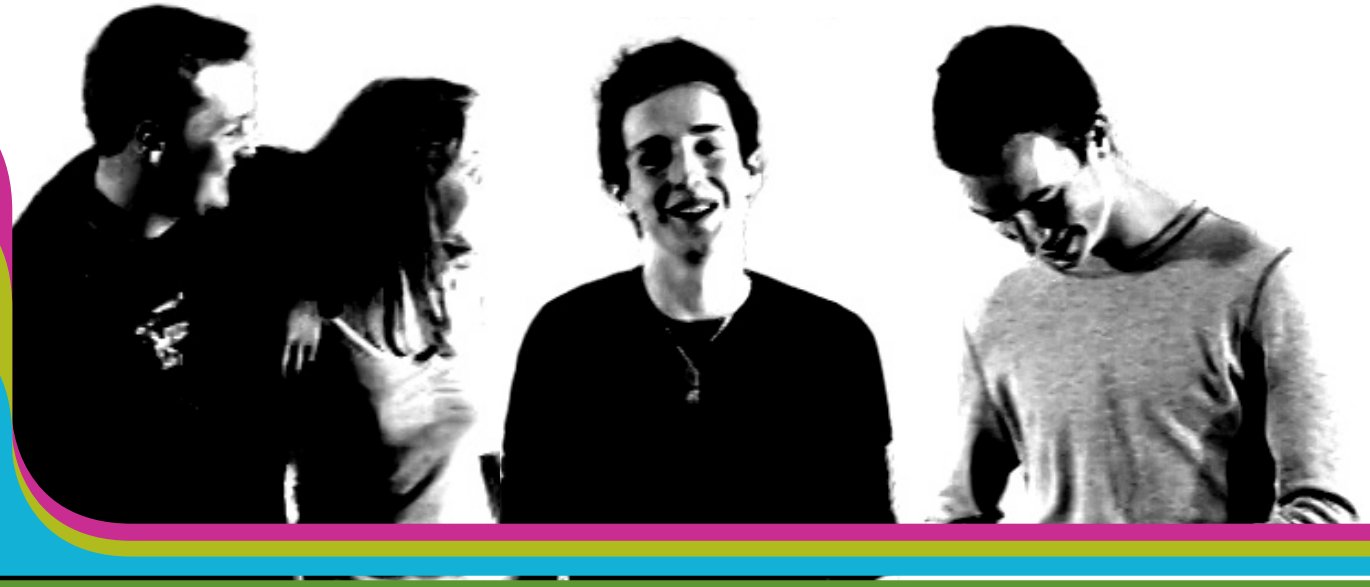
HEALTH AND SAFETY AUTHORITY

CHOOSE SAFETY



STUDENT SAFETY AT WORK

An Education Programme on the Principles of Health and Safety in the Workplace

Students' Workbook

HEALTH AND SAFETY
AUTHORITY

Published in August 2010 by the Health and Safety Authority, The Metropolitan Building, James Joyce Street, Dublin 1.

Choose life. Choose a job.
Choose to change jobs five times before you're 20 if you like. Choose not to walk out in front of a car. Choose not to burn your workplace down. Choose to tidy up loose cables so you and your colleagues don't break your necks. Choose to lock away flammable material and dangerous substances.
Choose to tell your boss if you think your precious person is in danger.
Choose to make your workplace safe for you and your colleagues.

Choose Safety...

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CHOOSE SAFETY

STUDENT SAFETY AT WORK

An education programme on the principles of
Health and Safety in the workplace for second level students

Students' Workbook

UNIT 1

ACCIDENTS HAPPEN

Unit Contents

Part 1

LOOKING AT HAZARDS IN THE WORKPLACE

We will find out how to reduce accidents at work by considering the type and range of hazards that can cause injury. This unit pays particular attention to five sample hazards: electricity, fire, asbestos, stress and bullying.

The first step in reducing the risk of accidents at home or at work is recognising all the hazards around. A hazard is anything that could cause harm. Everyday examples of hazards are: busy roads, kettles, faulty electrical equipment and garage equipment.

Workplace hazards include: unstable ladders, damaged electric cables, heavy boxes, un-guarded machines, liquid spills on floors and repetitive work.

Identify the hazard › Assess the Risk › Apply the Control

Activity 1.a

Brainstorm

See how quickly the class can list 25 hazards that are easily found in a school.

Activity 1.b

Class Discussion

'Choose Safety DVD'

Watch the sequence on hazards in the **'Choose Safety'** DVD and answer the questions below.

Q.1 What hazards did you see in the opening sequence?

Q.2 What other hazards may exist in these workplaces but were not seen on screen?

FAST FACTS

Most common occupational injury by body part in 2008 (HSA)

Rank	Body part	%	Number of injuries
1	Back	22	1,721
2	Fingers	11	867
3	Leg	8	648
4	Hand	8	632
5	Ankle	8	588
6	Arm	6	431
7	Shoulder	5	393
8	Foot	5	350
9	Wrist	4	280
10	Head	4	275

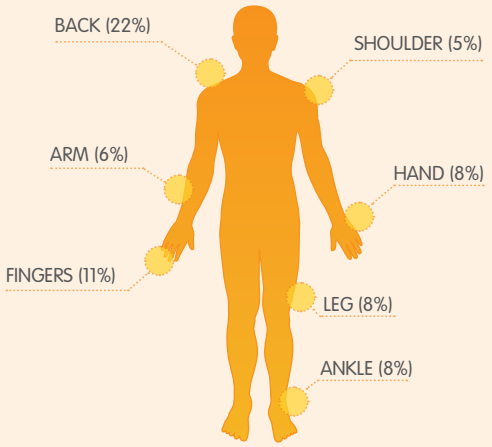
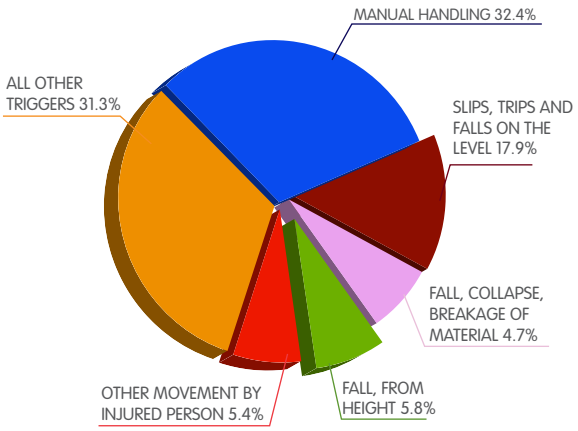


Figure: Reported most injured body part, all sectors 2008 (HSA)

Rates of injury by age group in 2007 (from Central Statistics Office)

Age range	Number of injuries	Rate per 1,000 employees
15-19	3,600	56
20-24	8,600	36.1
25-34	19,300	30.1
35-44	16,200	31.8
45-54	11,200	27.5
54-65	4,700	20

Causes of non-fatal injuries 2007 (HSA)



Fact: More accidents occur around 11am than at any other time of the day.

