

## Unit R108 – 3D design realisation

### Risks, hazards and risk assessment

#### *Instructions and answers for teachers*

*These instructions should accompany the OCR resource ‘Risks, hazards and risk assessment’ activity which supports OCR Cambridge Nationals in Engineering.*

Hazard	Risk	Risk Reduction
		
		

#### **The Activity:**

This resource comprises of 1 task.



*This activity offers an opportunity for English skills development.*

#### **Associated materials:**

‘Risks, hazards and risk assessment’ activity sheet

#### **Suggested timings:**

**Task 1:** 1 hour

## Task 1



The purpose of this activity is for learners to be able to identify and appreciate the differences between a hazard and a risk, and also be able to suggest ways in which a risk might be reduced.




Learners may require some teacher guidance on the differences between a hazard and the risks it might present.

In the activity five different hazards are presented for learners to identify the associated risks with and also risk reduction. The teacher might wish to add further hazards to the activity which might be in the context of the local working environment.

The activity might form an introduction to undertaking a more comprehensive risk assessment activity which could be related to the making of a prototype.

The following table includes typical responses although learners may suggest others or alternatives.

	<b>Hazard</b>	<b>Risk</b>	<b>Risk Reduction</b>
	Overloaded electrical socket	<ul style="list-style-type: none"> <li>• Overheating of plugs and socket</li> <li>• Fire risk</li> <li>• Electric shock risk</li> </ul>	<ul style="list-style-type: none"> <li>• Do not overload sockets</li> <li>• Visual check of sockets prior to use</li> </ul>
	Wet and slippery floor	<ul style="list-style-type: none"> <li>• Risk of slipping over</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure floor is clean and dry</li> <li>• Use warning signs if required</li> </ul>

Hazard		Risk	Risk Reduction
	Sharp craft knife	<ul style="list-style-type: none"> <li>• Risk of getting cut by sharp blade</li> <li>• Risk of blade snapping</li> </ul>	<ul style="list-style-type: none"> <li>• Store knife with blade retracted</li> <li>• Use knife correctly</li> <li>• Wear PPE as appropriate (eg goggles)</li> </ul>
	Preparation and use of epoxy adhesive	<ul style="list-style-type: none"> <li>• Risk of glue on hands, body or clothes</li> <li>• Risk of inhalation of fumes</li> </ul>	<ul style="list-style-type: none"> <li>• Wear appropriate PPE (coat, goggles, gloves etc)</li> <li>• Prepare and use in well ventilated area</li> <li>• Dispose of unused glue correctly</li> <li>• Store glue safely</li> </ul>
	Hand filing operation and waste metal (swarf)	<ul style="list-style-type: none"> <li>• Risk of cutting self (pinching, abrasion, sharp edges)</li> <li>• Risk of swarf in eyes, on clothes, on floor</li> </ul>	<ul style="list-style-type: none"> <li>• Use file correctly (as shown)</li> <li>• Ensure handle is secure</li> <li>• Wear appropriate PPE (eg coat, goggles, safety shoes)</li> <li>• Clear away waste material when finished</li> </ul>

To give us feedback on, or ideas about the OCR resources you have used, email [resourcesfeedback@ocr.org.uk](mailto:resourcesfeedback@ocr.org.uk)

**OCR Resources: the small print**

OCR's resources are provided to support the teaching of OCR specifications, but in no way constitute an endorsed teaching method that is required by the Board, and the decision to use them lies with the individual teacher. Whilst every effort is made to ensure the accuracy of the content, OCR cannot be held responsible for any errors or omissions within these resources.

© OCR 2014 - This resource may be freely copied and distributed, as long as the OCR logo and this message remain intact and OCR is acknowledged as the originator of this work.

OCR acknowledges the use of the following content: Maths and English icons: Air0ne/Shutterstock.com. Electrical socket: Monkey Business Images/Shutterstock.com. Wet and slippery floor: tony740607/Shutterstock.com. Sharp craft knife: onair/Shutterstock.com. Preparation and use of epoxy adhesive: aijt/Shutterstock.com. Hand filing operation: HandmadePictures/Shutterstock.com.