

Element 1:- Health and Safety Foundations

Accident Definition:- An unplanned, uncontrolled event which led to, or could have led to loss

Incident/Near miss: An accident that results in no apparent loss

Dangerous occurrences: An accident not resulting in personal injury reportable to the enforcing authority

Work related ill-health: Harm to a worker's health caused by their work

Hazard:- Something with the potential to cause harm

Risk:- The likelihood that harm will occur and the severity of the harm

Why manage health and safety

Moral, Legal, Financial

Reduced accidents
 Reduced loss through damage to equipment
 Reduced absenteeism
 Reduced insurance premiums
 Improved morale
 Improved company reputation
 Reduced fines,
 Reduced compensation claims
 Increased likelihood of securing business

Law:- Civil and Criminal

Aims:-

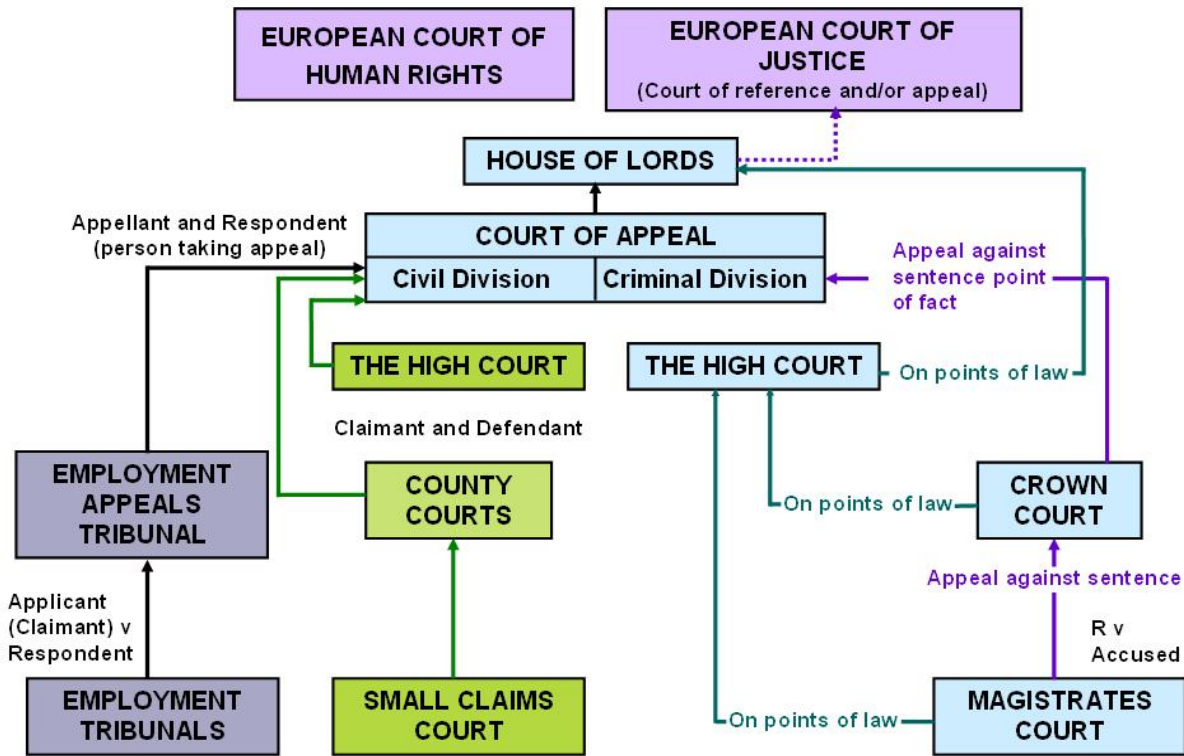
Civil:- to compensate an injured party for loss as a consequence of an accident or ill health

Criminal:- To punish and deter individuals/Organisations from behaving in a way that society has decide is unacceptable

Type	Civil law	Criminal law
Purpose -	Resolve dispute	Regulate crime
Remedy -	Compensation	Punishment
Means used -	Sue	Prosecute
Heard by -	Judge sits alone	Judge and Jury or Magistrates
Burdon of proof -	Balance of probability	Beyond reasonable doubt
Parties involved -	Claimant / defendant	Prosecution / defendant
Status -	Insurable	Not insurable