Fact: 565 people died as a result of work-related accidents over the eight years 2000 to 2008.

Fact: The biggest cause of workplace deaths in 2008 was 'fall, collapse or breakage of material' (HSA, 2008).

Activity 1.c

Individual Exercise

Arrange the following hazards in the workplace in the appropriate groups:

High noise levels, asbestos, fungi, wood dust, paint, x-rays, bullying, alcohol, wet floor, untrained forklift driver, hot oven, hair colourant, heavy boxes, stress, poorly erected scaffolding, violence, over-loaded electrical devices, paints, detergents, a crane, awkward loads, trailing cables, chemicals, poor light, working at a height.

Physical hazard	Chemical hazard	Human hazard	Biological hazard	Transport hazard

Activity 1.d

Class Discussion

Consider the additional hazards that may exist in a workplace for the following types of worker:

- A pregnant woman
- A blind worker
- A worker with little ability to speak or understand English
- A worker with impaired hearing
- A student on work experience
- A family carer

Part 2

ELECTRICITY

The invention of electricity brought enormous benefits. It adds greatly to people's ability to work productively and efficiently. It is difficult to imagine any workplace without equipment or machinery powered by electricity.
When handled with care, electricity is a safe and enormously valuable source of energy. However, the same invention has caused numerous deaths and injuries. It remains high in the list of major factors causing workplace accidents.

Death or injury from electrical equipment is far more common than you might think. During 2004 to 2008, the Health and Safety Authority received 209 reports of serious injuries or deaths as a result of contact or close contact with electricity.

Many more accidents went unrecorded.
Most injuries and deaths relating to electricity are caused by electrocution, electrical burns or electrical fires. Some people are injured by coming too close to high-voltage overhead power-lines or pylons.
A particular danger is the use of long conducting objects such as metal ladders, fishing rods, tipping trucks or high machinery. While the normal voltage of electricity in your home and at work is between 230 and 400 volts, that of a pylon can be as high as 400,000 volts.

SAFE USE OF ELECTRICITY

Here is a quick guideline to working safely with or near electrical appliances:

- Use a qualified electrician for all inspection and repairs to electrical equipment.
- Switch off all electrical equipment before any maintenance work is carried out.
- Tidy or tie all long cables to avoid trips and falls.
- Ensure all electrical equipment, including lighting, is well clear of wet areas or sources of water.
- All large equipment requiring a motor (such as those in a school woodwork room) must have an isolation switch located away from the motor.
- Make sure all plugs are correctly and firmly fitted.
- Do not use any equipment that has loose or faulty connections.
- Always report such faults to your supervisor or an electrical contractor.
- Do not use long conducting objects or operate machinery close to overhead power-lines or pylons.
- Check all available maps of cabling and seek guidance from ESB Networks if you plan to work with large machinery anywhere near overhead powerlines or underground cables.
- Seek advice from ESB Networks before any excavation work.
- Contact the ESB if you see fallen overhead lines. Always assume they are live.

In most work and home situations, users of electrical appliances are protected by standard safety features. Mobile appliances such as a kettle or a drill have fuse protection in the plug. The fuse is fitted with a link which melts at a fairly low temperature, thus cutting off the flow of electricity. Fixed appliances can be protected by fuses or 'miniature circuit breakers' (MCBs) at a central fuse box. These also 'break' if they detect a problem.

Most new premises are fitted with 'miniature circuit-breakers' (MCBs) in conjunction with a 'residual current device' (RCD) which is designed to operate at a trip current of 30 milliamps. When any problem is detected in circuits for socket outlets, the RCD immediately disconnects the electricity. RCDs are highly sensitive units that detect loss (leakage) of electrical current in a circuit that might be flowing through a person using an electrical product. When such a loss is detected, the RCD turns the electricity off before severe injuries or electrocution can occur.

RCD protection should be incorporated in circuits feeding any hand-held or portable appliances used in or out of doors, in circuits in moist or damp environments and in circuits used for electrical repair and test work (unless protected by an isolating transformer). RCD devices should be periodically tested by pressing the test button to make sure that they are in working order.

Lighting equipment is not normally protected by an RCD. Portable equipment (other than portable transformers and portable generators) used in building or construction or in damp or confined work locations must only be supplied at a voltage not exceeding 125 volts alternating current.

Activity 1.e

Brainstorm

List all electrical hazards that may typically be found on a farm or in a café.

Check out the following website and discover more about how electricity works and about potential dangers: **www.esb.ie**

Activity 1.f

In Pairs

You are the project manager of a weekend rock festival being held in a large open-air venue. It is set in a small park beside a large river and close to a residential area. Several overhead power pylons run through the park! A railway line runs past one side of the park. Ten different acts will perform on the one stage. The main act is a band called the 'Bright Sparks'. Your job is to coordinate the event. The stage props include an extravagant water fountain and the band members often use this water to drench the crowd to cool them down. There is also a dry ice machine (which is run by a motor) on stage and is connected to the same power system used for the lighting and sound equipment. Also as part of the act the drummer flies a giant kite while still playing the drums. The crowd loves this and gathers around the stage. As the festival has free entry the exact numbers that will attend is unknown.

List all the hazards that you foresee at this event. List these under the headings on page 16 - physical, human etc.

Activity **1.g**

Individual Exercise

ELECTRICITY IN THE HOME

Check out your home for any electrical hazards and controls	Yes	No
1. Are there at least 2 smoke alarms in the house, and are they tested regularly?		
2. Do you have an RCD (residual current device) fitted in your fuse board?		
3. Are any appliance cords / extension leads clipped or stapled to the wall?		
4. Are all socket outlets fitted with safety caps to protect young children from harm?		
5. Do you have appliances that are fitted with 2-pin plugs which you may have purchased abroad?		
6. Do you have a fire extinguisher and a fire blanket located in or close to the kitchen?		
7. Do you have any trailing cords / leads near or across your cooking hob?		
8. Do you have any appliances (such as a radio) placed close to your sink?		
9. Do any of your electrical cords / leads run under rugs or carpets?		
10. Are any of your plugs / sockets / switches damaged or coming away from the wall?		
11. Are any portable appliances (radios, hairdryers, electric fires, etc.) ever brought into the bathroom?		
12. Do you own an electric blanket that is more than 10 years old?		
13. If you own an electric blanket, do you regularly carry out visual checks on it?		
14. Are curtains or clothes draped over any electric appliance, particularly heaters and cookers?		

List any other electrical hazards that you spot in your home

Part 3

FIRE AND ASBESTOS

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

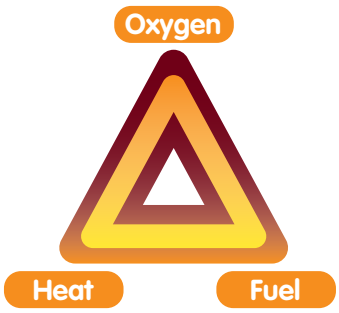
Fire Precautions Include

- 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.
- Of course, the best advice in the event of fire is to call the fire brigade and evacuate the building.

