent to use them. Forklifts can be dangerous: they account for 25% of injuries at work. Many workplace accidents involve people being hit or run over by forklift trucks (typically when the forklift is reversing) because the driver did not see them. Owing to their size and weight, injuries resulting from forklifts are generally very serious. Accidents involving them are often caused by poor supervision and a lack of training.



ACTIVITY 3.B IN GROUPS

Recent research carried out on behalf of the Health and Safety Authority (HSA) indicated that all 111 organisations surveyed said they had pedestrians moving around their workplace.

Worryingly, 45% of these organisations believed that pedestrians were not aware of the risks associated with workplace transport.

Pedestrians may be employees, members of the public or visiting workers that pass near vehicles in the workplace. This could range from a maintenance engineer arriving on site, to a customer walking near a fork-lift truck at a supermarket or builder provider's yard, or even someone passing near a mobile crane.

Your challenge – 'What can you do to help keep all pedestrians safe'?

In groups of three **select a workplace listed in above article** and provide solutions to keep pedestrians safe and outline the benefits of same.



CHEMICALS

new

Chemicals are part of everyday life. They can be found in the home in a wide variety of products, from paint and washing powder to shampoo and shower gel. They can also be found in the environment, either intentionally, for example from pesticides used in the garden, or unintentionally from pollution. Chemicals are also present in every workplace; even in the cleanest, most modern office, it is possible to be routinely exposed to chemicals such as inks and toners.

Chemicals can exist in many forms:

Dust, fumes, fibres, powders

Liquids

Gases, vapours, mists

Not all chemicals are harmful, but those which have the potential to cause harm to human health or the environment are referred to as hazardous chemicals.

The hazards associated with chemicals include:

Explosive	Sensitiser
Flammable	Carcinogen
Oxidising	Mutagen
Corrosive	Reproductive toxicity
Irritant	Hazardous to the environment

The effects of hazardous chemicals may be seen:

- immediately after contact: for example chemical burn or an explosion
- only after a period of time: for example cancer.



ACTIVITY 3.C IN PAIRS

Use a dictionary or website to find the meaning of each of the words in the boxes above.

CHEMICALS IN THE WORKPLACE

How can chemicals be hazardous to health?

In order for a chemical to be hazardous to a person's health, it must either be in contact with or enter the body. Chemicals can come in contact with the body by being:

- inhaled into the body through your nose or mouth. Breathing in contaminated air is the most common way that workplace chemicals enter the body.
- absorbed into the body through your skin, eyes, or nose. Some chemicals can damage the skin or eyes (e.g. irritation) or pass through the skin into the body.
- ingested into the body through your mouth. Workplace chemicals may be swallowed accidentally if food or hands are contaminated.
- injected into the body through the skin. Injection can occur when a sharp object (e.g. a needle) punctures the skin and injects a chemical directly into the bloodstream.

Inhalation and skin absorption are the main ways you can be exposed to chemicals in the workplace. Accidental injection of chemicals can be avoided by good safety practices. Accidental ingestion of chemicals can be avoided by a combination of good and hygienic practices such as washing hands and prohibiting foods, drinks, cosmetics and tobacco products in the workplace.



WHERE CAN YOU FIND INFORMATION ABOUT CHEMICAL HAZARDS?

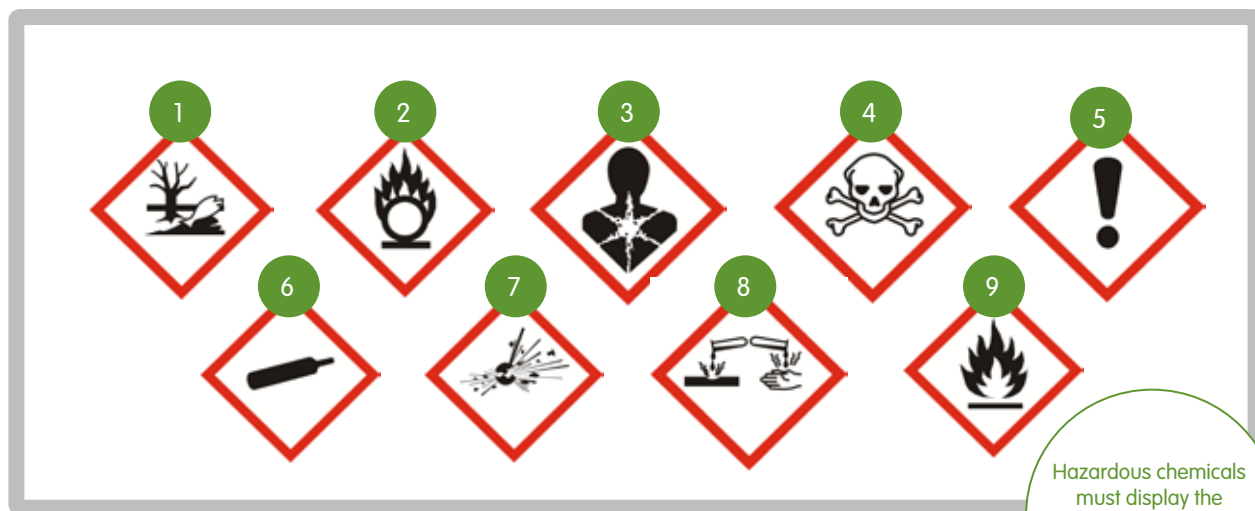
The most important sources of information on the hazards of chemicals are the label and the safety data sheet (SDS).

Labels:

Chemicals should be supplied with a label attached to the container. The label gives information on the chemical or product name, the chemical hazards and the precautions you should take to ensure safe use.

Info for Laundry Liquid Tablets/Capsules/Pods

You should always handle laundry capsules carefully and with dry hands. These capsules dissolve quickly when in contact with water, wet hands, or saliva. Children have required hospitalisation following ingestion of the capsule contents. Eye contact with the contents from ruptured capsules has also resulted in medical treatment for severe irritation and ocular burns. It is really important to keep these products locked up and out of the reach of children.



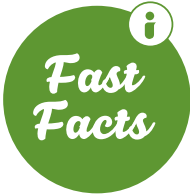
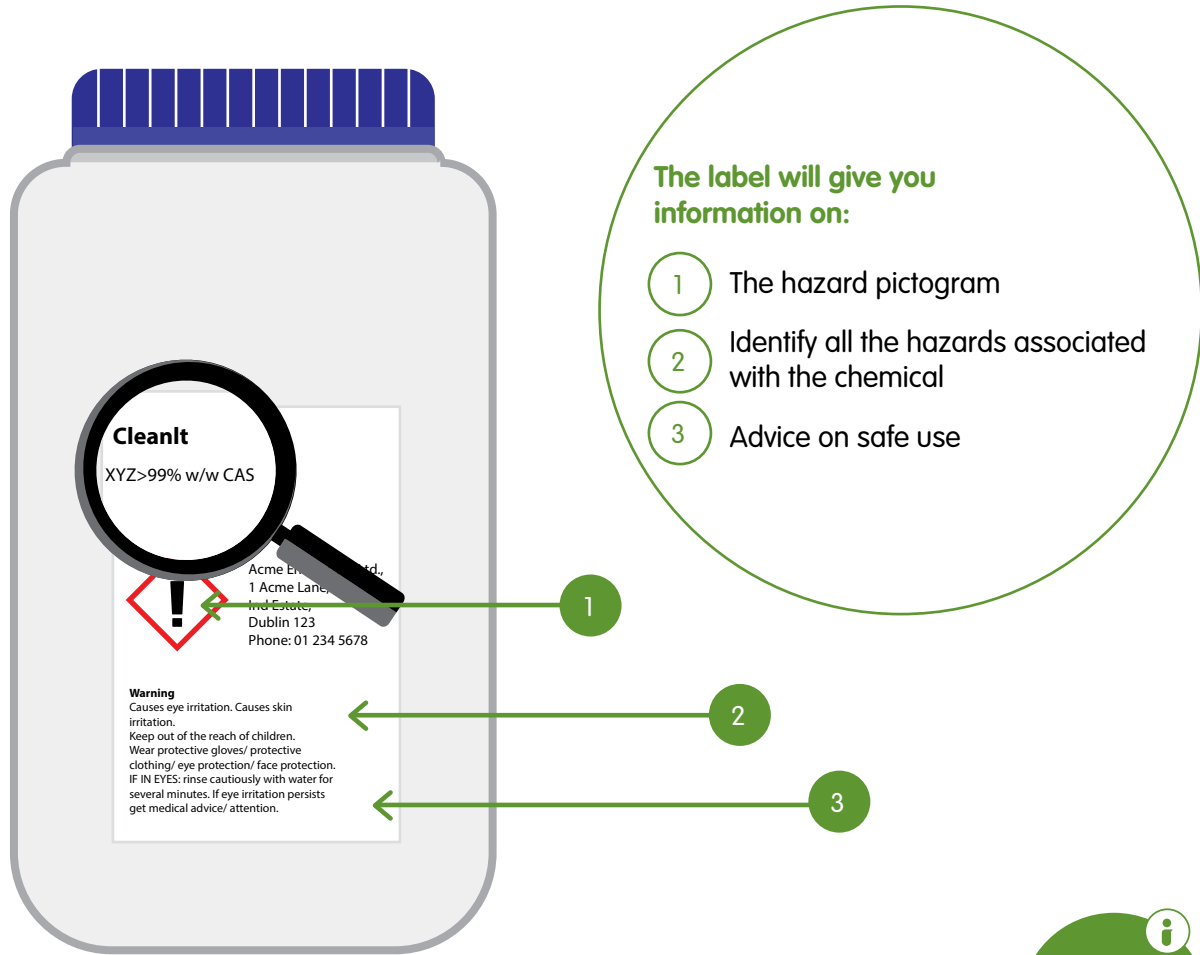
Hazardous chemicals must display the appropriate hazard symbol or pictogram on their label.



ACTIVITY 3.D GROUP EXERCISE/ CLASS DISCUSSION

Match the list of hazards below with their associated hazard symbol from the image above:

Hazard	Symbol Number	Hazard	Symbol Number
Explosive		Corrosive	
Oxidising		Carcinogen, Mutagen, Reproductive Toxicity	
Gas Under Pressure		Irritation	
Flammable		Toxic	
Hazardous To The Environment			



A chemical can have more than one hazard associated with it. For example, it could be irritating to the skin and dangerous to the environment.