Common law and statute law

<p style="text-align: center;">Common law</p> <p>Principles are derived from judgements made in earlier cases - resulting in "precedents"</p>	<p style="text-align: center;">Statute law</p> <p>Is a source of both criminal and civil law - consisting of acts of parliament and regulations</p>
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Criminal liabilities

Enforcement notices

- Improvement notices
- Prohibition notices
- Appeals against notices
- Employment tribunals (ET)
- Penalties for failure to comply

Enforcement notices

Appeals To an Employment Tribunal within 21 days

The appeal:

Suspends the operation of an improvement notice

But

Does not suspend the operation of a prohibition notice

Prohibition notices

- Workplace activity
- Involves or will involve 'risk of serious personal injury'
- Immediate effect
- Can relate to a system of work, equipment, workplace or a person

Prosecution

Summary offences (minor)

- Normally heard in magistrates court
- Maximum fine £20,000 (s2 - 6)
- Maximum fine £5,000 (s7)

Indictable offences (serious)

- Serious or repeated offences triable in crown court
- Unlimited fine, imprisonment or directorship disqualification

Employer to provide

Safe place of work and safe access and egress

Safe systems of work

Safe plant and equipment

Information, Instruction, Training and supervision

Safe and competent fellow workers

Fault Liability

There was a duty of care owed to the injured party.

The duty of care was breached (Negligence)

The breach cause the injury or loss

Hidden costs of accidents

Lost Time

Extra wages, overtime payments, temporary workers

Sick pay

Fines

Legal costs

Claims

Damage to equipment

Repairs to plant and equipment

Production delays

Loss of contracts

Increased insurance premiums

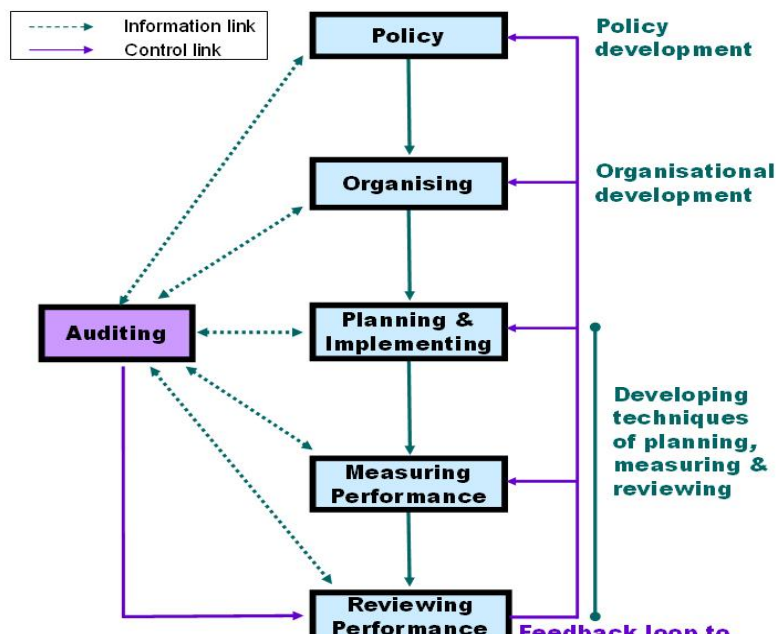
Loss of business reputation

Sources of Information

Internal	External
Risk assessments	Government bodies
Policies	National safety organisations
Inspection reports	Suppliers and manufacturers
Medical records	International standards
Health and safety committees	Consultants and specialists
Plant registers	Insurance companies
Safety advisors	

Successful Management Systems (HSG 65)

- 1) **Policy:-** Health and safety aims of the organisation, health and safety objectives and management commitment
- 2) **Organising:-** Competence, commitment and control, Co-operation, Communication
- 3) **Planning and Implementation:-** Identify hazards, assess risks, and decide how risks can be eliminated or controlled. Sets standards against which performance can be measured.
- 4) **Measuring performance:-** Be used as a means of determining the extent to which health and safety policy and objectives are being implemented and should be both reactive and proactive.
- 5) **Reviewing:-** Analysing data gathered through monitoring to see whether performance is adequate
- 6) **Audit:-** Systematic critical examination of each stage of an organisations management systems and procedures



Element 2:- Policy

What is a health and Safety policy:- A business plan for safety to prevent or reduce loss in an organisation.

