

HELP SHEET FOR TEACHERS

Napo's Hazard Hunter: Lesson Two – Intervention and prevention

Napo in... Risky business

Risky business is a short film about hazards and risks at work, and the need to assess risks and act on the findings to make workplaces safer and healthier. The film looks at hazards and some of the most common workplace risks, and the need to: 'Stop, Think and Act'.

The film seeks to explain the difference between hazards and risks, how these can be eliminated or reduced, and to demonstrate these through practical situations so that there is a greater understanding of the meaning of 'Risk'.

Risk assessment

Our aim is to make risk assessment and its importance in the prevention of accidents and ill health at work more clearly understood. Specifically we aim to:

- Explain the difference between hazard and risk
- Provide an introduction to risk assessment
- Illustrate, by example, what we mean
- Provide a bridge between the theory and the practice

Why carry out a risk assessment?

Risk assessment is the basis for successful safety and health management, and the key to reducing work-related accidents and occupational diseases. If it is implemented well, it can improve workplace safety and health – and business performance in general.

What is risk assessment?

Risk assessment is the process of evaluating risks to workers' safety and health from workplace hazards. It is a systematic examination of all aspects of work that considers:

- What could cause injury or harm
- Whether the hazards could be eliminated and, if not,
- What preventive or protective measures are, or should be, in place to control the risks

Typical hazards in workplaces (many of them are present at home too) include:

- Electricity
- Fire
- Tools, especially cutting tools such as blades or knives
- Machinery
- Slipping on the floor, falling from ladders or stairs, falling from height (e.g. from a scaffolding or from a roof)
- Transport (to vehicles, drivers or pedestrians)



- Musculoskeletal disorders (MSDs) due to handling heavy loads, twisting and turning, posture (e.g. work with VDU's), repetitive movements (e.g. on an assembly line)
- Chemicals – immediate damage due to inhalation, burns or irritated skin, and long-term effects such as cancer, respiratory diseases and allergies)
- Biological – bacteria, fungi or virus, e.g. hospital, laboratory of medical analysis, poor maintenance of the air conditioning plant
- Noise, vibrations, laser radiation, ionizing radiations, electromagnetic fields, UV rays, etc

There are a variety of episodes taken from different Napo films that can be used to present most of these risks. (table A)

The five-step approach to risk assessment

This lesson focuses on the final three steps to risk assessment; deciding on preventive action, taking action and monitoring and reviewing. The other two prior steps are presented in lesson 1 of Napo's Hazard Hunter.

Step 1 – Identifying hazards and those at risk, and Step 2 – Evaluating and prioritising risks are covered by the first Napo Hazard Hunter lesson entitled identification of risks and hazards.

Step 3 – Deciding on preventive action

The next step is to decide how to eliminate or control risks. First, consider if it is possible to eliminate the risk.

If not, how can risks be controlled so they do not compromise the safety and health of those exposed. When preventing and controlling risks, the following general principles should be taken into account:

- Avoiding risks by eliminating hazards (e.g. Napo eliminating the risk of tripping over a drawer in episode 1 "Caution, hazards!")
- Substituting the dangerous by the non-dangerous or the less dangerous (e.g. the substitution of an irritant chemical substance with a non irritant one- see episode "Irritant" in 'Napo in Danger chemicals!')
- Combating risks at source (e.g. dust produced when cutting marble or hard stone: the problem is solved by wetting the blade with water while in movement which prevents the formation of powder)
- Applying collective rather than protective measures (this means that if there is production of fumes or vapours in a work activity such as welding or painting, it is necessary to install appropriate and effective aspiration systems rather than simply providing respiratory masks to the workers)
- Adapting to technical progress and changes in information (if a new machine allows to perform the same job without exposing the workers to a certain risk –e.g. noise – the previous technology should be abandoned)
- Seeking to improve the level of protection (this means that improving safety is a continuous process)



Step 4 – Taking action

The next step is to put in place preventive and protective measures. It is important to involve everyone concerned, and to develop a plan specifying:

- The measures to be implemented
- Who does what and when
- When it is to be completed

It is essential that any work to eliminate or prevent risks is prioritised.
(see episode 4 "Act on risks" in Napo in Risky business)

Step 5 – Monitoring and reviewing

Carrying out regular checks must be done to ensure that preventive and protective measures are working or being implemented and to identify new problems. The risk assessment has to be reviewed regularly depending on the nature of the risks, the degree of change likely in work activity or as a result of the findings of an accident or 'near miss' investigation. Risk assessment is not a once-and-for-all activity.

Recording the assessment

The risk assessment must be recorded. Such a record can be used as a basis for:

- Information
- Monitoring
- Evidence
- Revision if circumstances change

A record of at least the following details is recommended:

- Name and function of the person(s) carrying out the examination
- The hazards and risks identified
- Groups of workers facing particular risks
- The necessary protection measures
- Details of the introduction of measures,
the name of the person responsible and date
- Subsequent monitoring and review, including dates and the people involved
- Details of the involvement of workers and their representatives in
the risk assessment.