What is fire?

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

The Fire Triangle



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

We all breathe oxygen (O_2) every day. Without it we would suffocate. But did you know that fire breathes oxygen too? And, like us, 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! But, 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-12s and over-60s
- 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 bed room

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
- risk of rapid fire spread
- evacuation of large numbers of people required
- means of escape are not ideal
- buildings where people will not be able to make their own way out
- there are legal requirements for such equipment

Activity 1.h

Class Discussion

Which of the above situations apply to your school?

FIRE EXTINGUISHERS

Four types of fire extinguishers are in general use:

Type	Extinguishes fires fuelled by:
Water	wood, paper, fabrics
Foam	flammable liquids, oils, fats
Powder	all fires, including electrical
Carbon dioxide	flammable liquids, electrical

Identify Sources of Ignition

You can identify the potential ignition sources in your premises by looking for possible sources of heat which may get hot enough to ignite material also found in your premises.

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 equipment ventilation.

Activity 1.i

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 1.j

Group Work

Organize your class into small groups. Seek permision 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?

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

ASBESTOS

One of the hidden hazards in some workplaces, especially older ones, is asbestos. Asbestos is the name for a group of fibres that are:

- strong;
- heat-resistant;
- chemically resistant.

Asbestos was used to limit the spread of fire in buildings. However, a large fire may break the asbestos fibres. These are so tiny you do not know you are inhaling them.

Breathing air that contains asbestos fibres can lead to asbestos-related diseases, mainly cancers of the chest and lungs. There is no cure for these illnesses. There is usually a long delay between first exposure to asbestos fibres and the diagnosis of disease. This can vary between 15 and 60 years.

There is no specified safe level of exposure to asbestos, but clearly the more asbestos fibres you breathe in the greater the risk to your health. However, a single fibre of asbestos may be enough to cause serious injury or death many years later. That is why it is important that everyone who works with asbestos should take the strictest precautions to reduce the generation of asbestos fibres in the workplace.

Where can asbestos be found?

Most asbestos in buildings is not dangerous unless it is disturbed. The use of asbestos is now banned. However, some risk still exists because of the large quantities of asbestos that were used in buildings in the past. Much of this asbestos is still present and you cannot easily identify it from its appearance – asbestos can only be conclusively identified by a skilled analyst using a microscope.

Asbestos was most commonly used:

- as a spray coating on steel work, concrete walls and ceilings, for fire protection and insulation
- as insulation lagging in buildings and factories, on pipe-work and for boilers and ducts
- as insulating partitions, fire doors, ceiling tiles, etc
- as asbestos cement products.

What should I do?

If you or your employer has any suspicion that asbestos is present anywhere in the building or in equipment, you must seek expert advice. You will not recognise asbestos simply by looking at it. You MUST seek expert advice.

To find out more about asbestos visit one of the following sites
www.hsa.ie
www.epa.ie
wwww.citizensinformation.ie

Part 4

WORKPLACE HEALTH AND WELL-BEING

The term 'psycho-social' refers to those types of injuries 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 great 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. They 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 1.k

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. But bullying in the workplace is not discussed nearly as much. It is a serious issue and is believed to cause great distress to many workers. Their upset and the resultant loss of productivity affect the well-being of many people in the community.

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 1.l

Classroom Discussion

Q.1 What types of pressure might be associated with positive and what with negative outcomes, do you think?

Q.2 Does the personality type matter?

Q.3 Does the situation matter?

Q.4 Does age and/or gender matter, do you think?

Activity 1.m

Classroom Discussion

Discuss these two facts about workplace bullying.

- Two sectors with high rates of reported workplace bullying are education and public administration
- Women are almost twice as likely as men to report being bullied at work (ESRI survey, 2007)

Q.1 Do these facts surprise you?
Q.2 Why do you think this is so?
Q.3 What could be done to change the above?

Activity 1.n

In Pairs

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

- List 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 employee and an employer 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 1.o

Short Presentation:

Prepare a presentation on ONE of the following workplace hazards:

Excessive Noise
Poor Lighting
Long exposure to the sun
Working at a height

Your presentation may take the form of

- A written project
- A poster
- A piece of drama
- A painting or a piece of art
- A collage
- A video
- A piece for radio

Activity 1.p

End-of-unit speed test

Q.1 What is meant by a hazard?

Q.2 Why is it important to list the hazards in a workplace?

Q.3 Give five examples of transport hazards that exist in many workplaces.

Q.4 What is meant by 'human hazards' and 'chemical hazards'? Give examples.

Q.5 Explain the fire triangle.

Q.6 List four kinds of extinguishers and the type of fires they are designed to extinguish.

UNIT 2

WANNA BET?

Unit Contents

Part 1

MEASURING RISK

We have seen that many hazards exist in our workplace. We now need to consider the likelihood that these will cause injury to us or others. Risk refers to the likelihood of a hazard resulting in actual injury. It is necessary to consider the probability and possible seriousness (severity) of an injury occurring as a result of exposure to a hazard. This helps us 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:

Risk (=) Likelihood (x) severity of the potential injury (x) number of people exposed

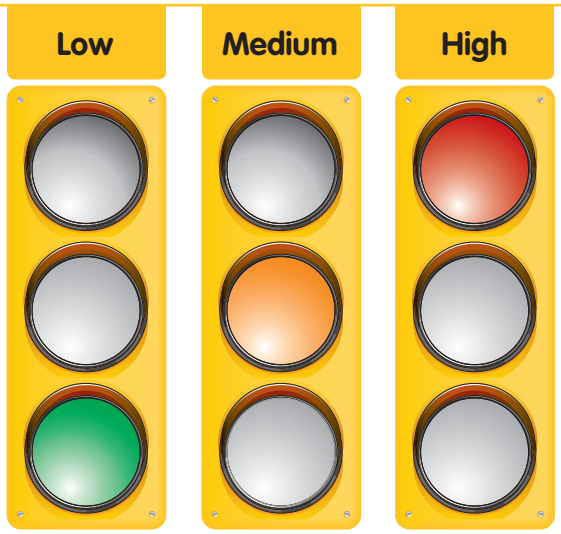
Some people like to measure risk numerically, using the above formula. For example, if you assign a number from 1 to 3 for each of the above, with 1 meaning low and 3 high, the risk rating may range from 1 to 27.

Others use plain words to describe the level of risk as low, moderate 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 (injury to a limb).