Objectives of policy:- to protect people from injury and ill-health, comply with legal requirements and avoid prosecution and manage health and safety on a cost effective basis.

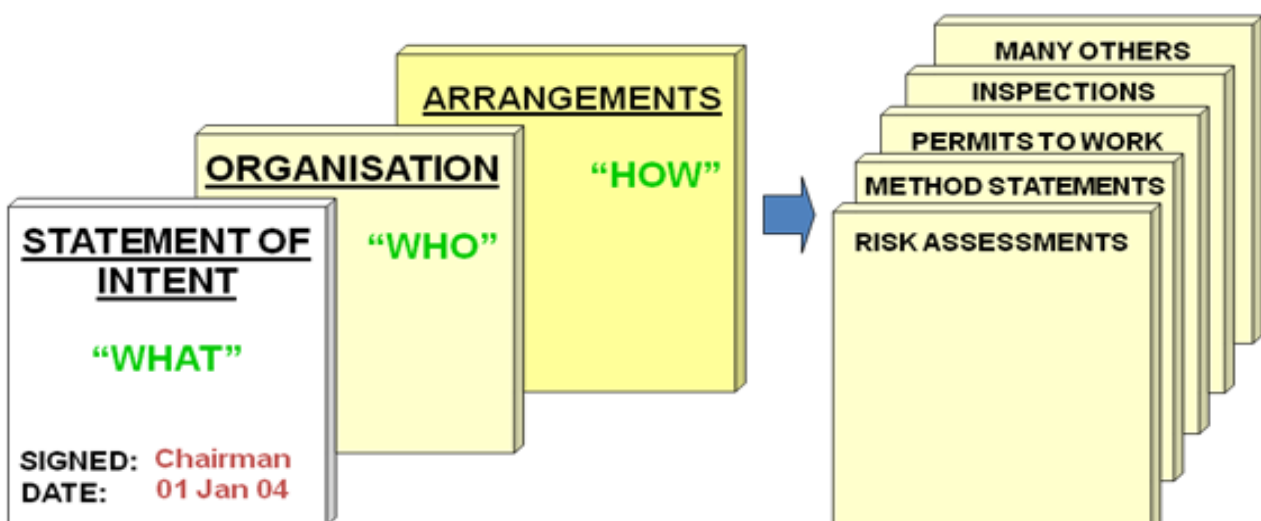
3 Elements of policy

- 1) **Statement of intent:-** A statement establishing the importance of health and safety in the organisation and providing targets and objectives for improvement
- 2) **Organisation:-** The roles and responsibilities of everyone in the organisation
- 3) **Arrangements:-** The arrangements for effective planning, organisation, control, monitoring of the organisations health and safety

Policy

The importance of setting policy for health and safety

Key elements



Contents of Arrangements Section

- Risk assessments
- Fire policy
- Evacuation procedures
- Safe systems of work
- Permits to work
- First aid policy
- Display screen policy
- Manual handling policy
- Hazardous chemicals policy
- Fork truck policy

Benchmarking

Advantages

- Identifies key performance indicators
- Ensures monitoring procedures are effective
- Feeds in to the continuous improvement cycle
- Identify normal practice amongst similar business
- Avoid making mistakes by learning from others
- Generate management focus
- Gains confidence of the stakeholders

Challenges of benchmarking

- Selecting a company with similar activities
- Assuring accuracy of data
- Using common definitions
- Accessing data
- Gaining commitment

Management issues to benchmark

- Health and safety policy
- Staff roles and responsibility
- Plans and strategies which can be measured
- Risk assessments
- Type of training
- Monitoring, Proactive and reactive

Review of Policy

- Accidents
- Incidents
- New equipment
- New staff
- New technology
- New premises
- Changes in legislation
- Accident investigation
- Enforcement action
- Prosecution
- Compensation claims
- Periodic review

