

The logo for National 5, featuring the letters 'N5' in white on a purple square background.

National 5 Practical Metalworking

Practical activity

Parts and Materials: toy train

Valid for sessions 2024-25, 2025-26, 2026-27 only.

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Introduction

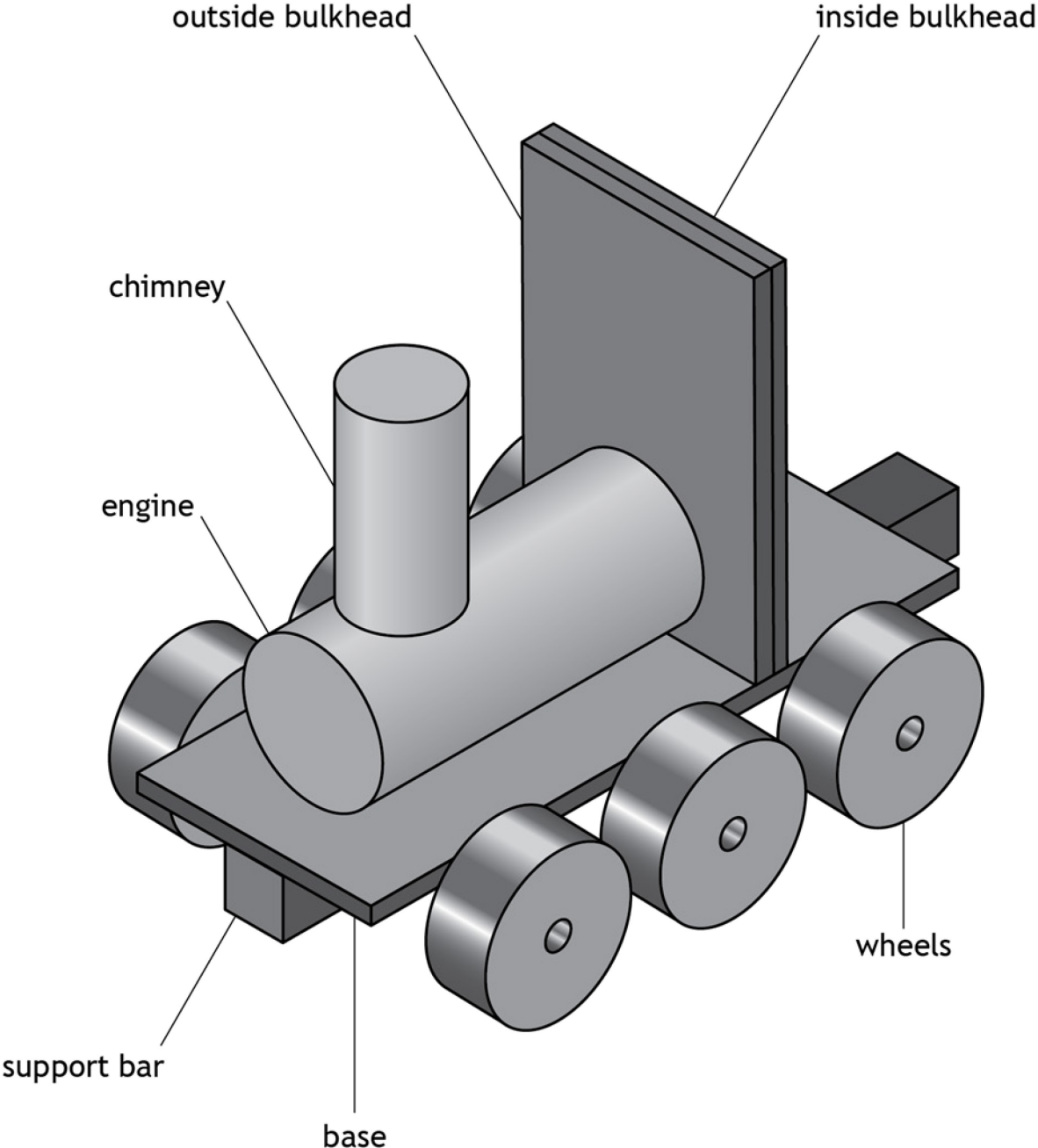
This document contains information for teachers and lecturers when preparing materials for candidates to use in the National 5 Practical Metalworking practical activity.

The National 5 Practical Metalworking course assessment has an annually issued task for candidates to complete. We publish this on SQA's secure website at the end of October of each academic session and is only valid for that academic session.