It is important to read the label carefully.



ACTIVITY 3.E
IN PAIRS

List some hazardous chemicals that may be found in your home or school

Chemical	Hazards listed on the label
Bleach	Irritant



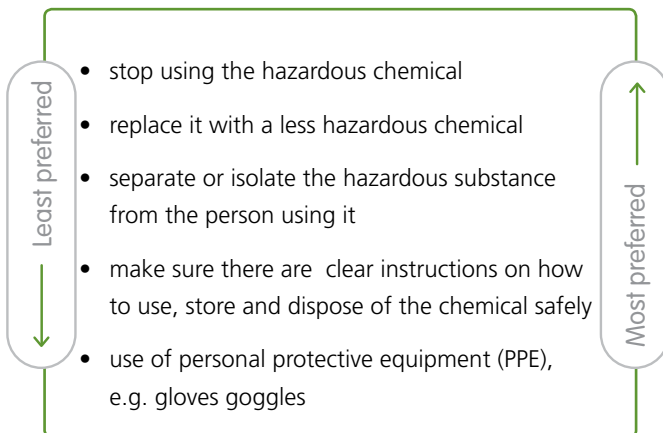
SAFETY DATA SHEETS

Hazardous chemicals used in workplaces are supplied along with a safety data sheet. The safety data sheet provides important information on the chemical including:

- the identity of the chemical
- the hazards associated with it
- what should be done in case of accidental exposure, fire or release of the chemical
- advice on how to store, use and dispose the chemical safely.

How to control exposure to hazardous chemicals?

Workplaces use the information provided in the safety data sheet and on the label to assess the risks associated with the use of the hazardous chemical and to decide the appropriate control measures to ensure it is used safely. When deciding on appropriate control measures for chemicals, a similar approach to that used for other types of hazards in the workplace is applied:



In practice, the control measures used will depend on the hazardous properties of the chemical and how significant the exposure will be. Some examples of different control measures are listed below:

- handling hazardous chemicals in a fume cupboard in a laboratory
- wearing gloves when using an irritant or corrosive chemical
- supplying certain hazardous chemicals to consumers with a child-proof opening
- storing flammable liquids away from sources of ignition.

Remember: The best way to control risk to a hazardous chemical is to not use it!



ACTIVITY 3.F IN PAIRS

From the list of hazardous chemicals which may be found in your home or school, describe what the hazard is and how it may be controlled.

Chemical	Hazards	Control measure
Bleach	Irritant	Clear label Child proof cap Careful storage Use gloves and goggles

When asked to use a chemical in the workplace:



DO



- always follow the instructions on when and how to use it given by your employer
- wear any personal protective equipment you have been given
- read the label and safety data sheet so you understand the hazards
- store chemicals in their original container
- wash your hands before and after use
- if you are splashed with a chemical, wash it off at once and tell your employer
- always ask your employer if you are unsure how to use or handle a chemical.

DON'T



- use the chemical for a different task than the one assigned by your employer
- mix chemicals without guidance or instructions
- eat or drink near chemicals
- put chemicals into unlabelled bottles or wrongly labelled bottles
- substitute a chemical without permission from your employer
- pour chemicals down the drain
- sniff a chemical to try to identify it.



ACTIVITY 3.G IN PAIRS

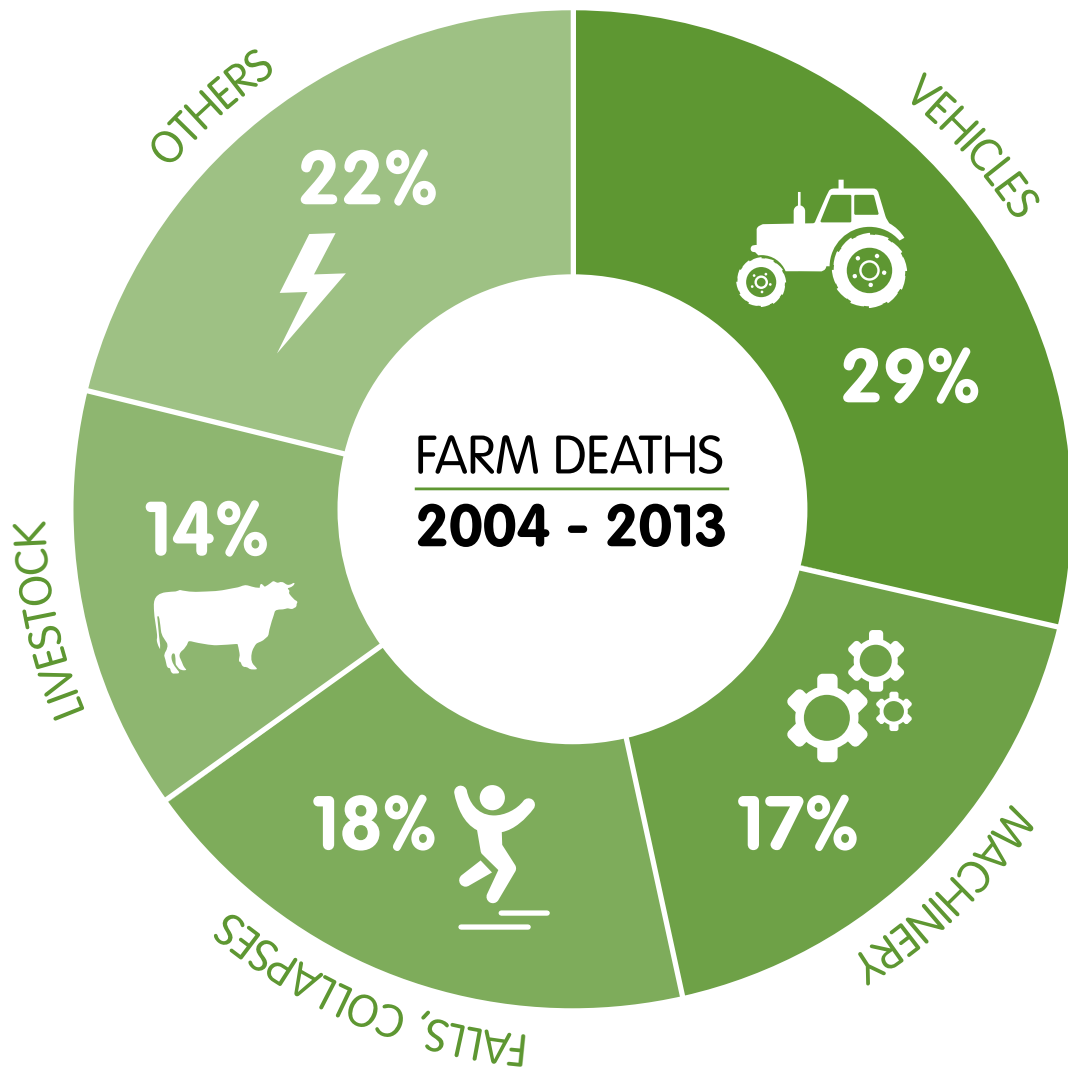
Select household products e.g. cleaning agents, weed killer etc. and search online for cleaning agent SDS. **Tip** – search for the Supplier name and from this website you should be able to get a copy of the SDS. Discuss in class how you get on.



FARMING



Farming is a high risk work sector. If you don't live on a farm the chances are you will visit a farm or even secure work on a farm at some point in your life. In recent years someone has died every two weeks in an accident on an Irish farm. Most of these fatalities involved farmers over 55 years of age. The highest proportion of workplace fatalities reported to the Health and Safety Authority between 2010-2013 were farm accidents. During 2013 alone sixteen people were killed in the agricultural sector. Farm safety and the prevention of accidents on farms is very much a family affair as farms are unique workplaces incorporating a home as well as a workplace. It is therefore crucial that everyone knows about safety.



MAIN CAUSES OF FARM ACCIDENTS IN IRELAND:

- tractors and machinery. Most accidents involve being struck by a tractor or moving machine, being crushed by vehicles and machinery, falling from vehicles and entanglement in machinery such as in a diet feeder or any machinery driven by a Power Take Off (PTO). Elderly farmers and children are at particular risk.
- farm vehicles and machinery account for the highest proportion of farm deaths and accidents. People at risk include vehicle or machine operators and others in the vicinity.

KEYS TO PREVENTION ARE:

- training,
- good maintenance and
- safe work practices.



NOTE ON POWER TAKE-OFFS (PTO'S)

The correct guarding of PTO drive shafts plays a crucial role in the safe use of agricultural machinery. Rotating PTO shafts must be totally enclosed by the proper guard. Individuals should never attempt to free a blockage or adjust a machine without turning off the PTO and the tractor first. Young people and inexperienced workers should always alert the person in charge or a responsible adult when they notice something is not working properly.

SAFE TRACTOR SKILLS (14-16 YEAR OLDS) TRAINING



Children under 14 are not permitted to operate tractors or self-propelled machines. A child or young person aged 14 or over may drive a tractor or self-propelled vehicle on the farm if they have attended a formal training course run by a competent training provider, and they are closely supervised by a responsible adult. The young person must also demonstrate the ability to operate the controls with ease. The Safe Tractor Skills course for 14-16 year olds covers the following:

Safety checks before starting:

- ✓ Setting up a good driving position
- ✓ Safe Driving
- ✓ Hitching Tractor to other equipment
- ✓ Operating trailed machinery from tractor
- ✓ Checking the terrain
- ✓ Practical Driving Skills

NOTE ON DRIVING ON SLOPES

Land is not always level and experienced drivers should only operate tractors or similar on hills. There may be a risk of overturning if the slope is steep or ground conditions are unsuitable. Always exercise caution and if in doubt ask.

ALL-TERRAIN VEHICLES (ATVS) / QUAD BIKE



Most people know what a quad bike is. This is an all-terrain vehicle (ATV) which can be extremely useful for farmers or those working on farms where the terrain is difficult to navigate by tractor, or is bumpy or uneven. However, caution is required. The main reasons ATVs are involved in accidents and injuries are:

- lack of structured training and/or experience
- excessive speed
- carrying a passenger or an unbalanced load
- tipping on a bank, ditch, rut or bump
- a steep slope combined with other factors, e.g. ground or load conditions
- towing excessive loads with unbraked equipment
- no personal protective equipment (PPE) such as a helmet worn.