Ineffective policies

- No management commitment
- No objectives set to implement policy
- Health and safety not given priority
- Resources not provided to implement action
- Aims and intentions not understood by personnel
- Too much emphasis on employee responsibilities
- No measurement that objectives are being met
- Management unaware of their health and safety role
- No management training

Element 3:- Organising for Health and Safety

Duties of Employers

- A safe place of work
- Safe work equipment and substances
- Information, Instruction, Training and Supervision
- Welfare provisions
- Emergency procedures
- Consultation with employees
- Do not charge employees for health and safety measures

Duties of Employees

- Do not endanger themselves and others
- Co-operate with their employer
- Consult with Employer
- Report dangerous situations to Employer

Duties of Designers, Manufacturers and Suppliers

- Ensure equipment is safe and without risks when being used
- Ensure substances are safe and without risks when being used
- Carry out any necessary tests
- Provide information
- Take reasonable steps to provide further information if new serious risks appear

Responsibilities of Safety Advisors

- Be properly trained and qualified
- Maintain adequate information systems
- Be able to interpret the law applying to their organisation
- Establish and maintain procedures for reporting, investigating, recording and analysing accidents and incidents
- Be able to present their advice effectively

Relationships outside the organisation

- The enforcing authority
- Fire/rescue service
- Insurance companies
- Contractors
- External consultants

Engineers
Equipment manufacturers and suppliers
Clients and customers
The police
Members of the public
The media

Clients duties to when work being done by Contractors

To consider the risks to their own employees from the work
The risks to the Contractors employees from the Clients activities
Risks to the public and others from the work

Contractors duties

To consider the risks to their own employees from the work
The risks to the clients employees from their activities
Risks to the public and others from the work
To follow clients rules and procedures

Management of Contractors

Select a suitable contractor
Planning the job
Controlling contractors on site
Checking contractors work
Review contractors performance

Selecting a suitable Contractor

Experience of the type of work and industry
Suitable references
Enforcement record
Safety management such as Policy, risk assessments etc.
Accident and ill-health data
Membership of trade/professional bodies
Competence and training of employees
Arrangements for selection of sub-contractors
Arrangement for ongoing liaison with clients

Element 4:- Promoting a Positive Health and Safety Culture

Benefits of a positive culture

- Increased levels of compliance with rules and procedure
- Increased staff morale
- Reduced staff complaints
- Reduced staff turnover
- Reduced absenteeism
- Reduced sickness and accident rates

Negative culture

- Job insecurity
- Reorganisation
- Poor example set by management
- Poor management decision making
- Inadequate supervision
- Poor working conditions

Internal influences on Health and safety

- Competence
- Commitment and control
- Co-operation
- Communication
- Production/service demands

External Influences on Health and Safety

- Society expectations
- Political priorities
- Legislation and enforcement
- National or International agencies
- Pressure groups
- Insurance Companies
- Workers unions
- Stakeholders
- Economic conditions

To improve culture

- Senior management commitment
- Ownership of health and safety at every level
- Effective communication and consultation
- Training for all levels of employee
- Shared perception of risks
- Standards of acceptable behaviour
- Learning from experience through monitoring and review
- Balance between health and safety and production

Personal factors that might place an individual at greater risk of harm while at work

Poor attitude
Low motivation
Physical capabilities
Poor perception of risk
Drugs or alcohol problems
Age related factors
Medical problems
Levels of training and experience

Attitude:- The tendency to respond in a particular way in a given situation**Factors that affect attitude**

Background
Personality
Experience
Training
Competence
Peer group pressure
Management actions
Culture of the organisation

Perception:- The way that people interpret and make sense of presented information**Factors which may affect perception**

The nature of the hazards
Previous experience
Over familiarity
Feeling of being in control
Level of training
Peer group pressure
Confidence in others ability
Personal characteristics

Motivation:- Motivation is the driving force behind the way a person acts in order to achieve a goal**What motivates people**