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

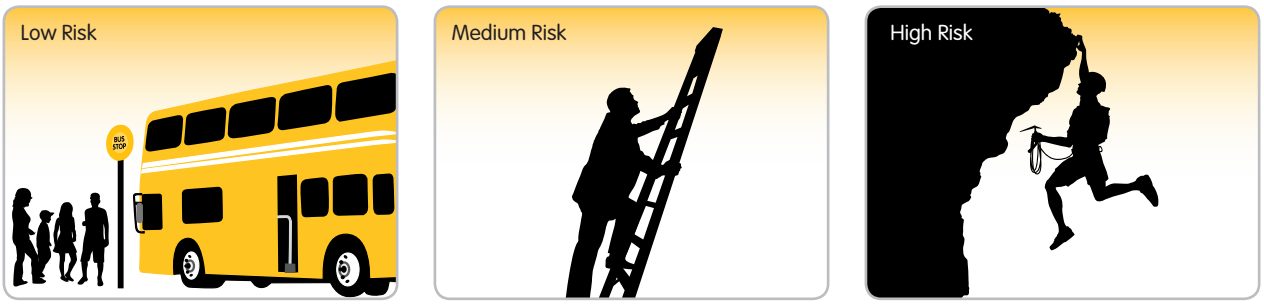


Another way of thinking of measuring risk is the traffic light system

Activity 2.a

Class Discussion

These illustrations (above and 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.b

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)

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

(X) 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.c**

Individual Exercise

i. Suppose you are working in an office and are required to sit at a computer for most of the day.

a. List all the hazards on and around your desk in the office.

b. 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)

c. 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 an assistant to a dentist. Repeat questions a, b and c above.

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

Activity 2.d

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.e

Individual Exercise

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

		True	False
1	The most frequently injured part of the body (in workplace accidents) is the back		
2	Slips, trips and falls are the least-common type of workplace accident		
3	Most workplace accidents occur after dark		
4	The 54-65 age group has the highest injury rate in workplace accidents		
5	There is no law in Ireland that forces employers to provide a safe working environment for workers		
6	Manual handling causes almost one-third of accidents in the workplace		
7	Most fires occur in our homes		
8	Male workers suffer higher rates of injury in every sector of employment except education		
9	In accidents involving fire, most deaths are from burns		
10	Over half a million work days are lost each year in Ireland due to workplace injuries or illnesses		
11	Three sectors – construction, agriculture and fishing (including hunting and forestry) – accounted for over half of the annual number of work-related fatalities in 2008		
12	The maximum penalty that can be imposed for breaches of health and safety law is €2m and/or one year in prison		

Activity **2.f**

In Pairs

In pairs, rank those hazards that you saw in the 'Choose Safety' DVD sequence, starting with that most likely to cause harm and ending with the lowest risk hazard. The group as a whole must agree the ranking.

Rank	Hazard seen in DVD
1. (highest risk)	
2.	
3.	
4.	
5.	
6.	
7.	

Now join with another pair of students in your class and see if you can agree on a joint list.

Rank	Hazard seen in DVD
1. (highest risk)	
2.	
3.	
4.	
5.	
6.	
7.	

Part 2

MANUAL HANDLING

Manual handling triggers approximately 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 poor handling of heavy or awkward loads. Even light loads can cause serious injury if handled incorrectly or repetitively. 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, great consideration and planning is needed before the lifting or handling takes place. The assessment may only take a minute or two, but that could save months of injury and absence from work. It may be your best moment's work all week!

In the case of manual handling, the risk assessment should include the following:

- Consider the load and areas where it lies, and where it is to be taken
- Check the regulations and guidelines
- If uncertain, ask for advice from colleagues or your employer
- Consider new ways of doing the job in order to avoid this hazard.

A load may cause injury if it is:

- **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.

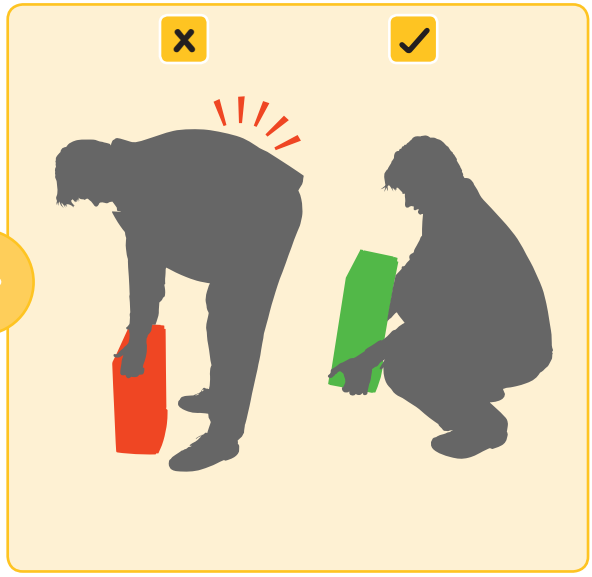
The question in your mind should not be 'How do I lift this?' It should be, 'Do I need to lift this? Is there another way of doing this work?'

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



Activity 2.g

Class Discussion

1. What is happening here?
2. Is the instruction given correct?
3. Comment on the other health and safety matters that you notice in this picture.
4. Do you consider the warehouse to be a safe working environment?
5. List the hazards and risk of injury in such a workplace.

'Choose Safety' DVD

Activity 2.h

Group Work

Source an awkward load (not a heavy one) from somewhere in your school. You could use a combination of empty photocopy paper boxes and a few dusters. Allow four volunteers from the class to compete on the safest way of picking up the load and carrying it a distance around the class. Other students can judge each contestant, assigning highest scores to the most efficient and safest method.

Activity 2.i

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.

FAST FACTS

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 causes of musculoskeletal disorders are:

- Lifting, carrying, pulling, twisting and bending
- Poor posture
- Excessive heat or cold
- Vibration
- Repetitive work

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 are particularly prone 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.

Part 3

RISK ASSESSMENTS

All employers must carry out risk assessments for every activity that occurs on their premises. A risk assessment is a comprehensive examination of all aspects of a task or area of work. To carry out a risk assessment, you must:

- identify all the hazards
- assess the risk that arises from each hazard
- consider how to eliminate or reduce that risk
- write a comprehensive plan of action.

Identify the hazard › Assess the Risk › Apply the Control

For example, a risk assessment of the woodwork room in your school should include these questions:

- Are teachers trained to use machines and chemicals associated with this work?
- Are all guards on machines in place and adequate for their use?
- Are instructions for use of machines clearly visible?
- Are machines routinely inspected?
- Are teachers and students exposed to high levels of noise over long periods of time?
- Do machines vibrate to such an extent as may cause harm?
- Are teachers trained in manual-handling techniques?
- Are all electrically driven machines safely wired?
- Are electrical cords and cables in good condition and in a safe place?
- Is the dust-extraction system adequate?
- Are chemicals properly labelled and stored?
- Is all personal protective equipment available and in good condition?