Key considerations include:

- the risk of overturning on sloping ground
- professional training is essential before using an ATV (1 day's duration)
- never carry a passenger on an ATV
- wear personal protective equipment (PPE), including a helmet
- ATVs require on-going maintenance as specified by the manufacturer.

Farmers must check that:

- tyre pressures are correct
- brakes give a straight stop
- the throttle operates smoothly in all steering positions

- many ATVs have no differential, so the vehicle speed and placing of your body weight is crucial for safe cornering.

ACTIVITY



ACTIVITY 3.H INDIVIDUAL EXERCISE

You are asked to help on a neighbour's farm during the summer months. You will be involved in: moving sheep from field to field, bringing feed to cattle in pasture, driving a tractor, using a range of tractor attachments, dosing animals with veterinary products.

Identify the top ten hazards you feel you will encounter. How do you propose to deal with those hazards? How will you communicate your suggestions or concerns to the farmer?



ACTIVITY 3.I IN GROUPS

- (a) Discuss how the Government, the Health and Safety Authority, Third Level Agricultural colleges, IFA, Teagasc, and other farming bodies could further get the message across to the farming community about the need to farm safely.
- (b) Decide on suitable themes for a TV advertising campaign on farm safety.

Discuss how this will help spread the farm safety message throughout the farming community and if there are other suitable ways to promote and highlight farm safety.



ACTIVITY 3.J CLASS DISCUSSION

Watch the short video <http://www.youtube.com/watch?v=W5l1hzWO--o> from the HSA website, Survivor Stories, Episode 8: Thirteen year old boy in tractor accident. Discuss the impact this video makes. What did you learn from this video? How can similar accidents be prevented?



HOSPITALITY

new

Many young people are employed in hotels, restaurants, catering and bars. These are busy active workplaces with lots of hazards. Good practice is necessary to safeguard workers and those who may be affected by the work activities being undertaken.

There are many examples of good practice found in the accommodation and food service sector. Some examples are:

- wheels or castors fitted to the legs of machines, equipment, furniture so that it can be moved easily
- a locked cage fitted around machines to prevent unauthorised use
- new staff using knives required to wear a cut-proof glove on their non-knife hand for the start of their training
- use a start-of-shift and end-of-shift checklist for essential safety precautions
- routine area-by-area audits carried out to enable self-assessment, leading to improvements.



Manual handling and slips, trips and falls are the most common causes of accidents in the hospitality sector and have already been covered earlier in Unit 2. Cuts are also a major risk for those working in accommodation or food preparation. Many accidents occur because items slip when they're being cut or knives don't move in the direction required. In many cases large kitchen knives are used for tasks where a smaller, safer knife could be used.

Falling objects may be particularly dangerous. As far as possible avoid storing items at height – consider safer alternatives wherever possible. Great care must be taken when stacking items at a height, especially containers of liquid likely to slosh around when moved or heavy or awkward items.

Falls from height, which was covered in in Part 1, is another hazard. In addition burns and scalds can cause some terrible injuries. For example, a blast of heat or steam can be released when opening hot oven doors or, removing saucepan lids during cooking. Steam can cause very serious burns. Oil in deep fryers is particularly hazardous.

Bar and reception staff are exposed to the risk of robbery of stock or cash, and difficult customers can expose staff to a risk of violence.

ACTIVITY



ACTIVITY 3.K CLASS DISCUSSION

You have been asked by the Hotel Manager to list the top ten hazards you can identify in his hotel commercial kitchen. He wants you to rank them in order of their seriousness and the risk of injury to staff and then compile a set of control measures for the top five.

See publication on www.hsa.ie 'Safe Hospitality' Parts 1 to 7 for useful information to complete the above activity. You may wish to use the table below to complete this activity.



ACTIVITY 3.L INDIVIDUAL EXERCISE

You have just begun your summer job in a local restaurant. Initially you are asked to take out the rubbish to a compactor at the back of the premises. You have not been shown how to operate the compactor and feel unsure about how to put the cardboard into it.

What should you do?

Hazard	Risk (*H,M,L)	Control
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

*H=High, M=Medium, L=Low



PERSONAL PROTECTIVE EQUIPMENT (PPE)

PPE (personal protective equipment) is used to minimise the risk or the severity of injury. It should never be considered as the first or primary line of defence. In fact, all other control measures should be put in place before or in addition to PPE.



- take note of signs telling you what PPE you need to wear
- wear your PPE the way you have been shown. It may feel strange at first but you will soon get used to it
- look after your PPE. Don't lend it to anyone else
- maintain and clean your PPE, particularly seal of face mask that fits over your nose and mouth. Store face mask in a bag separate to glasses or other PPE to prevent cross-contamination
- tell your boss if any of your PPE is damaged or needs to be replaced.



Remember... PPE is there for your protection



ACTIVITY 3.M INDIVIDUAL EXERCISE



ACTIVITY 3.N INDIVIDUAL EXERCISE

PPE



Which of the following are personal protective equipment?

Ladders, goggles, ear plugs, drill, safety boots, scaffolding, high visibility vest, conveyor belt, hard hat, face mask, safety harness, gloves, fire extinguisher, VDU.

1. What type of injury may occur without proper controls such as PPE?

2. Choose the correct PPE needed to safely perform the following tasks:

- cutting wood
- cleaning machinery
- working at a height
- road marking
- dispensing drugs
- welding
- hairdressing.

Identify the eight items of PPE in the list above. Explain briefly why each provides some personal protection. Give examples of workplaces where each item of PPE is likely to be found.



END OF UNIT 3: SPEED TEST

- Q.1.** Give four examples of workplace transport hazards.
- Q.2.** List four main causes of farm accidents.
- Q.3.** What are the key considerations for operating an ATV?
- Q.4.** Identify three chemical hazards which affect human health.
- Q.5.** Name two main ways you can be exposed to chemicals in the workplace.
- Q.6.** Name the two most important sources of information on a hazardous chemical.
- Q.7.** Indicate the type of information you would expect to see on the label of a hazardous chemical.
- Q.8.** List four occupations that may require PPE.



Make Notes



UNIT 4

ROLES, TASKS, AND YOU

Unit Contents

- 1 Safety officer and safety representative
- 2 Work environment
- 3 Workplace health and well-being

ROLES, TASKS AND YOU



You will experience lots of different roles in your workplace. Not only are you an employee, you are also a co-worker, a representative of the company, and a valuable staff member. In Unit 4 you will learn about responsibility, and the role of the safety officer and the safety representative. These roles are common to most workplaces, particularly large workplaces. You will also learn more about your work environment in this Unit and how to keep safe and healthy in your job.

SAFETY OFFICER AND SAFETY REPRESENTATIVE

Every employer is required to manage safety and health at work so as to prevent accidents and ill-health. The Safety, Health and Welfare at Work Act, 2005 requires employers to:

- identify the hazards
- carry out a risk assessment
- prepare a written safety statement.

This helps employers and other duty holders to manage employees' safety and health, and get the balance right between the nature of any safety and health problems and what has to be done about them. The employer may decide to appoint a **safety officer** to manage health and safety operations and to consult and act on his / her behalf in relation to health and safety matters. However, responsibility for health and safety always rests with the employer.

The management of health and safety must involve consultation between the employer and his/her employees, who are required by law to co-operate with the employer in the safety-management process.

Employees are entitled to select a safety representative to represent them on safety and health matters in consultation with their employer. This is not a legal requirement. However, most workplaces particularly larger ones will have one.

When you start your job you should be introduced to this person or at least know who they are and where they are stationed. Don't worry if there is no safety representative. This is not unusual.

A safety representative can:

- immediately inspect where an accident, dangerous occurrence or imminent risk to the safety, health and welfare of any person has occurred or is present
- investigate accidents and dangerous occurrences
- investigate complaints relating to safety, health and welfare at work that have been made by an employee whom he or she represents
- accompany an inspector carrying out an inspection
- receive advice and information from inspectors in relation to safety, health and welfare at the place of work
- make representations to the employer on safety, health and welfare at the place of work.

It is against the law for an employer to penalise or threaten to penalise an employee with respect to carrying out his/her lawful duties as safety representative

- reasonable time off to acquire knowledge and training to carry out function without loss of pay
- consult with other safety representatives at the same place of work or other places of work controlled by the same employer.

It is against the law for an employer to penalise or threaten to penalise an employee with respect to carrying out his/her lawful duties as safety representative.

Employer groups, Trade Unions, and professional bodies representing employees play an equally important role in informing their members of health and safety matters

ACTIVITY



ACTIVITY 4.A SHORT PRESENTATION

Make arrangements with your teacher and school principal or safety officer to visit one of the work rooms in your school. Groups of six could visit the art room, woodwork room, science room or similar.

Make a record of the meeting. Choose any format you wish such as an edited tape recording or video, a collage of photographs or illustrations, an oral report or an interview transcript.



WORK ENVIRONMENT

new

Your workplace should be safe for you and you should be comfortable working there. Your employer must also consider the work environment during the risk assessment process. This includes heating, lighting, indoor air quality, ventilation, noise vibration, and electromagnetic radiation. Employers must also ensure that the workplace is safe and comfortable for individuals with disabilities, and that the workplace is compliant with current Regulations.



At high or uncomfortable temperatures, especially when not caused by temporary weather conditions, a means of cooling should be provided. In other work environments appropriate personal protective equipment (ppe) may need to be worn, for example, in a chilled room environment a worker may require gloves, body-warmer, hat, non-slip safety boots/shoes.

LIGHTING

Windows, skylights and glass partitions in offices must be so arranged as to prevent the excessive build up of temperature at workstations from excessive sunlight. Blinds can help alleviate heat or glare from sunlight. Use of low-emissivity glass and whitewashing of windows are other possible solutions to excessive heat from sunlight.

VENTILATION

Appropriate ventilation should also be in place in the workplace. Each enclosed workplace must be adequately ventilated. In most cases the natural ventilation provided through windows and doors will be adequate. However in some cases forced ventilation may be required.



TEMPERATURES

There is no maximum temperature stated under the regulations but as a guideline a minimum comfortable working temperature for indoor sedentary workers is 17.5 degrees centigrade. In extremely hot weather conditions, measures such as for example, the provisions of fans, provision of cold water dispensers and regular water breaks for staff, the relaxation of formal dress codes, the introduction of flexible working patterns etc., can assist in maintaining comfortable working conditions.