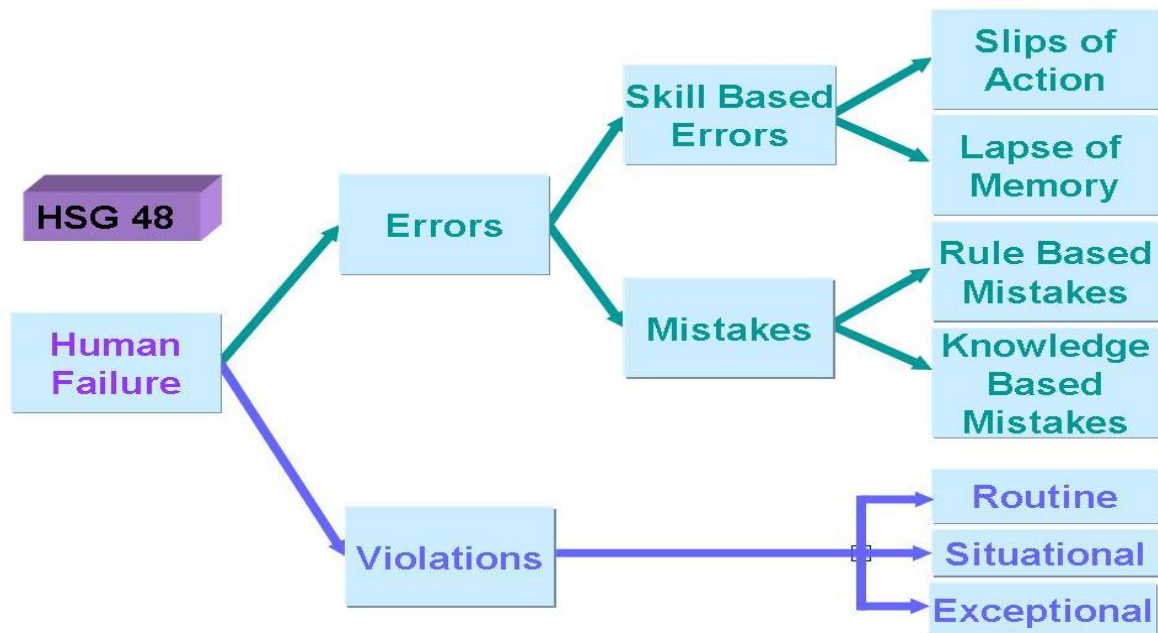
Reward
Fulfilment
Job satisfaction
Recognition
Peer approval
Threat of Discipline

Why person may fail to comply with safety procedures

- Lack of motivation
- Unrealistic working procedures
- Lack of management commitment
- Over familiarisation
- Repetitive work leading to boredom
- Peer group pressure
- Inadequate supervision
- Fatigue and stress
- Lack of information, training and consultation
- Job insecurity

Human Error causes

- Slips
- Lapses of attention
- Mistakes
- Violations



Reducing human error

- Skilled competent workers
- Well motivated employees
- Clear roles and lines of responsibility
- Adequate levels of supervision
- Clear information and instructions
- Drug and alcohol prevention policies
- Good environmental conditions e.g. lighting, noise etc.
- Avoiding monotonous work
- Breaks to avoid fatigue

Promoting Safe behaviour

Discipline
Reward
Informing
Facilitate safe behaviour
Train

Competence

Sufficient Knowledge, Training, experience and any other qualities to carry out their functions

Competence

Knowledge
Skills
Experience
Training
Recognition of limitations

Checks to assess competence

Qualifications
Level of training
Membership of professional/trade organisations
Undertaking written or practical assessments
Seeking references or recommendations

When is training needed

On recruitment (Induction)
On the job training
Transfer
New equipment
New technology
New systems of work or system changes

Induction Training programme content

Health and safety policy
Culture of organisation
Fire precautions
Emergency procedure
What accidents to be reported
How to report accidents
Hazards of the workplace
Drink and drugs policy
First aid precautions
Welfare provisions

Additional Training

New processes
New equipment
Accidents/incidents
Enforcement action
New legislation
Result of risk assessment
Newly promoted
Refresher training

Levels of supervision

Persons skills and qualifications
Experience of the work involved
Age
Persons attitude and aptitude
Nature and complexity of the task
Employees communication skills
Any special needs they may have

Factors when preparing a talk on Health and safety

- Identify the training needs
- Identify the training objectives
- The target audience, knowledge, skills etc.
- Training methods, lecture, video etc.
- How to evaluate effectiveness of training
- Number of trainees
 - Time available
- Training aids required
 - Suitability of training facilities, room size etc.
 - Course rules and administration

Barriers to communication

The person e.g.