A systems approach

Considering alternatives to unsafe lifting and manually moving goods or equipment is referred to as a 'systems approach'. For example, alternatives to lifting may include the following:

- Divide loads into smaller units and carry on a pallet truck
- Make sure that heavy or awkward loads (e.g. plasterboards) are delivered as close as possible to where they are needed
- Use a forklift, a hoist or other device
- Change the set-up of the job so that it is not necessary to bring the load anywhere.

In the DVD you saw Tom struggling to lift a 30kg box. That is too heavy a load to lift safely. Then you saw him transporting three 15kg boxes safely using a pallet truck. Not only is this far safer for Tom, it is also more efficient.

As explained above, if a job requires lots of handling of heavy or awkward objects, the best thing to do is to analyse the way the job is set up. For example, the best procedure might be to reorganise the workplace so that the lifting is eliminated. By changing the order in which each stage of the production line is organised, you may eliminate most of the risk of manual handling.

Ergonomics made simple!

Ergonomics is a set of ideas on how to design tasks, tools and equipment to allow for comfortable and safe use.

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'.

Activity 2.j

Short Presentation

Prepare a presentation for the class on hazards and risks associated with ONE of the following workplaces:

- A hospital ward
- A high-rise office block
- A quarry
- A fast production line
- A car ferry.

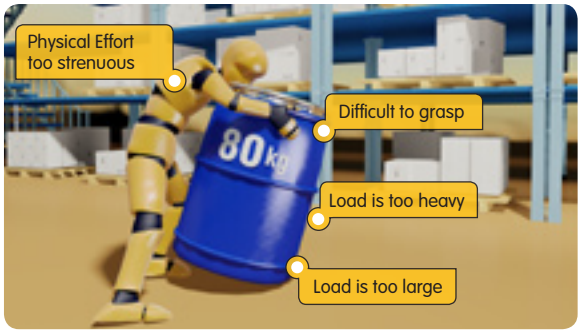
Your presentation may take the form of :

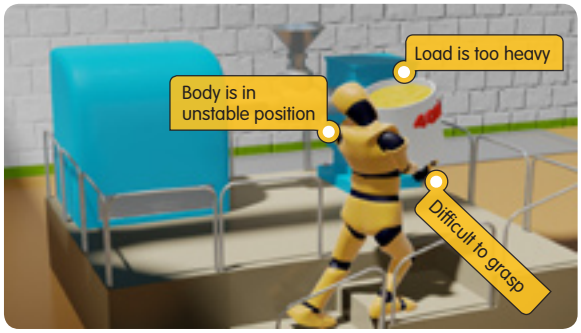
- A written project
- A poster
- A piece of drama
- A painting or a piece of art
- A collage
- A video
- A piece for radio.

Activity 2.k

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'.

Activity **2.1**

End-of-unit speed test

Q.1 Why is it important to learn about handling and lifting items?

Q.2 What types of handling are most likely to cause injury?

Q.3 What are the most likely injuries to result from lifting incorrectly?

Q.4 What parts of the body are most likely to receive injury from the following activities:

a. Over-reaching for a box stacked high in a warehouse
b. Carrying a load downstairs
c. Working in a busy kitchen
d. Driving a forklift truck
e. Standing on a busy production line
f. Replacing windows in a large office block
g. Working as a caretaker in a school
h. Lifting an elderly person from a wheelchair onto a bed

Q.5 List the occupations where injury due to poor handling is most likely to occur.

Q.6 Rewrite and complete the principles of safe handling below:
Assess the _____ and load
Establish a broad _____
Bend the _____
Maintain a straight _____
Establish a firm _____
Place arms in line with _____
Bring _____close to the centre of gravity
Place ___ in the direction of your movement

Q.7 Suppose you decide to move things around using a forklift truck. List the hazards involved in driving a forklift truck and in using it to move large loads.

Q.8 Suggest what an employee or her boss could do to greatly reduce or eliminate the risk of injury as a result of manual handling.

UNIT 3

YOU'VE BEEN WARNED!

Unit Contents

Part 1

CONTROLLING RISK

So far we have considered the hazards that exist in many workplaces and the risk of injury from these hazards. Our focus now turns to reducing that risk of injury. This is called 'controlling risk'.

The best kind of control is removing or avoiding the hazard altogether. For example, to remove the risks from cycling, you could walk, though that presents its own set of risks! However, in many cases it is not practical to remove the hazard, so you have to consider ways of minimising the risk.

Identify the hazard › Assess the Risk › Apply the Control

Activity **3.a**

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

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.

CHEMICAL CONTROLS

Controls are extremely important in reducing risk of injury. A good example of a 'control system' is the labelling used to warn of the dangers of hazardous substances. These include a visual symbol that relates to the hazard and written information to explain the hazard and the precautions to be taken by the user. (See safety data sheets later in this unit.)

Hazardous substances can be divided into two main categories: chemical and biological agents.

Chemical agent hazards may be:

Flammable	Mutagenic
Explosive	Reproductive effects
Corrosive	Environmental effects
Toxic	Oxidising
Carcinogenic	Radio-active

Workers exposed to these hazards may suffer from skin burns, loss of consciousness, headaches, nausea, poisoning, asthma, dermatitis, cancer, genetic damage.

Biological agents include:

Bacteria	Toxins
Viruses	Microorganisms
Fungi	

Exposure to biological agents may cause a variety of ailments, ranging from mild allergic reactions to serious medical conditions and death.

Activity 3.b

In Pairs

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

CHEMICALS CAN CAUSE HARM BY:

- **being ingested into the body through your mouth**
- **being inhaled into the body through your nose or mouth**
- **being absorbed into the body through your skin, eyes, nose, ears**
- **being injected into the body through the skin.**

Inhalation and skin absorption are the predominant occupational exposures you may expect to encounter in the use of chemicals. 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.

Controls of chemicals include:

1) Eliminate the use of the chemical by changing the work process.
2) Replace the chemical with something safer.
3) Separate the hazardous substance from the worker.
4) Use a mechanical device to handle the substance.
5) Install an efficient fume extractor.
6) Wear personal protective equipment.

When using chemicals

FAST FACTS

DO ↓	DO NOT ↓
Read and understand the label and the process	Use chemicals near sources of ignition
Read the instructions	Throw aerosols into fires
Wear protective clothing and use protective equipment	Mix chemicals without guidance
Follow safe procedures	Eat, drink or smoke near chemicals
Wash hands before and after use	Put chemicals into a different container
Store properly and securely	Substitute the chemical without advice
Ask if unsure	Pour chemicals down the drain

Activity **3.c**

In Pairs

List the hazardous substances that may be found in your home or in your school.

Hazardous substances at home	Hazardous substances in school
Bleach	

Choose three substances from each list above and describe the risk of each and how it may be controlled.