To support centres (and to ease the planning of material purchases) we will use the same parts and materials list for three academic sessions.

Instructions for teachers and lecturers

Toy train



The toy train will also incorporate a sheet metal cab.

Toy train

The annually issued assessment task will use the parts and materials detailed in this document. The task has specific details that candidates must follow, such as a particular join at a given point, a specific shape template, or something similar.

The sizes below indicate the maximum finished size of component parts.

Parts and materials list

Part	Description	Quantity	Material	Length	Breadth	Thickness
A	support bar	1	mild steel	115	10	10
B	base	1	mild steel	100	40	3
C	axle	3	metal (see note 1)	60	Ø6	-
D	wheel	6	metal (see note 1)	10	Ø25	-
E	engine	1	metal (see note 1)	60	Ø25	-
F	chimney	1	metal (see note 1)	36	Ø20	-
G	outside bulkhead	1	mild steel	60	40	3
H	inside bulkhead	1	mild steel	60	40	3
I	cab	1	mild steel sheet	115	60	0.8
J	M6 x 30 machine screw			see note 2		
K	M4 x 10 machine screw			see note 3		

Notes

1 Centres are free to choose any metal for the identified parts.

2 Candidates should be supplied with the following machine screw:

M6 x 30 (2 Off)

These screws may not be required for every practical activity task.

3 Candidates should be supplied with the following machine screw:

M4 x 10 (4 Off)

These screws may not be required for every practical activity task.

- ◆ All dimensions are in mm.
- ◆ Specific instructions will be given in the annual practical activity task.
- ◆ Candidates may also need other fixings (such as rivets) which might not be used in every task. Centres can use their discretion around sizes.

Alteration or adaptation

You must not alter, adapt or modify the practical activity in any way, except as outlined below. This includes moving the content into a different format or re-drawing and/or producing additional working drawings.

You must not alter lengths or widths and you should not alter thicknesses. However, if centres cannot source a metal plate material thickness, they can substitute material of the closest available thickness. If a thickness is changed, you **must** adjust the working drawings to reflect this change. The amended drawings must be in the identical format and layout to those issued by SQA.

Any change to thickness must not impact on the validity of assessment or the functionality of the project.

Questions and answers

Q. Do I need to inform SQA if I am changing thicknesses?

A. No. However, if selected for verification, you must let the verifier know when the visit is arranged so that they know what to expect.

Q. If I change a thickness, what is a suitable thickness?

A. If you cannot source material in the given thickness, you must use your professional judgement to ensure that the assessment remains valid, and candidates are not disadvantaged. Replacing it with something excessively thinner or thicker would not be appropriate, as this would not allow them to demonstrate their application of practical skills in a way that is consistent with candidates from other centres.

For example, changing a 3mm thickness to a 1.5mm thickness would not be appropriate, as this reduces the material thickness by 50%.

Any change to thickness must not impact on the validity of assessment or the functionality of the project.

Q. I can't get lengths or breadths in the sizes noted, can I change them?

A. No. This is a national assessment activity and consistency across all centres is essential. We want all candidates to be using the same length and breadth sizes to ensure that every candidate is doing the same assessment. Thicknesses are a special case, and you can only alter this by exception. If you cannot source the required materials and sizes, you need to escalate this within your centre, as your candidates will be unable to begin the practical activity.

Q. Can I change the practical activity?

A. No. You cannot change, reformat or add to the documentation related to the practical activity, as all candidates must do the same assessment. Likewise, you cannot give additional drawings to candidates. The only exception is when thicknesses have been changed and there is a consequential change to these dimensions.

Q. Can the candidates produce another product to evidence their work?

A. No. All candidates must do the practical activity for the current session. You cannot award marks for anything else.

Q. What if I give candidates a practical activity from a previous session?

A. You cannot award marks, as this is like giving candidates a past paper instead of the current live question paper. The practical activity documentation clearly states the academic session it is valid for. In addition, we remove older practical activity documentation from SQA's secure website after each academic session, so it is unlikely this would happen.

Q. Can I substitute materials?

A. No. You must use the materials stated in this document – if we state ‘mild steel’, then you must use mild steel for that component.

Administrative information

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History of changes

Version	Description of change	Date

Security and confidentiality

This document can be used by practitioners in SQA approved centres for the assessment of National Courses and not for any other purpose.

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