Sensory impairment
Learning difficulties
Inexperience
Lack of motivation

The deliverer e.g.

Too much jargon, language or dialect
Ambiguity of the message
Too complex message
Lack of feedback

The place e.g.

High noise levels
Interference from PPE
Distractions

Methods of communication

- Team briefings
- Safety committee meetings
- Health and safety representatives
- Memoranda
- Tool box talks
- Newsletters
- Standards/codes of practice
- Work instructions
- Posters
- Notices
- Electronic notice boards
- Safety policy
- Induction and other training

Written Communication

Advantages	Disadvantages
Written record Can be referred to Can convey complex ideas Provide analysis Many people in different locations Can clarify or confirm oral Forms basis of contracts	May not be read Too complex and jargon Time to produce and expensive Tends to be formal and distant Does not provide feedback Difficulty to modify Does not allow for exchange of views Attitude

Oral communication

Advantages	Disadvantages
Direct Close physical proximity Allows for interchange Provides instant feedback May be more effective Allows for contribution	No written record Difficult to control May reduce the quality of decision making through lack of time Attitude

Factors to consider in presentation of health and safety talk

- The purpose of the talk
- The audience
- The training style
- Number of trainees
- The time available
- The skills required by trainer
- Training aid required
- The suitability of the training facilities.

Posters

Advantages

- Low cost
- Flexible
- Brief
- Used to enforce written instructions
- Constant reminder

Disadvantages

- Need to be changed on regular basis
- May become soiled
- May be defaced
- Can become out of date
- May be seen as trivialising matters
- May alienate people
- Provide no feedback

Safety Representatives rights (ILO Convention) C155

- Have access to all parts of the workplace
- To be able to communicate with workers
- Protection from dismissal
- Protection from other prejudicial measures
- To contribute to the decision making process
- Free to contact enforcement agencies
- Contribute to negotiations in health and safety matters
- Given appropriate training
- Given reasonable time to exercise their health and safety functions

Safety Committees Agenda

- Study of accident/incident statistics
- Examination of audit reports
- Reports from enforcing authorities
- Reports from workers representatives
- Assist in the development of policies/procedures
- Monitoring the effectiveness of training
- Monitoring safety communications
- Provide link with the enforcing authority

Effective Safety Committees

- Right number of members
- Right mix of members
- Adequate authority
- Right knowledge and expertise
- Good communications
- Suitable level of formality

Input from outside specialists
Limited individual input
Identified and agreed priorities
No trivia

Ineffective Committee opposite of above

Element 5:- Health and Safety Risk Assessment

Hazard:- Something with the potential to cause harm

Risk:- Likelihood that harm will occur and the severity of the harm

Suitable and Sufficient

- Be proportionate to the level of risk
- Ensure that all aspects of work activity are covered
- Take account of the way the work is organised
- Identify the significant hazards and risks
- Evaluate the risks
- Identify control measures
- Enable priorities to be set
- Residual risk low

Competence of Risk Assessor

- Experience and training in risk assessment techniques
- Knowledge of process or activity
- Technical knowledge of the plant or equipment
- Good communication and report writing skills
- Ability to interpret legislation and guidance
- Possess right attitude
- Knows limitations

5 Steps to Risk Assessment

- Identify the hazards
- Decide who might be harmed and how
- Evaluate the risks and the existing precautions
- Record the findings
- Review the assessment and revise if necessary

Identifying hazards

- Task observation
- Accident, ill-health or near miss data
- Workplace inspections
- Job safety analysis
- Legal standards

Hierarchy of Control

- Eliminate
- Reduce
- Isolate
- Control
- PPE
- Discipline

When assessment should be reviewed

After an accident/incident
New equipment
Changes to equipment, plant, process
Changes in personnel
Changes in legislation
Result of monitoring or audit
Action by enforcing authority
New information becomes available