Hazard	Risk	Control measure
bleach	poisoning skin damage eye damage	clear labelling child-proof cap careful storage PPE (gloves and goggles)

Activity **3.d**

Individual Exercise

Design your own label for each of the following potentially hazardous substances that may be found in a kitchen:

cooking oil, dishwashing powder, bleach

Part 2

SYMBOLS AND PICTOGRAMS

Between 2008 and 2015, the current EU hazard symbols that warn of hazards in relation to chemicals will be replaced by a new 'global' system. Every country will adopt new pictograms. This will make the movement and use of chemicals far safer. This new system is called a 'globally harmonised system' of classification and labelling of chemicals and is referred to as GHS.

The current and proposed new symbols are set out below:

Current EU Hazard Symbols


Explosive (E)


Oxidising (O)


Extremely/Highly Flammable (F+/F)


(Highly) Toxic (T+/T)


Harmful (Xn)


Corrosive (C)


Irritant (Xi)


Dangerous for Environment (N)

GHS PICTOGRAMS

Physical hazards

Health hazards


(Hazardous to human health)

(Health Hazards of Lower Severity)

Environmental hazard

Safety Data Sheets

Suppliers of all chemicals must provide all the safety information in relation to the storage, handling, use and disposal of the product. For chemicals, this comes in the standard format called the Safety Data Sheet. This contains 16 fixed sections providing important information to the supplier, seller and user of the chemical. These sections are:

1. Identification (e.g. name, recommended use, supplier's details).
2. Hazard(s) identification (e.g. classification of the chemical, details of the most important adverse effects relating to the possible uses, precautions in use).
3. Composition/information on ingredients (e.g. chemical formula).
4. First-aid measures (e.g. how to deal with exposure i.e., inhalation, skin and eye contact and ingestion).
5. Fire-fighting measures (e.g. correct and incorrect response).
6. Accidental release measures (e.g. appropriate action to protect people or the environment; recommended clean-up methods).
7. Handling and storage (e.g. safe-handling procedures, appropriate storage temperature and humidity ranges).
8. Exposure controls / personal protection (e.g. suitable protective clothing).
9. Physical and chemical properties (e.g. odour, melting and boiling point).
10. Stability and reactivity (e.g. dangerous by-products).
11. Toxicological information (e.g. health effects whether immediate or delayed; toxicity levels).
12. Ecological information (e.g. effects on plants and animals).
13. Disposal considerations (e.g. proper disposal of the material or its packaging, such as incineration, recycling or landfill).
14. Transport information (e.g. any special transport requirements).
15. Regulatory information (e.g. any specific regulations for the product).
16. Other information.

Activity **3.e**

In Pairs

Visit your local supermarket, hardware store, Petrol Station or Pharmacy. Ask if they are aware of Safety Data Sheets (they should be!). Ask for a copy of one SDS. Discuss in class how you get on.

Activity **3.f**

'Choose Safety' DVD

1. What is happening here?
2. What information do you think is on the safety data sheet?
3. Do you think that the hair salon is a safe working environment?
4. List the hazards and risk of injury in such a workplace.

Activity **3.g**

'Choose Safety' DVD

1. Explain why the work system illustrated above is both safer and more efficient.
2. What other controls may be used in a warehouse such as that shown in the DVD?

Transport of Chemicals

Dangerous substances, which include; infectious materials, gases, petrol, explosives and many hundreds of industrial chemicals are transported every day on our roads. Due to the intrinsic hazardous nature of "dangerous substances", strict legislation applies governing how these substances can be transported safely. Throughout Europe transporting dangerous substances by road is governed by the European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR). This agreement is transposed into national legislation and provides a uniform approach to the design and construction of packaging and vehicles, testing of packaging and vehicles, classification of dangerous substances, labelling requirements, vehicle marking, training and many other relevant issues. The Health and Safety Authority is the main competent authority in Ireland for transport of dangerous goods by road.

Part 3

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.

Activity **3.h**

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.

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

Activity 3.i

Individual Exercise

1. Using drawings or any material of your choice, design a new piece of personal protective clothing for use in any workplace of your choosing. The PPE must be safe, effective and of practical use.

Or

2. Select all the appropriate PPE necessary for a school break in an outdoor adventure centre. Match each piece of equipment with each activity typical of such an outing.

Activity 3.j

Individual Exercise

i) What type of injury may occur without proper controls such as PPE?

ii) 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

WORKPLACE HEALTH AND WELL-BEING

Activity 3.k

Class Discussion

In Unit 1 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
shop assistant on a minimum wage	manager of a large financial company

Activity 3.l

In Pairs

Consider again the rock concert exercise you completed in Unit 1. Think of all the hazards you associated with such an event. Are there more hazards you can add? List SIX of the hazards in order of risk, starting with the highest risk. For each of the six, list three effective controls that could be put in place to reduce or eliminate the risk.

Activity **3.m**

End-of-unit speed test

Q.1. Describe three ways by which hazardous substances get into the body.

Q.2. How can chemicals affect the human body?

Q.3. How can chemicals affect the environment?

Q.4. What is the new 'globally harmonised system'? List the advantages and disadvantages of the new system.

Q.5. Why is it important to promote well-being in the workplace?

Q.6. What do the following Pictograms mean?

1 2 3 4

Q.7. List four safety information points that are shown on Safety Data Sheets.

UNIT 4

NOT MY PROBLEM .... IS IT?

Unit Contents

Part 1

WHOSE RESPONSIBILITY IS IT TO PROVIDE A SAFE PLACE OF WORK?

The short answer is: 'everyone's'!

It is wrong to assume that managers are the only ones responsible for creating and maintaining a safe workplace. Everyone has a role to play. Unit 4 looks at the range of responsibilities of employees and employers.

Activity **4.a**

Individual Exercise

Unit 3 focused on controls. These are sensible, planned measures used to reduce the likelihood of accidents. Now we consider whose responsibility is it to put these controls in place? List as many controls you can think of that are the responsibility of:
(a) the employer and (b) the employee.

Employee	**Employer**
Inform management of new hazards	Provide personal protective equipment

Activity **4.b**

Individual Exercise

Which of the following duties are the responsibility of management and which are the responsibility of employees? Rewrite the list of responsibilities in the correct column. In some cases, a responsibility may belong to both the employee and the employer.

- Remove the risk
- Provide training
- Wear suitable protective clothing
- Identify hazards in the workplace
- Report an accident or dangerous occurrence to the Health and Safety Authority
- Select a safety representative
- Provide adequate access for emergency services
- Pay penalties for breaches of health and safety regulations
- Inform management of a new hazard
- Provide suitable protective clothing
- Assess risks in working in the building
- Do not work under the influence of alcohol or drugs
- Complete a written safety statement
- Hold appropriate fire drills
- Use equipment properly
- Report defects in the personal protective equipment
- Do not engage in improper conduct such as bullying or horseplay
- Maintain equipment regularly
- Consider special arrangements for vulnerable workers such as trainees
- Tell others of new hazards
- Explain what should be done in the event of an accident
- Where chemicals are involved, read the safety labels and refer to the safety data sheets.