DUST AND FUMES

Workplaces such as factories and workshops can contain a lot of dust and fumes. To combat this extraction systems are installed. These enable contaminants to be filtered out from the clean air and minimise worker exposure to dust and fumes. Systems used to extract dust and fumes should be well-maintained, and checked regularly.

NOISE

Noise can be a problem in workplaces. A general rule of thumb is, if you have to shout to have a conversation in your work area, then this is an indication that noise levels are too high and need to be measured, to confirm what improvement measures can be taken to prevent people damaging their hearing or suffering hearing loss. Such improvement measures may include the removal or isolation of the noise. For example, a noisy machine could be set up in a separate room from workers. Fixed machines should have noise-dampening mountings. Shields and sound-absorbing coverings could also be used. Workers exposed to high or repetitive noise levels should be provided with hearing protection.

HOUSEKEEPING

Trailing cables, goods stacked too high on shelves, and materials left randomly on floors and walkways are some examples of poor housekeeping. These can all contribute to workplace accidents. Essentially, it is important that you keep your workspace tidy and free from clutter. This will prevent slip and trip hazards or the risk of goods falling on you.

Quick Quiz

Workplace conditions include:

- A. Heat
- B. Light
- C. Noise
- D. Ventilation
- E. PPE

Select the correct answers.



WORKPLACE HEALTH AND WELL-BEING

The term 'psycho-social' refers to those types of hazards that are not physical but instead affect how people feel. Health may be seen as not just the absence of illness but the presence of well-being. Maintaining a sense of well-being and a positive outlook on life can add greatly to our quality of life. People who are content, with a healthy attitude and strength of mind and spirit, are generally better equipped workers.

However, those workers with low self-esteem or with low morale are often less productive. They are also more likely to experience an accident at work. Later we will consider ways by which employers and employees can promote a positive sense of well-being. First let's consider the negative psycho-social factors that may become hazards in the workplace.

STRESS

Stress is a negative reaction to all kinds of pressure in all aspects of life. For many people, pressure such as that from an upcoming exam or an important sports event is easily tolerated. We feel under pressure, but also feel able to cope. For others, pressure can be less easily dealt with. When pressure builds up, and isn't dealt with, we experience stress. Stress is a state of being; it is seldom permanent. It affects us mentally – how we think, emotionally – how we feel, and physically – our bodies and our biology. Eating, sleeping, digestion and activity patterns are altered when we are stressed.

So, some types of pressure lead to stress, others are motivating and don't lead on to stress.

Pressure that tends not to lead to stress has some common elements. Firstly, it is usually associated with something we do voluntarily – such as the pressure from a football or tennis final we are participating in. Pressure which tends to motivate rather than stress us also tends to be short lived – the pressure mounts, we are aware of it, and then an event happens – the 'game' – and then the pressure is over.

Pressure which is motivating rather than stressful also has other factors which differ from person to person. This has to do with our coping style/capacity and our willingness to take control and to access support. If we feel able to cope with it or feel we have some control over it and there is some support available to us when dealing with the pressure, it is less likely to cause us stress. So, not all pressure leads to stress.

Where pressure has led to stress in a person, there are similar symptoms for everyone, although not everyone will feel or experience them to the same degree. Normally, there is an alteration in how we feel about things generally and a tension in our bodies which makes everything more difficult to accomplish.

Imagine:

Imagine yourself juggling three balls at once. You feel fine juggling 3 balls, you are well able for it and don't feel anxious about one falling, because if one does fall, you can just stop and start over again. However, imagine you are juggling 5 balls, and you feel you cannot do it, that one will fall any second, that someone might throw you another any time, and if they fall, you will face lots of criticism and won't be able to start up again. Imagine that scenario for a few seconds and how you would feel. That feeling, that experience of heightened vigilance and fear, is the basic ingredient in stress.

ACTIVITY



ACTIVITY 4.B CLASS DISCUSSION

Consider these two questions:

- Q.1** What causes stress?
- Q.2** What can a person do to reduce stress levels in their life?
- Q.3** What can employers do to reduce stress at work?

Bullying

We are familiar with discussions about bullying in schools. Bullying in the workplace is not discussed nearly as much. It is a serious issue and can cause great distress to many workers.

Bullying at work may take the form of one or more of the following:

physical or verbal abuse, exclusion, pestering, aggression, intimidation, undermining, excessive monitoring, withholding information, blaming, ignoring, humiliating or treating less favourably.

For a behaviour to be bullying, it must be repeated, inappropriate and disrespectful to the basic rights of every human being.



ACTIVITY 4.C CLASS DISCUSSION

- Q.1** What types of pressure might be associated with positive and negative outcomes?
- Q.2** Does the personality type matter?
- Q.3** Does the situation matter?
- Q.4** Does age and/or gender matter?



ACTIVITY 4.D IN PAIRS

Discuss with another student each of the following matters relating to bullying:

- ways by which a worker may feel bullied in the workplace
- who is affected by bullying?
- why does bullying occur?
- why is it a serious issue?
- what can an employer and employee do to remove the risk of bullying in the workplace?
- who else can help to remove this hazard?
- is bullying at school different to bullying at work?



ACTIVITY 4.E SHORT PRESENTATION

Prepare a presentation on ONE of the following workplace hazards:

- Excessive noise
- Poor lighting
- Stress
- Poor Housekeeping

Your presentation may take the form of a

- written project
- poster
- drama piece
- painting or art piece
- collage
- video
- radio piece.



ACTIVITY 4.F BRAIN STORM

1. Discuss the role that can be played by each of the following in promoting positive well-being among workers:

employer	school
parents	spouse / partner
government	work colleague
friend	employee
trade union	

2. What do you understand by the following terms:
self-confidence / self-esteem / self-image
3. Complete a brainstorm on the concept of 'work-life balance'.



ACTIVITY 4.G IN GROUPS

In groups of FOUR, consider how each of the following contributes to a greater sense of individual well-being. Then list the top ten factors in the list which you, as a group, consider to be the MOST important in determining a sense of well-being. Do you think that an older person would make a different list?

Sport, Physical Activity, Work, Music, Community, Empathy, Wealth, Freedom To Make Choices, Relationships, Religious Faith, Accepting Diversity, Effective Law And Order, Support, Good Nutrition, Proper Social Facilities, Understanding Learning Difficulties, The Right to Vote.



ACTIVITY 4.H IN GROUPS

In the same groups of FOUR, consider how each of the following may have a negative influence on a person's sense of well-being. Again, try to list the top ten factors which you, as a group, consider to be the MOST negative influence in maintaining a sense of well-being.

Bullying, Stereotyping, Domestic Violence, Peer Pressure, Learning Difficulties, Materialism, Eating Disorders, Unemployment, Alcohol, Family Break-Up, Stress, Relative Poverty, Low Level of Education, Relationships, Bereavement, Addiction

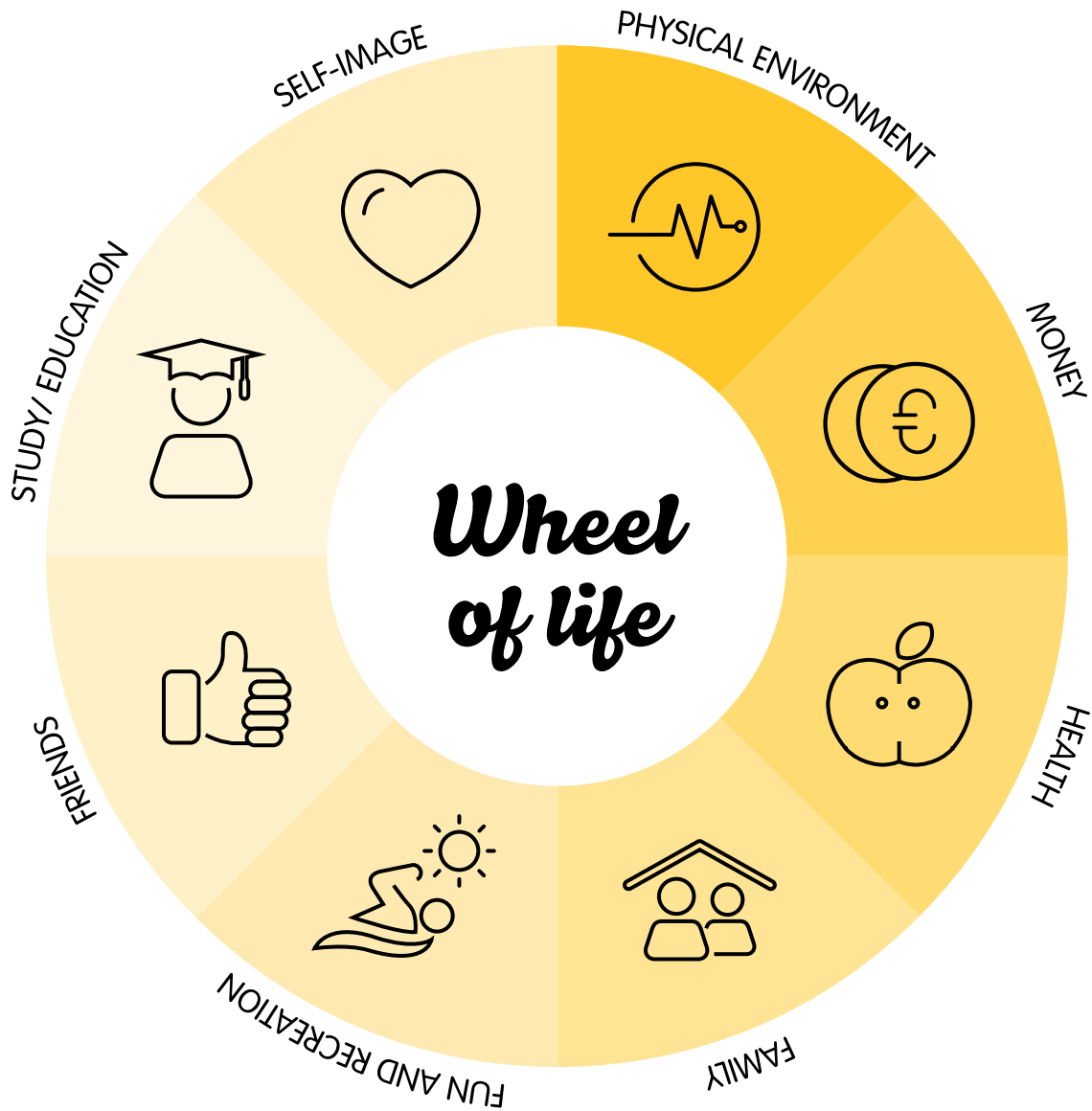




ACTIVITY 4.1 INDIVIDUAL EXERCISE

COMPLETE A 'WHEEL OF LIFE'.