Why young persons at risk

Lack of experience and/or training
Body not fully developed
More likely to take risks
Respond to peer group pressure
Be over enthusiastic

Risks to Young Workers

Their physical condition
The workplace
Physical, Biological and chemical hazards
The work equipment
The organisation of work and processes
Health and safety training

Risks to New and expectant mothers

Ergonomic
Manual handling
Extremes of temperature
Personal protective equipment
Radiation
Chemical agents
Biological hazards
Working conditions

Risks to disabled workers

Reduced mobility for access and egress
Ability to access welfare facilities
Reduced sensory ability e.g. speech, hearing or eyesight
Reduced ability to lift, carry or move objects
Ergonomic hazards

Element 6:- Principles of Control in Health and Safety

General Principles of Prevention

- Avoid the risk e.g. eliminate the hazard or task
- Evaluate risks which cannot be avoided
- Combat risks at source
- Adapt the work to the individual
- Adapt to technical progress
- Replace the dangerous by the less dangerous
- Develop a coherent prevention policy
- Give collective measures priority over individual measure

General Hierarchy of Control

- Eliminate
- Reduce
- Isolate
- Control
- PPE
- Discipline

Benefits of PPE

- Often low cost
- Can be used as short term measure
- Portable for worker away from base
- Disposable PPE reduces risk of infection

Why PPE used as last resort

- Does not eliminate the hazard
- Does not reduce the hazard
- Only protects the wearer
- Always fail to danger
- May introduce new hazards
- Relies on worker to use it
- May not be worn correctly
- It may be uncomfortable
- Worn for only part of task of shift
- Wrong size
- Used when damaged
- Not properly maintained
- Management may not enforce wearing

Selection of PPE

What are the hazards?
Type of equipment
Made to suitable standards
Comfort
Compatibility
Storage
Training
Cost

Factors affecting the wearing of PPE

Fit
Health of worker
Period of use
Comfort
Maintenance
Training
Interference
Management commitment
Peer pressure

Main types of PPE

Head protection
Eye protection
Foot protection
Hand and arm protection
Body protection
Respiratory protection

Safety Signs

Prohibition (Circular, Red, white background)
Warning (Triangular, Yellow black edging)
Mandatory (Circular, Blue white symbols)
Safe Condition (Green, White symbols)

Safe Systems of Work:- A step by step procedure for carrying out a task safely, identifying the hazards, assessing the risks and the precautions needed to eliminate or reduce the risks.

Factors/Developing safe systems of work

- 1) Select the task to be studied
- 2) Identify the hazards
- 3) Develop the safe system looking at:-
Materials/Equipment/Environment/People
- 4) Implement system
- 5) Monitor the system

Permit to Work:- Is a formal written procedure requiring written confirmation that certain actions have been carried out to eliminate or control risks before a specific high risk activity is carried out

Where Permits needed

Confined spaces
Electricity
Hot work
Cold work

Operation of Permit to Work

Identify the task (Where and when)
Identify the hazards
List the precautions to eliminate or reduce the hazards
Additional precautions
Time limits
Issue by competent person
Receipt by person in charge of work
Completion
Cancellation

Confined Space:- Is any space where there is a specified risk of serious injury from hazardous substances or conditions within the space

What are the specified hazards in a confined space

Fire or explosion
Loss of consciousness due to increased body temperature
Loss of consciousness due to asphyxiation
Drowning
Asphyxiation due to free flowing solids

Confined space examples:- Cellars, Excavations, Sewers, Silos, Tanks, Vats

Avoiding entry

Modify confined space so entry not required
Have work done from outside

Precautions for working in a confined space

Permit to work
Competent staff
Appoint a supervisor
Isolate
Ensure suitable size of entry
Gas purging
Ventilation
Regular testing of the atmosphere

Special tools and lighting
PPE
Communications
Limit working time
Emergency procedures

Lone Worker Hazards to be considered

Work location
Type of work
The equipment
Manual handling
Sex of the worker
Emergency facilities
Lack of Training
Lack of Supervision
Limited communication

