Teacher notes - Hazards and risks

Getting started

The first two slides introduce the students to the terms hazard and risk.

In the first slide: The hazard for the motor cyclist is the giraffe, but the hazard for the giraffe is the motor cyclist.

In the second slide, the hazard is falling, the risk is (the likelihood of falling) which could be described as high, but this is debatable. Try to encourage this debate, as there may be an opportunity to touch on aspects which come later with questions like:

The next slide encourages the students to think about how we can measure risk. If the discussion above has been fruitful you may wish to pose the question "how can we quantify risk?" Then give the students a few moments to come up with some suggestions before showing the slide.

Use the activity - Dangerous animals matching puzzle.

The students are asked to match the animals with the number of worldwide deaths attributed to them.

Ask the students to work in pairs on the task and listen for conversations to determine how the students decide on a particular figure.

This will probably be things like, the danger resulting from an encounter verses the likelihood of an encounter.

The next slide is intended to prompt a short reflective discussion about the definition of dangerous.

You are aiming to get across that it is important to explain the measure you have used in-order for people to understand the risk.

It is also important to read the small print when stories like this are shown in the media and/or on the internet.

The next two slides are intended to focus the students thinking on probability and impact when determining a risk.

The first of the two slides shows two activities where he probability of the harm occurring is similar, assuming both performers are equally skilled, but the consequences of a fall are significantly worse in B

In the second slide, the maintainance workers have safety ropes which makes the likelihood of them falling less than the performer on the tight rope, however the consequences of a fall are still significantly worse.

We are now broaden risk to include both the likelihood of the harm occurring and the consequences of harm occurring.

A more complex view of risk

- Earlier we thought about risk as the likelihood of the harm occurring.
- However, sometimes risk is quantified using a combination of likelihood and potential harm

This is how risk is used in risk assessment

Assessing risk

- Find an event for each box

Assessing risk: Ask the students to work in pairs on this task. Place the activities from the previous slides onto the grid and ask them to suggest a scenario for the remaining empty section. Find some different activities for each risk level.

Compare and contrast the offerings from different groups. This should exemplify how difficult it is to get a consensus on the level of risk.

When planning things like events, an initial risk assessment is made, but as they will have experienced with this task, agreeing on the level is challenging

Risk assessments should be regularly updated to learn from experience and take account of changing circumstances. A similar process is involved when developing safe working practices.

Moving on to the next slide the students are asked to think about how the level of risk may be reduced.

Reducing risk – (mitigation)

- How could a high risk event can be reduced to a medium or low risk?
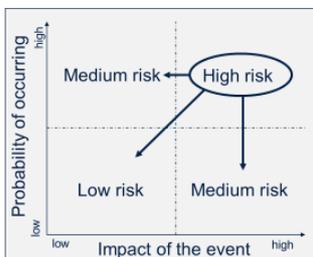
It would be good to use an example of a high risk which the students quoted on the last slide, then ask:

What measures could be taken to reduce the impact?

What measures could be taken to reduce the probability of it occurring?

There is an example on the next slide.

The helmet reduces the impact of an injury from a falling rock or other object.

The safety line reduces the probability of an injury from falling.

Reduces impact or probability?

Safety helmet

Safety line

The focus now moves from health and safety to financial risk

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Financial risk

- It is also important for businesses and individuals to consider the risk when making financial decisions

Finish off by using the financial risk activity/game.

There are a set of teacher notes to accompany this activity.

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Starter question

- You are about to get a legal pay-out of £100,000, but there is a hitch at the last minute and the pay-out depends on the decision of a court.
- Your solicitor tells you not to worry as there is a 95% chance of you winning the case.
- A company offers you a deal, they will pay you £90,000 now, but they keep anything won in the case.
- **Would you accept the offer?**