Note: The wheel of life is divided into 8 segments that are important to you in life. Take some time to reflect on each segment. Then assuming that the centre of the wheel is 0 and the outer edge is 10, rate your level of satisfaction with each area. Remember the wheel of life is about finding happiness and balance in your life.





ACTIVITY 4.J CLASS DISCUSSION

Earlier we discussed the importance of an employee's sense of well-being. Where this is undermined, more accidents occur. Consider ways (controls) that may help to promote a positive sense of well-being for each of the following workers:

production-line worker

newly trained garda

child care assistant

waiter/waitress in a busy restaurant

HUMAN BEHAVIOUR

It's not always what we do, but how we do it, which causes accidents



Human behaviour contributes to accidents in a number of ways, for example:

Human error

When considering human behaviour and performance, we acknowledge that people are not perfect and we all make mistakes.

- At certain times of the day (towards the end of a shift, for instance) we may be more likely to make a mistake as we are tired, or are focused on getting home.
- If we have stresses coming from outside the workplace or from within it, we are more likely too to make mistakes – our minds are not 'on' the job in hand.
- If we are rushed, or have many other distractions, we may not have enough concentration capacity to properly attend to a task. For instance, if there is loud noise occurring whilst we are trying to work to a tight deadline on a meticulous task, we are more likely to make errors which might cause or lead to an accident.

In order to address and prevent mistakes - as mistakes can sometimes lead to accidents - the type of error being made needs to be addressed.

This usually involves coming at the issue from two perspectives:

- the individual and his or her characteristics, age, gender, type of learning style, risk taking tendencies etc, and
- the perspective of the wider, organisational culture, management systems and prevailing climate, training given and reward systems in place.

To recap human error involves slips, lapses or mistakes. These types of human error can happen to even the most experienced and well-trained person.

1 Slips and lapses

Slips and lapses can occur in very familiar tasks which we can carry out without much conscious attention. This usually occurs when:

- the task is very familiar and requires little thought. People confuse two similar tasks
- tasks are too complicated and long-winded
- the main part is done but the finer details are missed
- steps in a procedure don't follow naturally
- there are distractions and interruptions.

Slips

(‘Whoops’) ‘Not doing what you’re meant to do’.

Examples of slips include:

- performing an action too soon in a procedure, or leaving it too late, e.g. not closing the lid on a bottle properly
- omitting a step or series of steps from a task, e.g. forgetting to switch the kettle on while making a cup of tea
- carrying out an action with too much or too little strength, e.g. lifting a heavy object
- performing an action in the wrong direction, e.g. pressing the reverse button instead of the forward button on equipment
- doing the right thing but on the wrong object, e.g. using the wrong size picture hook for hanging a picture.

2 Lapses

‘Forgetting to do something, or losing your place midway through a task.’

Examples of lapses include:

- forgetting to mop up floor
- taking your mask off to talk to a colleague and then forgetting to put it back on
- forgetting to put on fume hood.

3 Mistakes

Mistakes are decision-making failures. The two main types of mistake are rule-based mistakes and knowledge-based mistakes. They arise when we do the wrong thing, believing it to be right.

Examples of mistakes include:

- making a poor judgement when overtaking, leaving insufficient room to complete the manoeuvre in the face of oncoming traffic; and
- an operator misinterpreting the sound of a machine breakdown and failing to switch off immediately.

Why do mistakes occur?

- doing too many things at the same time
- doing too many complex tasks at once
- time pressures.

Factors which contribute to people making mistakes

- **work environment** – e.g. too hot, too cold, poor lighting, restricted workspace, noise
- **extreme task demands** – e.g. high workloads, boring and repetitive jobs, jobs that require a lot of concentration, too many distractions
- **social issues** – e.g. peer pressure, conflicting attitudes to health and safety, conflicting attitudes of workers on how to complete work, too few workers
- **individual stressors** – e.g. drugs/medicines and alcohol, lack of sleep, family problems, ill health
- **equipment problems** – e.g. inaccurate or confusing instructions and procedures
- **organisational issues** – e.g. failing to understand where mistakes can occur and implement controls, such as training and monitoring.

Your employer may avoid rule-based mistakes by increasing your situational awareness of high-risk tasks on site and providing procedures for predictable non-routine, high-risk tasks. Alternatively to avoid knowledge-based mistakes your employer should ensure proper supervision for inexperienced workers and provide job aids and diagrams to explain procedures.

Risk-taking behavior must also be discouraged. If someone undertakes an unsafe act and “gets away with it”, the potential consequences of that act should be made clear to all concerned. Lead by example and don’t take chances yourself. If you feel that something is unsafe, then stand back and think about the best way to deal with it. If you can’t deal with it tell your supervisor or employer.

Workplace accidents are often the result of human behaviour, i.e. cutting corners, rushing a job, taking chances.....think about the consequences of a bad accident and make sure you do everything you can to avoid it.

Don’t make the mistake of thinking that the responsibility for worker safety, health and welfare rests solely with your employer. Safety is everyone’s responsibility.

As an employee, you must not engage in any improper conduct that could endanger your own safety or health or that of anyone else’. This is the law. Your behaviour can also be a hazard if you act in a way that can cause harm, whether intentional or unintentional, to your colleagues e.g. shoving someone down steps or jokingly pushing someone into another worker.

DISTRACTIONS

Mobile phones and other media:

There may be a policy in place in your workplace prohibiting the use of mobile phones or other media during work hours. If there is no such policy try not to use them while working. Using these will affect your concentration, which could lead to an accident.

Top Tips



- Tell your friends and family not to call or text you during work time unless it is an emergency.
- Only text or phone during your break or at lunchtime.
- If you have to use your phone at other times make sure you use it in a safe place.
- If you listen to music you won't be able to hear warning sounds, such as the fire alarm, vehicles reversing or someone shouting.

Remember... Be aware – Take care

Shocking Fact

An experienced foreman, in charge of a road resurfacing operation was talking on his mobile phone when he was run over and killed by a reversing lorry. The lorry's reversing sounder was working but the foreman was distracted by his mobile phone conversation.

Facts



WORKPLACE RISK ASSESSMENT



ACTIVITY 4.K IN GROUPS

In this activity you work in groups of four. You must agree a common response to the scenarios described, before one of you reports to the whole class. Read each of the following scenarios. Identify what the bad practice is and why. Comment on who acted responsibly and who acted irresponsibly. How should the matter have been handled?

Scenario 1

An employee tells her supervisor that there are exposed wires at the back of the microwave in the staff kitchen. The supervisor fails to report this to the manager. Two days later another employee receives an electric shock while using the microwave.

Scenario 2

An employee tells his boss about a slippery surface on the steps leading to the storeroom. The cause seems to be worn floor-tiles. The employer moves the employee to a different task in another area of the plant. The employer does not fix the problem.

Scenario 3

You are asked to collect a box containing 'some cleaning stuff' from the storeroom downstairs. You are told the containers are in unmarked boxes 'somewhere' on one of the top shelves. After much difficulty, you find the boxes and bring them back to the office.

Scenario 4

You are a student on work experience in a large hardware store. You have been asked to mix cement-based mortar to assist in the repairing of a wall in the outside storage area. Though you have seen this done many times and helped your father mix mortar some years ago, you are uncertain as to safe practice. In particular, you do not understand the labels on the side of the cement bag.

Scenario 5

You are working in a busy hotel. You have become aware that the receptionist, on a temporary contract, is handling a lot of telephone calls along with checking people in and out, and dealing with general enquiries and complaints. She appears to be stressed and increasingly tired and distant. The hotel manager and supervisor do not seem to be aware of the pressure the receptionist is under. She has asked you not to say anything in case she is considered to be unsuited to reception duties. She is also hoping to have her contract made permanent in the future. You decide to remain quiet and tell nobody.

Scenario 6

A transition-year student on work experience in a farm equipment store is asked to hop on to a forklift truck to move it three metres out of the way before a delivery van arrives. The student is not trained to drive a forklift.



END OF UNIT SPEED TEST

- Q.1.** What is the main difference between a safety officer and a safety representative?
- Q.2.** List four factors that contribute to a comfortable work environment.
- Q.3.** Name eight everyday activities that are beneficial for individual well-being.
- Q.4.** What can an employer do to create a more comfortable working environment for the employee?



Make Notes



UNIT 5

COMMUNICATING SAFETY

Unit Contents

- 1 Communicating the safety message
- 2 Accident and incident reports
- 3 Safety statements
- 4 Safety signs

COMMUNICATING SAFETY

UNIT 5

PART 1



COMMUNICATING THE SAFETY MESSAGE

A concern for many workers, especially those on work experience and those working part-time, is knowing how to tell management that there is a new or increased risk in the workplace. If they see something unsafe should they report it? Will they be congratulated or side-lined for having expressed concern?

Procedures are usually discussed during induction training or workers may learn from their colleagues, or from reading work notices. If in doubt it is good practice to ask a responsible person, such as a supervisor or safety officer. Management, too, have concerns about communicating matters of health and safety. What is the best way of telling staff or customers about new health and safety concerns? In the same way, government must carefully consider the style and method of their communication of health and safety matters. Laws must be clear and easily understood.

There are lots of ways by which the message of workplace safety and health may be communicated to employers, employees and the public.

These include:

- government publications
- guidelines and codes of practice published by the Health and Safety Authority
- newspaper, radio and TV ads
- professional journals and trade magazines
- workplace notice boards
- meetings and trade conferences
- billboards and public posters
- training courses and manuals
- HSA-sponsored events.

Which of these do you think is the most effective method of getting the message across?



Of course, the most used system of communication today is the internet. A good place to start a search on 'health and safety' is the Health and Safety Authority's website: www.hsa.ie. A site that provides key information in a simple format is www.simplesafety.ie. Log on to these sites and see the latest news, advice and statistics that relate to health and safety at work.

