T-LEVELS | Institute for Apprenticeships & Technical Education

T Level Technical Qualification in Science

Occupational specialism assessment (OSA)

Metrology Sciences

Assignment 1

Assignment brief

v1.3: Specimen assessment materials
21 November 2023
603/6989/9

Internal reference: SCI-0011-01

NCFE CACHE

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Assignment brief

Assignment 1

Contents

Task 1: visual inspection

Scenario

You have been hired by a national kitchen design and installation company to work in their quality control department.

Your company has asked you to review length measuring equipment for suitability, accuracy, and fitness for purpose.

You will need to report back to the director that equipment is suitable and fit for use. In the event that further equipment is required, you will need to recommend suitable equipment, based upon the benefit of investment.

The business is split into 3 areas:

- the design team who visit customers' homes to design and plan the new kitchen
- the manufacturing team who make the kitchen units in the factory
- the installation team who install the kitchens in customers' homes

Task

Complete an inspection of 2 pieces of measurement equipment from each department (6 in total) in the company and record the findings.

Complete a risk assessment for the use of these pieces of equipment using the risk assessment form template provided.

(27 marks)
(1 hour 30 minutes)

Before the task

The assessor must:

- remind the student that all health and safety procedures must be followed during the assessment
- ask the student to locate all relevant safety equipment, risk assessment and/or relevant health and safety procedures specific to the individual work area

After the task

The assessor must complete the assessor checklist prior to marking the rest of the task. All essential criteria must be checked and signed by the assessor.

In the event that a student performs a task in an unsafe manner, the assessor may stop the assessment, and the student will not be able to complete the assessment at this time. An unsafe manner is any action that may cause harm to the student or anyone else within the same environment, or any action that may damage any equipment being used.

Task 2: completing metrology measurement equipment checks

Scenario

You have examined 6 pieces of length measuring equipment from 3 different departments and recorded your findings. You are now preparing to compare the equipment to the suitable standard.

The director of the company has asked you to collect all your results and measurements in order to monitor which company equipment is accurate.

This will help to evaluate the effectiveness of the current equipment pool and allow you to recommend where changes should be made in the future.

Task

Measure one piece of equipment against a suitable standard and record the results.

Use the piece of equipment to measure the unit template provided and record the results.

(16 marks)
(1 Hour 30 minutes)

Before the task

The assessor must:

- remind the student that all health and safety procedures must be followed during the assessment
- ask the student to locate all relevant safety equipment, risk assessment and/or relevant health and safety procedures specific to the individual work area

After the task

The assessor must complete the assessor checklist prior to marking the rest of the task. All essential criteria must be checked and signed by the assessor.

In the event that a student performs a task in an unsafe manner, the assessor may stop the assessment, and the student will not be able to complete the assessment at this time. An unsafe manner is any action that may cause harm to the student or anyone else within the same environment, or any action that may damage any equipment being used.

Task 3: assessing the results of metrology measurements

Scenario

You have completed your inspection and measurement of the equipment used in different departments of the company.

The director has asked you:

- to complete a short report to summarise your findings and the issues you have identified
- to provide possible recommendations to improve the measurement systems, and justify them

Task

Produce a report that:

- presents all results and measurements from task 1 (inspection of 6 pieces of equipment) and task 2 (measurement of the provided template) in a suitable format
- summarises your findings from the inspection of selected pieces of equipment and measurement of the template
- provides recommendations for the future, based on the inspections, measurements, and the equipment currently available

(24 marks)
(1 hour 30 minutes)

Risk assessment guidelines

These guidelines will help you complete your risk assessment.

Section 1

- identify and list any hazards that you feel apply to your activity
- identify the people that could be harmed by this hazard
- using the risk matrix below, identify the risk level that this hazard presents
- think about the control measures that you can put in place to reduce the risk of the individual hazards
- using the risk matrix below, identify the new risk level now that control measures are in place to control the hazard and reduce the risk of injury (please note that the severity level will not always alter, only the likelihood)
- continue on a separate sheet if necessary

Finally

- sign and review

Risk matrix

Risk matrix - evaluation of risks							**Action level**
Almost certain	**5**	**5**	**10**	**15**	**20**	**25**	**20–25 STOP**
Highly likely	**4**	**4**	**8**	**12**	**16**	**20**	
Likely	**3**	**3**	**6**	**9**	**12**	**15**	**12–16 URGENT**
Unlikely	**2**	**2**	**4**	**6**	**8**	**10**	**8–10 ACTION**
Extremely improbable	**1**	**1**	**2**	**3**	**4**	**5**	**4–6 MONITOR**
	X	**1**	**2**	**3**	**4**	**5**	**1–3 NO ACTION**
		Minimal	Minor injury	7 Day + injury	Serious or major injury	Severe	
			CONSEQUENCE				

Risk assessment form

Person carrying out risk assessment:	
Persons responsible on site:	
Venue:	
Work activity:	
Date of assessment:	

THOSE AT RISK	KEY
Own staff	OWN
Venue staff	VEN
Organisers	ORG
Visitors	VIS
Public	PUB
Contractors	CON
All persons onsite	AOS

Please read the guidelines prior to completing your risk assessment.

Section 1

Hazard	**Who might be harmed?** (see those at risk above)	**Likelihood**	**Severity**	**Total risk level**	**Control measures** (add any other control measures you will use)	**Likelihood**	**Severity**	**Resultant risk level**

Hazard	**Who might be harmed?** (see those at risk above)	**Likelihood**	**Severity**	**Total risk level**	**Control measures** (add any other control measures you will use)	**Likelihood**	**Severity**	**Resultant risk level**

By signing the declaration below, you have agreed that you will put the appropriate control measures in place to ensure that hazards are reduced and that the risks applicable to your area are controlled.

Signed	
Print name	
Review date	

Document information

The T Level Technical Qualification is a qualification approved and managed by the Institute for Apprenticeships and Technical Education.

Owner: Head of Assessment Design

Change History Record

Version	Description of change	Approval	Date of Issue
v1.0	Post approval, updated for publication.		January 2021
v1.1	NCFE rebrand.		September 2021
v1.2	OS review Feb 23		February 2023
v1.3	Sample added as a watermark	November 2023	21 November 2023