

Guidance on the use of past paper questions for National 5 Design and Manufacture

The new Courses at National 5 draw on the strengths of popular areas of study from Standard Grade and Intermediate 2 with the introduction of some new content. The purpose of this support document is to help centres and departments to identify suitable past paper questions/items that could be used, or possibly amended, to support learners in their preparation for sitting question papers (exams) as part of the National 5 Course assessment. The advice in this document reflects questions selected from 2011 to 2013 [past papers](#). (If you click on the highlighted links in the columns below, this will take you to the relevant past paper.)

When utilising any past paper questions, you need to take into account the following:

- ◆ You must select questions that provide the learners with the same level of challenge as those in the National 5 Specimen Question Paper.
- ◆ You may be able to use questions as published or with amendments as suggested in the columns below for Standard Grade and Intermediate 2.
- ◆ You must use questions that adhere to the National 5 General Marking Principles and reflect the form of detailed Marking Instructions as published in the National 5 Specimen Question Paper.

If any change to a Standard Grade/Intermediate 2 question is necessary, you must ensure that:

- ◆ The style and structure matches the Specimen Question Paper for National 5.
- ◆ Marking of the learner's response to the question adheres to the General Marking Principles in the National 5 Specimen Question Paper
- ◆ Marking Instructions are amended to reflect the style of the National 5 detailed Marking Instructions.

The details below for National 5 should be read in conjunction with the relevant:

Mandatory documentation:

- ◆ Course Specification
- ◆ Unit Specifications
- ◆ Course Assessment Specification

Advice and guidance:

- ◆ Course and Unit Support Notes

Assessment:

- ◆ Question Paper Component:
 - general assessment information
 - general marking principles and detailed marking instructions

Related Information as provided in the relevant

Not all topic/areas of study will appear every year due to the sampling techniques used in producing question papers.

N3-N5 Course Comparison Document.				
<p>Information from the Course Assessment Specification</p> <p>Each Section of the question paper will be made up of restricted/extended response questions. Questions will sample the knowledge and understanding and apply skills described in the Further mandatory information on Course coverage section.</p>	<p>The columns below identify additional support questions from Standard Grade and Intermediate 2 Past Papers 2011 to 2013.</p>			
	<p>Standard Grade Credit (Craft and Design)</p>		<p>Intermediate 2 (Product Design)</p>	
<p>Section A</p>	<p>Note there are no past Standard Grade or Intermediate 2 papers with an appropriate full Section A equivalent</p>			
<p>Design process</p>		<p>2012 Q5 (b) change to eg <i>'Describe one idea generation technique that could have been used in the design of the desk.'</i></p> <p>2013 Q3 (a)- change to eg <i>'Describe one idea generation technique that could have been used in the design of the salt and pepper set.'</i></p> <p>2013 Q5(a) change to eg <i>'describe why market research would be carried out...shelving.'</i></p>		

<p>Design factors</p>	<p>2011 Q5(a)</p> <p>2012Q1(a)</p> <p>2012Q2(a)(ii)</p> <p>2013 Q4(a)</p>	<p>2012 Q5(a) change to eg <i>'State two secondary functions of the desk.'</i></p>	<p>2011 Q1 (c)(ii)(iii) 2012 Q1 (c)(i)(iii)</p> <p>2012 Q5(a), (b),(c) 2013 Q1 (c)(iii)</p> <p>2013 Q4 (a)(b)</p>	<p>2011 Q1(b)(i-iii) replace all terms with ergonomics eg <i>'Describe how the design of the activity toy has been influenced by ergonomics.'</i></p> <p>2011 Q6 remove aspect of safety – reduce to 3 marks.</p> <p>2012 Q1 (b)(i-) replace all terms with ergonomics eg <i>'Describe how the design of the stool has been influenced by ergonomics.'</i></p> <p>2013 Q1 (b)(i-iii) Replace all terms with ergonomics eg <i>'Describe how the design of the toaster has been influenced by ergonomics.'</i></p> <p>2013 Q2 (a)(i)(ii) remove last part for stem from <i>'and how the results...'</i></p> <p>2013 Q4(i),(iv),(v) change to eg <i>'Describe how each of the issues above could be researched to assist the designer in the development of the iPad.'</i> Reduce marks to 3.</p>
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Communication and modelling	2013 Q4 (b)	2011 Q1 (v) remove 'scale'. 2012 Q4(d) reword to explain the benefits to designers of modelling.	2013 Q1 (a)(iii)	
Planning for manufacture	This topic is treated slightly differently at National 5, therefore there are no equivalent questions			
Tools, materials and processes	2011 Q3 (c)(d) 2011 Q4 (b)(c) 2012Q2(a)(i) 2012Q3(a)(i)(ii) 2013 Q1(a)(b) 2013 Q2(d)(i) 2013 Q3 (b)	2011 Q1 (b)(iii) make standard components and advantage to manufacturer. 2011 Q5 (e) (i), (iii), (iv) – Process to be given in stem as vacuum forming. 2012(b)(i) – give two reasons for two marks. 2013 Q1(g) change to eg 'Describe how the sharp edge could be removed from the torch body.' (2 marks) 2013 Q2(b) remove 'rather than pine'. 2013 Q4(e) change acrylic to thermoplastic on	2011 Q1 (a)(iii) 2011 Q4(a)(i-iii) 2012 Q3 (b) 2013 Q1 (a)(iii)	2011 Q1(a)(i) change 'polypropylene' to 'thermoplastic'. 2012 Q1 (a)(i) replace 'tubular steel' with 'tubular ferrous metal'. 2012 Q2 (b) remove 'beech' replace with 'hardwood' on both occasions. 2013 Q1 (a)(i) change to eg 'A ferrous metal was used for the inner shell of the toaster, state two reasons why this material is suitable.' 2013 Q 1(a)(ii) change to eg 'A thermoplastic was used for the body of the toaster, state two reasons why this material is suitable.'

		both occasions. <u>2013 Q5(b)</u> change to eg <i>'With reference to hand tools, describe how one of the joints could be manufactured.'</i>		
Manufacturing in industry				<u>2012 Q4</u> products A, B and C only <u>2012 Q6 (a)</u> change to eg <i>'State two reasons why a hardened ferrous metal is suitable for the head of the claw hammer.'</i>
The impact of design and manufacturing technologies and the environment and the world of work.	<u>2013 Q3 (c)</u>		<u>2012 Q3 (c)</u>	<u>2013 Q1 (c)(i)</u> change 'environment' to 'sustainability'

Resources

<p>SQA past papers www.sqa.org.uk/pastpapers/findpastpaper.htm</p>	<p>Additional National 5 assessment support material is available here:</p> <p>Education Scotland www.educationscotland.gov.uk/</p> <p>Glow www.educationscotland.gov.uk/usingglowandict/</p> <p>Glow Log-in https://secure.glowscotland.org.uk/login/login.htm</p>
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