SAFETY, HEALTH AND WELFARE AT WORK ACT (2005)

The Safety, Health and Welfare at Work Act (2005) contains legal requirements aimed at improving the health, safety and welfare for all workers. Its core focus is the avoidance or reduction of risk to people at work. It outlines clearly the duties of employers and employees in reporting and reducing the risk of workplace accidents. It also provides the Health and Safety Authority with enforcement powers including the ability to prosecute or close down workplaces.

ACTIVITY



ACTIVITY 5.A CLASS DISCUSSION

Read the following excerpts from the Safety, Health and Welfare at Work Act (2005). Consider why these are in the 2005 Act. How effective do you think they may be in reducing accident rates in work?



Excerpt A:

'an employer's duty extends to:

... managing and conducting work activities in such a way as to prevent any improper conduct or behaviour likely to put the safety, health or welfare at work of his or her employees at risk.

... preparing and revising adequate plans and procedures to be followed and measures to be taken in the case of an emergency or serious or imminent danger.

... reporting accidents and dangerous occurrences.'

Section 8 of the 2005 Act

Discuss who an employer may need to communicate with in performing these duties.

Excerpt B:

'Every employer shall ... ensure that instruction, training and supervision is provided in a form, manner and language that is reasonably likely to be understood by the employee.'

Section 10 of the 2005 Act

Discuss the different ways an employer can provide instruction, training and supervision to his/her employees. Consider the difficulties of performing this duty in a large company employing workers of many different nationalities.



Excerpt C:

'An employee must not engage in improper conduct or other behaviour such as violence, bullying or horseplay, which could endanger another person at work or his or her safety, health and welfare.'

Section 13 of the 2005 Act

Discuss the effects of workplace violence, bullying or horseplay on an individual. What measures can an employer put in place to prevent such behaviour?

Excerpt D:

'Every employer shall identify the hazards in the place of work under his control, assess the risks presented by those hazards and be in possession of a written assessment of the risks.'

Section 19 of the 2005 Act

Why is this provision in the Act? What can be done to enforce this regulation? Does your school meet this requirement?

Excerpt E:

'An employer shall not penalise an employee for ... making a complaint or representation to his or her safety representative or employer or the (Health and Safety) Authority as regards any matter relating to safety, health or welfare at work.'

Section 27 of the 2005 Act

Why is this provision in the Act? Do you think employers would be wise to penalise or attempt to penalise workers who report incidents of poor health and safety in their workplace? Would you make such a complaint?



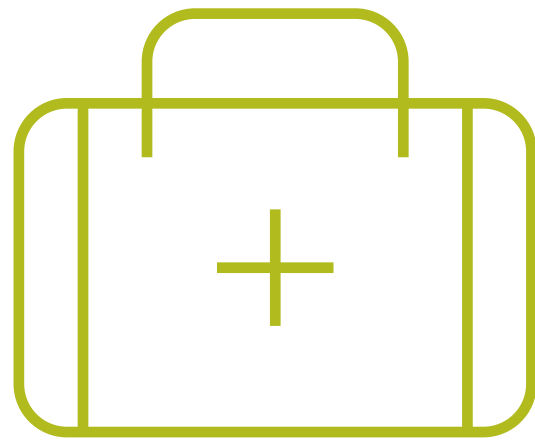
ACCIDENT AND INCIDENT REPORTS

All workplaces should have an agreed procedure for reporting and recording accidents, incidents or dangerous occurrences. This is important for many reasons such as the prevention of future, similar accidents occurring.

Workplaces usually record details of an accident in an accident log book. In this way, the accident, its causes and any subsequent injuries are clearly documented. Such records assist management in deciding control measures that may need to be implemented or improved to prevent further accidents.

Dangerous occurrences that result in no injury must also be reported. It is also important to examine near misses where an injury almost occurred.

All accidents that result in a fatality or in an injury resulting in the loss of more than three days work, excluding the day of the accident, **MUST** be reported to the Health and Safety Authority. This can be done online through the Authority's website www.hsa.ie. The formal recording of workplace accidents helps the Health and Safety Authority to compile accurate statistics on the range and occurrence of accidents at work. These in turn assist policy makers in agreeing procedures, developing guidelines or regulations aimed at reducing the frequency of such accidents. All fatal workplace accidents are investigated by Inspectors from the Health and Safety Authority. Some non-fatal accidents and dangerous occurrences are investigated also.



Following an inspection, the Authority can choose from a range of options including verbal advice or one of the following:

- an improvement notice: the employer is instructed to make particular improvements to the workplace or to the system of work by a given date
- a prohibition notice: the employer must cease work in an area or activity thought to pose an immediate risk of serious personal injury.

Failure to comply may result in prosecution leading to fines and / or imprisonment.



ACTIVITY 5.B INDIVIDUAL EXERCISE

Read the following accident report and answer the following questions:

- Q.1 Where did the accident happen?
- Q.2 How did the accident happen?
- Q.3 What treatment did the worker receive?
- Q.4 Do you consider that this accident was easily avoidable? Explain your answer.

NOTICE OF ACCIDENT

Details of injured person:

Name: Joe Ryan

Address: Bellview, Kilmoy

Occupation: Farm labourer

Date of Birth: 29/04/1965

Sex: Male

Date / time of accident: 6.50 am. 12/08/2014

Describe the type of work the person was doing at the time of the accident:

Joe was preparing to bale hay. He was attaching a baler to the 'power take-off shaft' (PTO) of a 1993-registered tractor.

Describe the environment where the accident took place:

The accident took place in the yard of Martin McKenna's farm. It was a dry, bright morning. The yard contained a lot of farm machinery.

Describe what happen at the time of the accident:

Joe's shirt got caught in the PTO which was running at the time. Joe became entangled in the PTO.

Describe the injuries incurred:

Joe received major injuries. He suffered severe abrasions to his chest. His left arm was seriously entangled in the machinery and was later amputated.

Outline the immediate aid given to the injured person:

As Joe was working alone, he did not receive aid until the owner, Mr McKenna, heard calls for help. Mr McKenna turned off the tractor. As he was unable to disentangle Mr Ryan, he called for an ambulance. This came thirty minutes later. Medics were able to remove Joe from the machinery. He was taken to St Luke's Hospital, twenty-three miles away.

Outline the consequences:

Fatal: no

Ambulance / doctor called: yes

Hospitalisation: yes

Period of absence from work:

Joe remains on sick leave. It has not been decided if he will be able to return to farm work

Details of notifier: Mr Martin McKenna

Type / name of business: farm

Today's date: 15/08/2014

ACTIVITY



ACTIVITY 5.C ROLE-PLAY

In this exercise you are asked to role-play. Read the account below of an incident that occurred and the details of the part your character played. Due to the circumstances of the accident and the subsequent events, a meeting has been called between management and the worker involved. In character, you must prepare your thoughts before the meeting begins. Then you will role-play the meeting in class.

You will be asked to play the part of one of the following:

- Paul Walsh
- Ger Byrne, a colleague of Paul's
- Jane Brennan, managing director of Brennan's Design
- Damien Browne, Paul's supervisor on the day and a senior manager for Brennan's Design.



Description of incident

Paul Walsh is an apprentice painter working with Brennan's Design. The company was contracted to redecorate a block of a large pharmaceutical company called DCC. Paul's job included carrying 10-litre containers of paint from the company van outside the building. To do this, Paul had to walk up a flight of stairs and through a 'clean area' where a critical stage of the drug-manufacturing process took place. Everyone entering this area has to wear complete personal protective clothing, including shoe covers.

On the day of the accident, Paul was carrying two 10-litre containers up the stairs. He was carrying one container on each shoulder. He was wearing all the required protective clothing. Paul lost his footing on a step of the stairs and fell. His knee was badly hurt and he has since suffered from acute backache. Paul received no training from Brennan's Design on how to carry large weights and no training from DCC on working with protective clothing.

In preparation for the role-play you should:

- get all your facts right
- list your responsibilities in relation to health and safety
- be clear on your role in the incident
- anticipate what the other characters are likely to say
- decide what you wish to achieve from the meeting
- write everything down.

When ready, each group acts out its role-play. This is viewed by the rest of the class. A class discussion may follow.



ACTIVITY 5.D CLASS DISCUSSION

Look at [BeSMART.ie](https://www.besmart.ie) - Business electronic safety management and risk assessment tool.

What is this tool and how will it benefit small businesses?
What are the advantages of online tools such as BeSMART for

- (a) individuals**
- (b) business?**



SAFETY STATEMENT

Safety must be managed no matter what size a workplace is. The Safety, Health and Welfare at Work Act 2005 states that all 'employers must complete a safety statement'. This is a document outlining the company's health and safety policy along with a risk assessment of all activities carried out there. It is a record of what the company intends to do to provide a safe environment for its workers and all others in contact with the company.

IDENTIFY THE HAZARD



ASSESS THE RISK



APPLY THE CONTROL

The safety statement must be brought to the attention of all employees and to any other persons at the place of work who might be exposed to the specific risks outlined in the safety statement. When bringing the safety statement to the attention of employees, it must be in a form, manner and, if necessary, a language that can be understood by employees.



It is most important that the safety statement is about ACTION and not about the statement itself. Writing the safety statement is not the key thing. What matters most are the actions taken, as outlined in the statement.

The procedure for writing up and acting on a safety statement is the following:

- consider the legislation that applies to this industry
- look for the hazards
- decide the levels of risk
- decide the controls required
- take action immediately
- write down all observations, actions and decisions
- look back on progress made
- make further changes as the need arises.

How can students on work experience access the company's safety statement?

The safety statement must be made available to students on work experience. Some employers give each employee a copy of the statement. Others make it available at a central location e.g. on the company notice board or intranet site. Sometimes the employer may refer to the safety statement as the safety policy. You must read the safety statement carefully, particularly the risk assessment sections relating to your job, and ensure that you fully understand this information. If in doubt, ask.



ACTIVITY 5.E SHORT PRESENTATION QUESTIONNAIRE

In groups of four, prepare a short questionnaire which may be used to investigate the levels of health and safety awareness and controls that exist in ANY small local enterprise of your choice.