Employer's Responsibility	**Employee's Responsibility**

Duties of employers where employees are working at a height

The Health and Safety Authority issues guides and codes of practice relating to particular types of hazards or particular industries. An example is the Guide to the General Applications Regulations (2007), Part 4 of which gives guidance on the Work at Heigth Regulations.

Working at a height includes working on a scaffold or mobile platform, working on the back of a lorry, on a telephone pole, a ladder, a mine-shaft or any other environment where injury could result from a person's fall or a falling object.

The regulations require employers and the self-employed to ensure that:

- all work at height is properly planned, organised, supervised and carried out
- the place where the work at height is done is safe
- all work at height takes account of weather conditions
- workers are instructed and trained
- equipment is inspected before use
- all work at height is avoided where possible
- most appropriate equipment is used.

Activity **4.c**

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

4. Consider the controls that could be put in place for two of the workplaces you listed in 1 above

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-18s 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.

Activity **4.d**

Class Discussion

Discuss these guidelines. Do you think they are reasonable? Are they adhered to?

Activity **4.e**

Log On

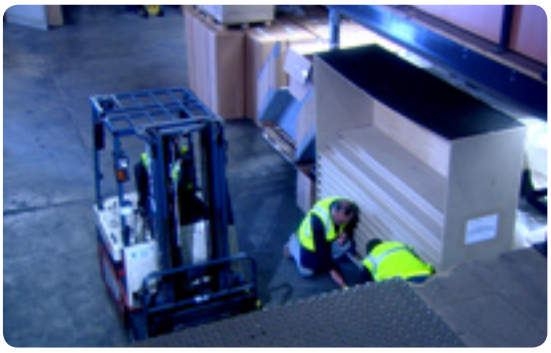
Search the web for more information on employment rights for young people. Look for information on restrictions on length of working day and week, on rest periods, on minimum pay levels and on use of equipment. You could begin by looking at the following sites:

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

Activity **4.f**

Class Discussion

'Choose Safety' DVD



View the sequence on 'controls' in the DVD.

What is going on here?

Who raised the issue?

Who suggested a solution?

Whose responsibility is it to provide such control?

Are there other aspects of this clip that concern you, in terms of health and safety?

Part 2

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 cooperate 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 consultations with their employer. A safety representative has the right to:

- 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.

Activity **4.g**

Short Presentation:

Make arrangements with the safety officer, safety rep or the principal in your school to visit one of the workshops 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.

Workplace risk assessment

Activity **4.h**

Group Work

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 an LCA 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 teaching in a large secondary school. You have become aware that a young teacher, on a temporary contract, is having lots of difficulties teaching his class. He appears to be stressed and increasingly unwell. No senior teacher or anyone in management in the school appears to be aware of this. The teacher has asked you not to say anything in case he is considered to be unsuited to teaching. 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.

Training

While the Health and Safety Authority provide lots of safety guidelines and resources to workers and their employers, many other groups provide expert 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.

Part 3

WORKPLACE HEALTH AND WELL-BEING

We already considered the importance of a positive sense of WELL-BEING among workers. But whose responsibility is it to promote positive well-being? To what extent is it the responsibility of the employee herself/himself? Or is it someone else's role?

Activity 4.i

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.j

Group Work

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.k

Group Work

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**

End-of-unit speed test

Q.1. List five health and safety duties that are the sole responsibility of the employer.

Q.2. List five health and safety duties of the employee.

Q.3. Why is it important to have both a safety representative and a safety officer in a medium-sized or large business?

Q.4. Name eight everyday activities that are beneficial for individual well-being.

Q.5. What can an employer do to create a more stable and friendly working environment for the employee?

UNIT 5

COMMUNICATING THE RISK

Unit Contents

Part 1

COMMUNICATING THE 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. Will they be congratulated or side-lined for having expressed concern?

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 and regulations are no use unless they are known and understood by the public.

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. Refer back to the list of websites shown in **Unit 1**. A good place to start a search on 'health and safety' is the Health and Safety Authority 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 **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 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 construction firm. Consider the implications of this law in a firm 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

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?

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?

Part 2

ACCIDENT AND INCIDENT REPORTS

All workplaces should have an agreed procedure for reporting accidents, incidents or dangerous occurrences. This is important for many reasons. In order to ensure safe and well-considered reactions to accidents at work, including the most minor, it is good practice to always write a report.

In this way, the accident, its causes and any subsequent injuries are clearly reported. Such reports assist managers in considering how future accidents can be avoided. Dangerous occurrences that result in no injury must also be reported. There is no point waiting for an accident to occur before acting. It is just as valuable to examine near misses where an injury almost occurred. That is how industries such as airlines prepare safe evacuation and safe working procedures.

All accidents that result in a fatality or in the loss of more than three days' work MUST be reported to the Health and Safety Authority. This can be done on line (**www.hsa.ie**). The formal recording of workplace accidents helps the Health and Safety Authority and others to compile accurate statistics on the range and occurrence of accidents at work. These in turn assist policy makers in agreeing procedures, guidelines or regulations aimed at reducing the frequency of such accidents. All fatal accidents and most reports of dangerous occurrences are fully investigated by HSA inspectors.

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

- an improvement notice: the employer is instructed to make particular improvements to the workplace or to the system of work
- 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, 12/08/2008

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: *15/08/2008*

Activity 5.c

'Choose Safety' DVD

View the closing sequence of the DVD and complete an incident report form similar to that in Activity 5.b.

Activity 5.d

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 front of the class.

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

a. Paul Walsh
b. Ger Byrne, a colleague of Paul's
c. Jane Brennan, managing director of Brennan's Design
d. 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 and judged by the rest of the class. A class discussion follows.

Activity 5.e

Group Work

There is a campaign to promote safety in each of the following environments:

- a construction site
- electricity in the home
- a supermarket.

In groups of four, write the script for a television programme or design a feature for a magazine aimed at promoting safety in one of these workplaces

Activity 5.f

In Pairs

In pairs, choose the advertisement that you consider to be the most effective, and discuss the following:

Q.1 What is the most important message in the ad you have chosen?
Q.2 Is it effective? Why?
Q.3 At whom is this advertisement aimed?
Q.4 What could you add to the advertisement to make it more appealing to people your age?

Part 3

SAFETY STATEMENTS

The Safety, Health and Welfare at Work Act 2005 states that all employers must complete a safety statement. This is a report of all the hazards and risks identified in the workplace, as well as the actions that the company intends to take to control risks. 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

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 you take, as promised 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.

Activity 5.g

Short Group Project:
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.h

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

Activity 5.i

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.j**

End-of-unit speed test

Q.1. List four requirements set by the Safety, Health and Welfare at Work Act, 2005.

Q.2. Rank in order of effectiveness five methods that the government can use to promote health and safety at work.