Precautions for lone workers

Information on hazards
Training to deal with hazards
Regular contact
Supervisors regularly visiting
Automatic warning devices
Check the worker has returned home
PPE
Emergency action if worker becomes ill

First-Aid:- aim is to preserve life, prevent deterioration and promote recovery

Assessment for first-aid requirements

The nature of the work and the size of the organisation
Past history and accident type
The nature and distribution of the workforce
Remoteness of site from emergency medical services
The needs of travelling, remote or lone workers
Employees working on shared sites
Absence of first aiders due to holidays etc.
Compliance with legal requirements

Element 7:- Monitoring, Review and Audit of Health and Safety Performance

Monitoring

Active Monitoring

Benchmarking

Takes key performance indicators and compares them externally with similar organisations or industry standards

Workplace Inspections

A formal, structured examination possibly by a team of people of the working environment that identify hazards that are not controlled

Limitations of inspections

Some hazards are not visible
Some hazards not always present
Unsafe practices not seen

Types of inspections

General workplace inspections
Statutory inspections
Compliance inspections

People who carry out inspections

Managers
Supervisors
Health and Safety advisors
Employee safety representatives
Enforcement agencies

Inspection Checklist

Condition of processes and plant
Contractors
Electrical
Environmental conditions
Fire protection
First aid
Hand held tools
Hazardous substances
Housekeeping/cleanliness
Lifting equipment
Manual handling
Machinery guarding

Noise etc.

Safety Sampling

A random exercise in which assigned observers walk in allotted timescale noting incidence of health and safety defects on pre-prepared sheets

Safety Tours

An unscheduled examination of a workplace to look for acceptable standards. A tour can be carried out by a Manager and demonstrates commitment to safety

Audit

A thorough examination of the performance of the health and safety management systems, procedures.

Audits look at Management systems, Procedures, Training, documentation such as safe systems, Permits to work, Interview selected employees as well as examining the workplace.

Reactive Monitoring

Accidents

Incidents

Ill-health statistics

Near misses

Dangerous occurrences

Complaints by workforce

Enforcement action

Prosecutions

Civil claims

Element 8:- Investigation, Recording and Reporting of Health and Safety Incidents

Reasons to investigate accidents

- Prevent future accidents by identifying and eliminating the causes
- Demonstrate concern about peoples health and safety
- Improve worker morale
- Identify weaknesses in management time
- Prevent business loses
- Collate accident and ill-health data and identify trends
- Defend criminal cases
- Defend claims for compensation

Accident:- An unplanned, unwanted event which results in a loss

Incident (Near Miss):- An unplanned, unwanted event that has the potential to result in loss

Why consider near misses

Near misses indicate that the potential for serious accidents is present and by reacting to the near misses them will prevent them. If asked in examination explain Bird triangle page 8

Domino Theory:- It has been suggested that the events leading up to an accident are like a row of dominos and by removing dominos the accident will not occur.

Actions following Accident

Immediate

- Treatment for injured personnel
- Make the area safe
- Initiate emergency plan
- Contact emergency services
- Preserve scene for investigation
- May have to notify enforcing authority

Initial

- Identify witnesses
- Report details to senior management
- Report details to insurance company

Longer Term

- Decide the depth of the investigation and select team
- Gather evidence at the scene
- Interview witnesses
- Examine documents
- Appoint specialists if necessary

Composition of Investigation team

Supervisors and line managers from department where accident occurred
A senior manager from another department
Health and Safety professionals
Specialists e.g. Engineers
Representative of workers
Employee experienced in the work activity.

Direct/Immediate cause of an accident

An unwanted, unplanned event that results in a loss

Root/Underlying cause of an accident

The failures in management systems or procedures that have led to the accident

See page 16 for fork truck scenario explaining examples of direct and underlying causes

Reasons Why records should be kept

To prevent a recurrence
Monitoring purposes
Legal reasons
Occupational ill-health may take years to occur
Civil claims

Reporting of accidents

Report to enforcing authority
Injuries involving lost time
Dangerous occurrences
Occupational diseases

Information in Report

Who is injured person
Where the accident happened
When it happened
What happened
Why it happened
Documentation
Evidence
Recommendations