ACTIVITY 5.G SHORT PRESENTATION School Health and Safety System

Invite the school's Safety Officer or Safety Representative to talk to the class about the Health and Safety System that operates in your school.

Before the talk prepare a set of questions. It may be best to present these questions to the guest speaker in advance of the talk.



ACTIVITY 5.F SHORT PRESENTATION Health and Safety Poster

Design a poster that promotes either of the following:

Positive well-being

or

The entitlement of young workers to a safe working environment

Make Notes



SAFETY SIGNS



A safety sign provides information about safety or health and can be a:

- signboard
- colour
- acoustic signal
- verbal communication
- hand signal.

A signboard is a sign that provides information or instruction using a combination of shape, colour and symbols but excludes information in writing.

Text should not be used if the meaning is clear by use of a pictogram or symbol alone. If a text explanation is necessary (e.g. where doubt could exist as to the meaning of a symbol) a supplementary signboard containing appropriate text should be provided. This supplementary signboard can be on the same "carrier".







The colours and shapes that should be used on safety signboards are:

- **red** for prohibition
- **blue** for mandatory actions
- **yellow** for caution
- **green** for positive action
- discs for prohibitions and instructions
- triangles for warnings
- squares and rectangles for emergency and information signs.

SAFETY SIGN INFO

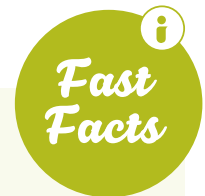
SIGN TYPE	MEANING AND INFORMATION	EXAMPLE
Prohibition	Danger alarm - Stop, shutdown, emergency cut-out devices Evacuate	Not Drinkable
Fire-fighting	Fire fighting equipment - Identification and location	
Warning	Warning sign - Be careful, take precautions Examine	
Mandatory	Mandatory sign - Specific behaviour or action Wear personal protective equipment	

SIGN TYPE	MEANING AND INFORMATION	EXAMPLE
Emergency Escape/First-aid	Emergency Escape/ First Aid - Doors, exits, routes, equipment, facilities	
No danger	No Danger, Rescue Equipment - Return to normal	
Supplementary Signs	Used with signboard for supplementary information, includes information in writing	
Obstacles/dangerous locations	Risk of colliding with obstacles, of falling or of objects falling	
Traffic routes	Traffic routes for vehicles	



ACTIVITY 5.H INDIVIDUAL EXERCISE

- Q1.** What is the difference between red, blue and yellow signs and when are these used?
- Q2.** When might discs, triangles, and squares be used on a safety signboard and give an example for each?



PROVISION AND USE OF SIGNS:

Signs are the last line of defence against hazards and should only be used where hazards cannot be avoided or adequately reduced.

The risk assessment and safety statement should identify necessary signs. In some cases signs are specifically required, e.g.

- fragile roofs and ceilings
- emergency routes and exits
- fire detection and fire fighting
- work-at-height danger areas
- places with obstacles, falling risk or risk of falling objects
- workplace traffic routes
- exposure to noise above 85dB(A)
- explosive hazard zones.



END OF UNIT 1: SPEED TEST



- Q1.** List four requirements of the Safety, Health and Welfare at Work Act, 2005.
- Q2.** Where might you find a safety statement?
- Q3.** What is the main difference between an accident and a dangerous occurrence?
- Q4.** Why is it important to report accidents?
- Q5.** What do the colours red, blue, yellow, and green stand for on a signboard?



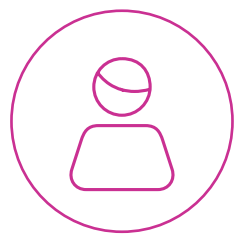
UNIT 6

REFLECTIONS

Unit Contents

- 1 Case studies
- 2 Major assignment

REFLECTIONS



CASE STUDIES

The cost of accidents and ill-health in the workplace

When a person has a workplace accident or suffers ill-health at work the costs to the individual are obvious in terms of human suffering and loss. However, the costs to business may be less obvious. Some of these costs may include:

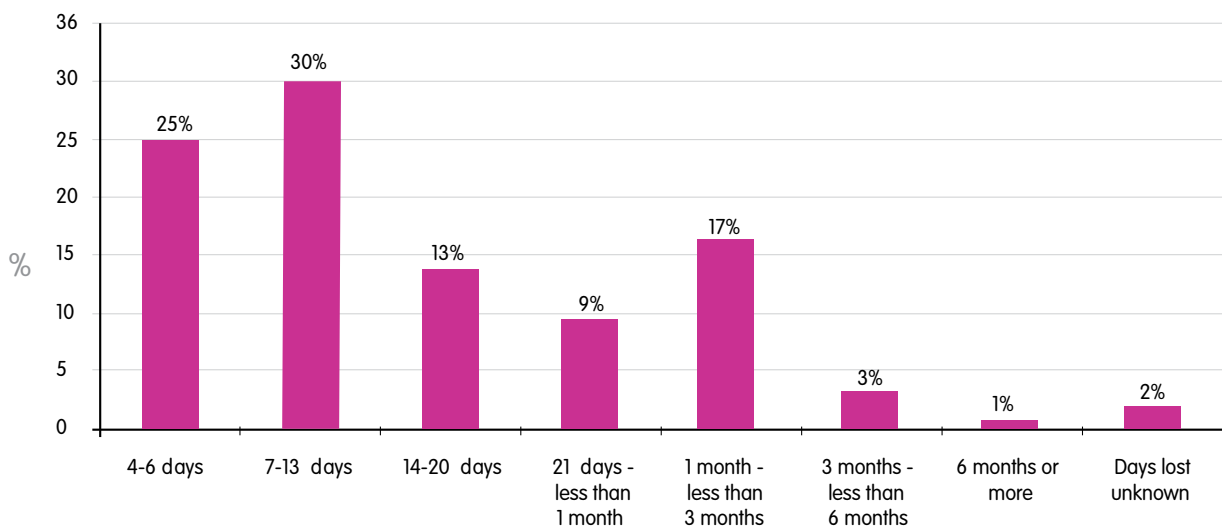
- medical costs and ongoing support for the injured worker
- re-organising work rotas
- recruitment
- training
- repairing or replacing equipment
- delayed deadlines
- meeting insurers, Inspectors
- completing paperwork
- maintaining workplace morale
- maintaining client trust.

Just one accident can cost thousands

The following charts show the number of non-fatal injuries by absence from work and the number of non-fatal injuries by work environment. This gives an idea of the types of figures that employers in Ireland are dealing with. The pie

chart also gives an indication of the work environments where most non-fatal injuries are occurring. It is worth remembering that these are the reported injuries and that many more may go unreported.

Percentage of non-fatal injuries by absence from work 2013

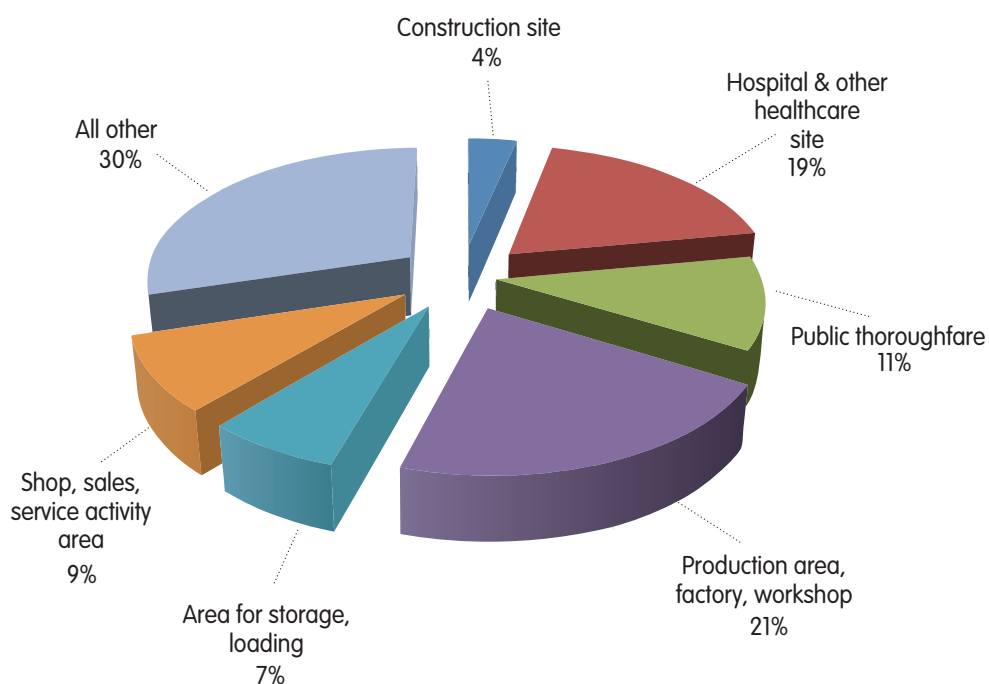


Reported non-fatal injuries by work environment 2013 (HSA)

Figure 2.25a Reported non-fatal injuries by work environment 2013 (HSA)

	All		Workers Only	
	Number	%	Number	%
Construction site	227	3.4	224	3.5
Farming, Forestry, Fishing (not on vessel)	88	1.3	85	1.3
Hospital & other healthcare	1,204	18.2	1,198	18.7
Public thoroughfare	719	10.9	707	11.1
Production area, factory, workshop	1,374	20.8	1,363	21.3
Area for storage loading	445	6.7	441	6.9
Shop, sales, service activity area	651	9.9	567	8.9
Other	1,871	28.4	1,793	28.0
Unknown	19	0.3	18	0.3
Total	6,598	100	6,396	100

Chart of reported non-fatal injuries by work environment 2013 (HSA)



ACTIVITY

ACTIVITY 6.A
IN GROUPS

Read these case studies of fatal accidents and answer the questions that follow:

FATAL ACCIDENTS

- 1 A gardener died from a fatal electric shock after switching on a kettle of water. The kettle was five years old and had not been used for some time, as an electric water heater was in use. However, the water heater had recently failed and had been sent for repairs. As a result, the worker used the old kettle. Examination after the accident showed that the earth wire was not connected to the terminal in the plug. The earth and live wires crossed, causing the accident.
- 2 An employee of company A died when a bale of steel coils fell from the trailer of a lorry. She was attempting to secure the load to a large trailer when the accident occurred.
- 3 An employee of company B died from severe head injuries received when struck by a telescopic handler being used to place a large stone on a wall of a house.
- 4 An employee of company C died from electrocution while topping trees close to live 20,000-volt power lines.
- 5 An employee died when a 9 tonne dumper he was driving overturned trapping him under the vehicle.
- 6 An employee of company D died when he fell from planks on top of an internal partition wall of a single-storey dwelling under construction. He fell as a result of falling roof trusses which fell 'domino-like' before they had been secured into place. There was no fall-protection in place.
- 7 A farm labourer walked into an area where slurry was being agitated. After inhaling one lungful of slurry gas he collapsed and died.
- 8 A student working part-time for company F died from electrocution. The accident occurred when the student was harvesting silage. He was attempting to climb onto the harvester (driven by his employer) as it was passing under high-voltage wires.
- 9 An employee of company H died from electrocution while installing aluminium gutters on a newly constructed two-storey house. A 15-metre section of gutter made contact with a 10,000-volt power line as it was being manoeuvred into position.
- 10 A maintenance worker was clearing guttering on a 2-storey house when the ladder he was standing on slipped. The worker fell to the ground suffering fatal injuries.