Roles and responsibilities

It is important that workers (or pupils in this case) participate in risk assessment identifying hazards and reporting them to the employer (teachers in this case). The pupils know the problems and what really happens when they perform their tasks or activities, so they should be involved in the risk assessment. Their practical



knowledge is also needed to develop workable preventive measures that can help protect themselves, their schoolmates and their teacher.

Workers (pupils) and/or their representatives have the right/duty to:

- Participate in the risk assessment
- Alert their employer (teachers) about perceived risks (see episode 7 "Safety angels" in Napo in: Clean sweep) and signal temporary dangerous situations (see episode 1 "The importance of signposting" in The adventures of Napo)
- Report any changes in the workplace (classroom) than can affect safety and health
- Be informed of the risks to their safety and health and of the measures necessary to eliminate or reduce these risks
- Be informed on the preventive and protective measures to be put in place
- Cooperate to help the employer (teacher) to ensure that the working (school) environment is safe
- Be trained/receive instructions on the measures to be put in place
- Learning safety procedures (see episode 2 "Attention, listen up" in Napo in Safe start or episode 4 "Safety plan" in Napo in Clean sweep) and following them (see episode 2 "Lock out" in Napo in: Safe maintenance or episode 8 "Bad dream" in Napo Safe on site)
- Take care as far as possible of their safety and health and that of others affected by their acts (see episode 4 "Watch out for others too" in Napo in: Safe start!)
- Not improvise (see episode 6 "Improvising means risk taking" in The adventures of Napo)
- Be cautious (see episode 6 "Keep them apart" in Napo in Safe on site)
- Use personal protective equipments (or PPE, examples being masks, hearing protectors, helmets, etc) if required (see episode 1 "Harmful" in Napo in Danger chemicals! or episode 1 "Irreparable" in Napo in Stop that noise).

Some things your pupils might ask you as a teacher or ask their parents

- What are the hazards and risks I am exposed to?
- Will I receive safety training and when?
- What steps do I need to take to protect myself?
- What should I do in an emergency?
- How do I report an accident, health problems or if I notice something wrong?
- What do I do if I get hurt?

Some things you might tell your pupils (students)

- Risks concern you; they are aimed at you!
- Every danger is ready to hit you; the crocodile is always ready to bite
- Stop, think, act (stop – red, think – orange, act – green: signals from traffic lights)
- Why are you disregarding hazards?
- Why are you acting unsafely?
- Describe the 'domino effect' of unsafe situations, i.e. a chain of negative occurrences where a primary incident of limited relevance causes a series of other incidents that at the end lead to serious consequences (see episode 8 "Bad dream" in Napo Safe on site)



Table A

Risk	Film	Scene
Road accidents		
Hit by a vehicle	Napo in... Safe on site	6. Keep them apart
Hurrying or a lack of concentration	Napo in... Clean sweep	1. Change of plan
Being tired and in a hurry	Napo in... Safe maintenance	5. In a rush
High speed and hidden risks	Napo in... Risky business	5. Risky combination
Fire		
Fire	Napo in Danger chemicals	3. Flammable
Fire	Best signs story	2. Prohibition sign – No smoking
Fire	Best signs story	4. Rescue sign – emergency exit
Fire	Best signs story	5. Fire protection sign – fire extinguisher
Electricity		
Electricity	Napo in: Safety in... and outside of work	Sequence of Napo preparing the party lights
Machinery		
Machinery	The adventures of Napo	5. The right protection at the right time
Machinery	Napo in... Risky business	1. Caution hazards
Noise		
Exposure to noise	Stop that noise	Full film
Chemicals		
Chemical risks	Napo in... Danger chemicals	Full film
Slips and falls		
Risk of slipping	The adventures of Napo	1. Why signposting is important
Falling down stairs	The adventures of Napo	2. Signposting is not sufficient
Falling down stairs	Napo in: Safety in... and outside of work	Sequence of Napo on the stairs full of objects
Fall from height	Napo in... Safe on site	2. Don't fall for it
Falling objects	Napo in... Safe on site	1. Building in safety
Manual handling		
Heavy loads	Napo in... Safe on site	5. Lightning strike
Heavy loads	Napo in... Lighten the load	3. Divide and rule
Heavy loads	Napo in... Lighten the load	10. Hold me tight
Heavy loads	Napo in... Lighten the load	6. The duel
Bad posture	Napo in... Lighten the load	5. Radical ergonomics
Bad posture	Napo in... Lighten the load	8. Think and move
Vibrations		
Vibrations	Napo in... Lighten the load	4. Bad vibrations

The first lesson of Napo's Hazard Hunter introduces the other side of Risk Assessment: Identification of risks and hazards

This teaching resource has been produced by EU-OSHA in consultation with the Napo Consortium – HSE (UK); DGUV (Germany); INAIL (Italy); INRS (France); SUVA (Switzerland); and AUVA (Austria).