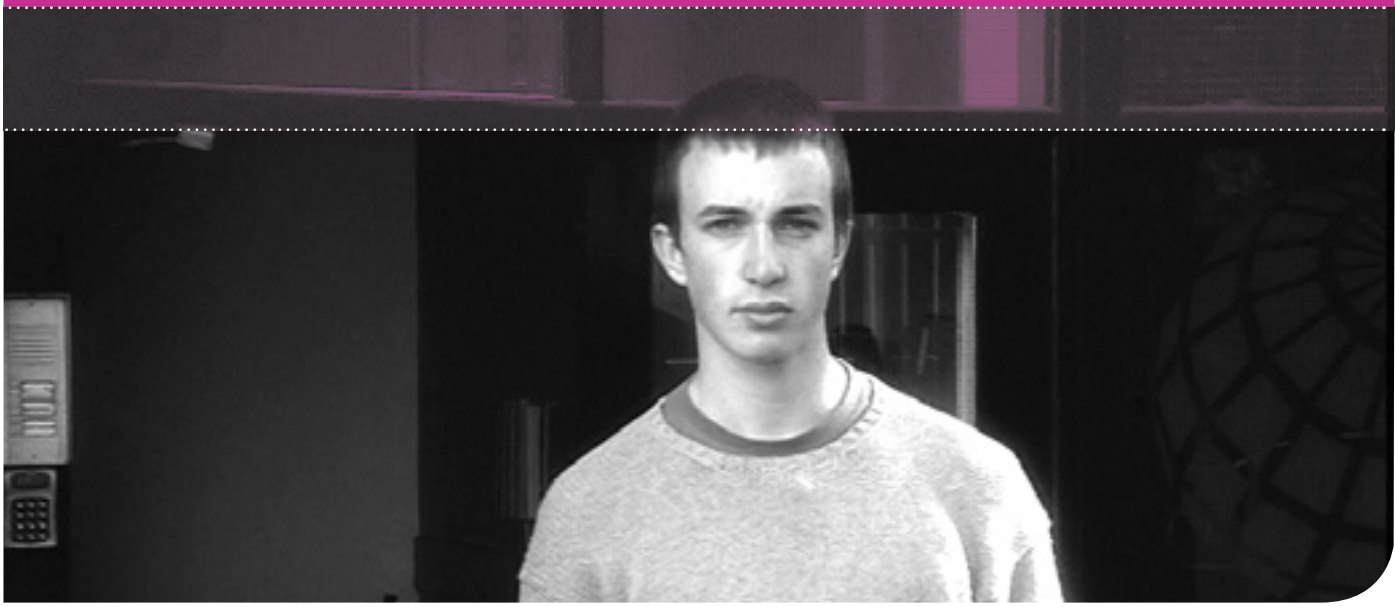
Q.3 Why is it important to be discreet when telling management of a risk in the workplace?

Q.4 What are the features of an effective advertisement promoting health and safety at work?

UNIT 6

IT HAS HAPPENED BEFORE

Unit Contents



Part 1

CASE STUDIES

Activity 6.a

Class Discussion

Read the following poem by Robert Frost entitled, '**Out, Out** – ' and discuss your reaction to it.

The buzz-saw snarled and rattled in the yard
And made dust and dropped stove-length sticks of wood,
Sweet-scented stuff when the breeze drew across it.
And from there those that lifted eyes could count
Five mountain ranges one behind the other
Under the sunset far into Vermont.
And the saw snarled and rattled, snarled and rattled,
As it ran light, or had to bear a load.
And nothing happened: day was all but done.
Call it a day, I wish they might have said
To please the boy by giving him the half hour
That a boy counts so much when saved from work.
His sister stood beside them in her apron
To tell them 'Supper'. At the word, the saw,
As if to prove saws knew what supper meant,
Leaped out at the boy's hand, or seemed to leap—
He must have given the hand. However it was,
Neither refused the meeting. But the hand!
The boy's first outcry was a rueful laugh.
As he swung toward them holding up the hand,
Half in appeal, but as if to keep
The life from spilling. Then the boy saw all—
Since he was old enough to know, big boy
Doing a man's work, though a child at heart—
He saw all spoiled. 'Don't let them cut my hand off
The doctor, when he comes. Don't let him, sister.'
So. But the hand was gone already.
The doctor put him in the dark of ether.
He lay and puffed his lips out with his breath.
And then – the watcher at his pulse took fright.
No one believed. They listened at his heart.
Little – less – nothing! - and that ended it.
No more to build on there. And they, since they
Were not the one dead, turned to their affairs.

Activity 6.b

The poem 'Out, Out' by Robert Frost might remind you of the early scene in the film 'Walk the Line', a biopic of the life of Johnny Cash. If you know it, compare the scene with the poem or consider other scenes from film or television where a simple workplace accident has life-changing consequences.

Activity 6.c

Group Work

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

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. An employee of company E died when he fell from a roof 2.3 metres high. He had been distributing slates on the roof. There was no scaffolding.
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. An employee of company I died when she fell 3.8 metres from the roof of a school. She was repairing the roof at the time.

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.d

Class Discussion

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

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.

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 would you blame in each case?

FAST FACTS

Number of deaths (worker and non-worker) by accident type in 2008 (HSA)

Type of accident	Total
Fall, collapse or breakage of material	12
Loss of control of: transport/handling equipment	10
Person entered inappropriate area	10
Fall from height	9
Loss of control of: machine	9
Slips, trips, falls on the level	2
Loss of control of: animal	1
Fire	1
Overflow, Leakage, Emmission of Gas	1
Other	2
Total	**57**

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 **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 first 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

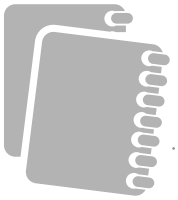
Write an imaginary account entitled: 'A day in the life of...' based on what you suppose is the typical daily work routine of one of the following workers. For this exercise, focus entirely on hazards, risks and other health and safety matters that would routinely arise during the person's daily work.

Choose from:

A prison officer
A teacher in a crèche
A GP
An oil rig engineer
A construction worker
A member of a circus act
A miner
An off-shore fisherman
A family carer

Part 2

MAJOR ASSIGNMENTS



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

Project Number One

Arrange a visit to a local business. Write a report on the health and safety practices of the business.

or

Consider a workplace where you have recently worked or are currently working. Write a report on the health and safety practices of the business.

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

- a copy or 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

Look again at the DVD. Imagine that you are a young worker in one of the workplaces shown in the video. Consider the hazards that you are likely to encounter and the level of risk that they present. Think also of the appropriate controls that may be introduced to reduce or eliminate the risk.
You are asked to write a report with two sections. The first section lists and comments on the hazards, risks and controls that you have noticed. The second section outlines how you are going to bring this information to the attention of management and how you plan to overcome the barriers that you may meet from colleagues or managers.

Project Number Eight

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.

Activity **6.h**

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			
A busy accountants office			
A hair salon			
A farm			
A video-making company			
A fishing trawler			

Make Notes

Make Notes

HEALTH AND SAFETY AUTHORITY

www.hsa.ie

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Students' Workbook

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