- Q.1 Only one of the above case studies is not a factual account of a real incident. Which one is it?
- Q.2 In each case, discuss the main cause of the accident and the sensible control measures that could have been put in place.
- Q.3 On what grounds could an employer appeal a fine or prison sentence?
- Q.4 What general lessons can be drawn after considering the above cases?



ACTIVITY 6.B CLASS DISCUSSION

Read these case studies of non-fatal accidents and answer the questions that follow:

NON-FATAL ACCIDENTS

- 1 An employee of company X was injured when she was investigating a malfunctioning machine. Her arm was severely crushed because the electro-mechanical guarding equipment around the machine had been turned off.
- 2 A member of the public received injuries following the collapse of a scaffold which was being dismantled on a busy main street.
- 3 A contractor was employed to remove a corrugated metal roof from the premises of company Y. An employee of the contractor was exposed to asbestos residue in the roof panels. The owner of the company was aware of the likely presence of asbestos in the roof but did not pass on this information to the contractor.
- 4 An apprentice worker was seriously injured after falling through a perspex corrugated roof on a farm shed.
- 5 An employee was paralysed when crushed by a dumper he was driving, which toppled over on a steep incline.
- 6 An employee of company Z had four fingers on his right hand amputated while using a circular saw. The saw had no guarding.
- 7 A carer looking after an incapacitated man received serious back injury as a result of frequently lifting a man from his bed to his chair.
- 8 A hotel worker tripped on a Hoover cable and fell down a flight of stairs suffering a severe back injury.

- Q.1** Consider the control measures that should have been in place in each of the circumstances above.
- Q.2** What role would training and / or supervision have played in preventing the above accidents?
- Q.3** Who do you think is at fault in each case?



ACTIVITY 6.C CLASS DISCUSSION

Many workplace accidents may go unreported. Why do you think this happens?

**Non-fatal
injuries**
(reported)

	2013	6,598
	2012	6,804

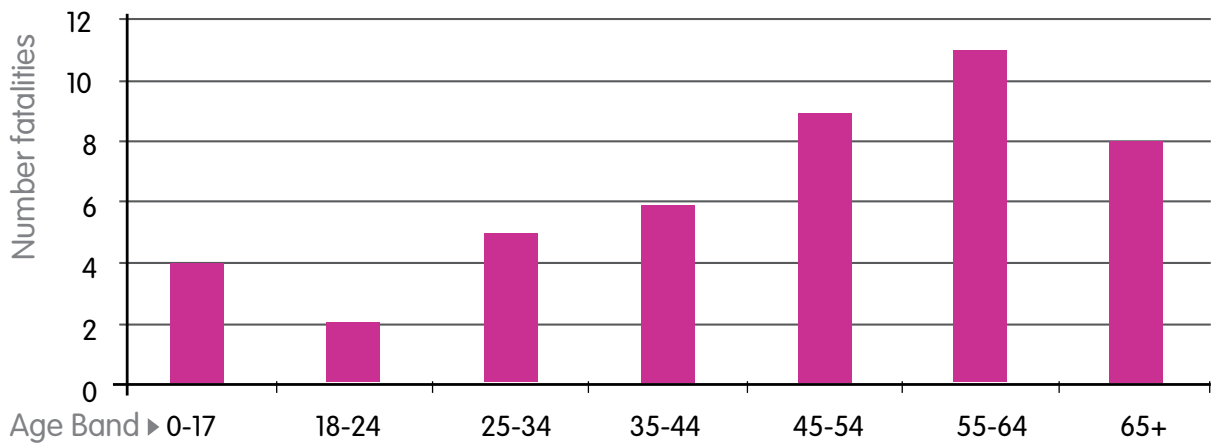


ACTIVITY 6.D CLASS DISCUSSION

Looking at the charts below discuss suitable methods of communicating health and safety information to employees in the 18-24 age band and employees in the 55-64 age band.

Consider sources of information and advice, education and training, promotional campaigns, tv, radio, and social media.

Number of reported fatalities (worker and non-worker) by age band 2013 (HSA)



Most Hazardous Work Sector



ACTIVITY



ACTIVITY 6.E

WRITE A LETTER TO A POLITICIAN

Read the following true account of how a man's life was dramatically changed as a result of a fall from a roof:

Since my accident four years ago, I have not worked. In fact, my whole life has fallen apart.

I fell from a roof while constructing a house and fractured my spine in two places. I also received soft-tissue damage and other damage to my right knee. My ankle was badly twisted and the shock absorber in my knee was destroyed. Everyone told me I was lucky to survive at all. I spent the next six years in a spinal frame, confined to my bed.

Actually, the worst thing was the depression and panic attacks. I ended up in a psychiatric ward.

My income, of course, was gone. And the strain of living off disability allowance and the recurring panic attacks were too much for my family. My wife and I separated and I find it very difficult to talk openly to my kids.

Now, years later, the physical wounds are largely healed but I am still not the man I used to be.'

John aged 38.

Suppose you are John's wife, child or friend. Write a letter that he or she might send to the minister responsible for regulating health and safety at work.

ACTIVITY



ACTIVITY 6.F TEAM DEBATE

Prepare a team debate on one of the following topics.

- No.1 That the government is not doing enough to protect workers from workplace accidents.
- No.2 That all health and safety matters depend on the individual's acceptance of personal responsibility.
- No.3 That there should be zero tolerance in relation to all breaches of health and safety regulations.
- No.4 That all injuries and occupational illnesses are preventable.
- No.5 That health and safety matters should feature more strongly in the curriculum for primary and second level schools.

Debate rules

Teams consist of three students. The team argues for or against the motion. Each team must discuss, plan and prepare all of its arguments. Parts of this are then assigned to each team member. One student acts as captain. The captain begins the team's debate, then returns at the end to summarise.

Each team member speaks for THREE minutes. The captain returns to summarise in TWO minutes the essential argument of the team.



ACTIVITY 6.G SHORT GROUP PROJECT A Diary

Write an imaginary account entitled: 'A day in the life of...' based on what you suppose is the typical daily work routine of one of the following workers. For this exercise, focus entirely on hazards, risks and other health and safety matters that would routinely arise during the person's daily work.

Choose from:

garda
crèche supervisor
GP
carer
waitress
farmer
off-shore fisherman
construction worker
hairdresser
bus driver
manager in financial services
manager in a manufacturing plant.



MAJOR ASSIGNMENT



Each student is asked to complete **one** of the following projects

Project Number One



Consider a workplace where you have recently worked or are currently working. Write a report on the health and safety practices of the business. Do not include personal or sensitive information.

Part one of your report should include some or all of the following:

- a summary of the company's safety statement
- a report on the company's knowledge of health and safety legislation
- consideration of the training provided for staff
- company policy on the following (if relevant):
 - Personal protective equipment
 - Accident reports
 - Evacuation procedures
 - Policy on bullying in the workplace.

Part two of your report should make suggestions as to how safety could be improved in this workplace.

Project Number Two



Ask permission to view your school's safety statement. Write a critical analysis of the statement, based on parts one and two of Project One above.

Project Number Three



Consider an important event in your school's calendar (such as TY trip, school tour, school musical or sports day). Write a risk assessment for the event considering all hazards, risks and controls that you associate with the event.

Project Number Four

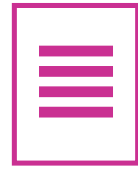


You are due to attend a meeting with the minister in charge of workplace safety. You want to discuss with him / her ways of improving health and safety for young people at work. Prepare the notes which you will bring with you on the day. This should contain the key points that you wish to make, as well as relevant statistics and / or illustrations to strengthen your argument.

Project Number Five



Design a poster for your school which can be placed in a prominent place. The poster should advise all users of the school (students, teachers, parents, etc) of the best and safest practice when using the available facilities (such as assembly areas, science rooms, computer rooms, etc). The poster must be both informative and eye-catching. If you prefer, you can design a poster for EACH of the key areas in your school.



Project Number Six



Design, prepare and conduct a survey of a full year-group in your school. The survey should ascertain the students' knowledge of and interest in health and safety matters. You must compile graphs, charts and lists based on your research. There should also be a section with conclusions based on the survey. You may like to engage the cooperation and assistance of the school's student council, prefects or appropriate Year Head.

Project Number Seven



Choose any one of the scenarios presented in this unit. Imagine a criminal court case takes place as a result of the event. Prepare the speech that may be presented by the barrister representing either the defence or the prosecution. Your speech may be presented orally or in writing.

Project Number Eight



Write a report on developing a social media campaign on slips, trips and falls. Take into consideration what you have learned on the 'Choose Safety' programme. Use statistical information, charts, and resources to emphasise why the campaign is important, the best times to commence the campaign, the target audience, and the media to be used. Write a short post for Facebook and Twitter or describe a suitable YouTube post, and incorporate these details in your report.



END OF UNIT SPEED TEST

Working in groups of four, you have 12 minutes to complete the following rapid-risk assessments:



Workplace	Hazards Unit 1	Risk Unit 2	Control Unit 3
Kitchen area of a restaurant			
Storeroom in a DIY store			
Busy accountants office			
Hairdressers			
Farmyard			
Garden centre			
Fishing trawler			

Make Notes

A series of horizontal dotted lines for writing notes.



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