

GCSE

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Design & Technology

Textiles Technology (1971, 3971)

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Summer 2005

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Examiners' Report

Edexcel GCSE
Design & Technology
Textiles Technology (1971, 3971)

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GCSE Design and Technology: Textiles Technology
Principal Examiner's Report
Unit 1971, Foundation Tier

Once again most candidates attempted all of the questions in both the foundation and the higher tier and again this year it was a rare occasion for questions to be totally omitted. Despite this being the third year of the examination and the INSET programme focussing on access to the examination, still candidates are largely gaining their marks on the design and the product analysis question and their knowledge of the subject matter stated on the Specification is still not being taught to the candidates. This leads to candidates performing at a lower level than that which they are capable. The questions will always require the candidates to have a knowledge and understanding of the technical aspects of the subjects. Candidates also find it very difficult to 'explain' answers, often giving a very bland answer. Once again candidates did not read the questions carefully enough and this resulted in them tackling the subject matter from the wrong angle - this therefore results in marks being lost.

It is essential that teachers pay attention to the content of the specification and teach candidates the knowledge they require to answer the written paper. The coursework must not be allowed to dominate the entire course for the candidates. Candidates on both papers responded well to the design question and the product analysis question often giving detailed answers and within the higher paper on occasions scoring full marks.

Foundation Paper

Question 1	Many candidates were able to identify most pieces of the equipment as well give an accurate description of their use. Most candidates were able mention the correct choice of scissors for cutting out but did not gain many more marks. It was evident that most candidates did not understand the term 'nap' or how it effects the laying of a pattern - this resulted in them being unable to explain why a jacket made from nap would be more expensive. Although candidates were able to give one correct response to the nap question, candidates were unable to explain why a product made with a nap fabric would be more expensive. Candidates did not score well in parts e and f where they needed knowledge of how CAM aided the process of cutting out.
Question 2	Candidates usually knew one product that could be made from felt - but it was clear that they did not understand the advantages of using this fabric. A few candidates could explain why Vilene is used in fabric construction. The knowledge about wool was generally very weak with many candidates referring to the fabric 'trapping heat'. Some candidates were able to identify an advantage for warp knitting. Candidates responded well to the label and where able to gain good marks. Candidates where unsure about smart fabrics and a lot based their answers on ultra violet light in discos.
Question 3	Most candidates made a good response to the design specification and also scored well on the second design. Candidates 'ticked off' the specification points ensuring that had covered all aspects. Some candidates obviously spent far too much time on their design ideas and the information was extremely detailed sometimes making it very difficult for them to introduce new pieces of detail in the evaluations. Evaluations of design ideas usually gained reasonable marks on the first two specification points but candidates could not explain why the item was suitable for one off production.

Question 4	<p>Candidates could usually give one or two relevant specification points and give detailed reasons. Most candidates identified a safety point but many candidates repeated the information given in the stem of the question. Candidates were able to identify the reasons for buying standard components but few could explain two reasons why the dungarees used snap fasteners on the inside of the leg. Many candidates confused topstitching with constructing seams and therefore did not give two suitable quality control points for the topstitching. Most candidates identified a safety point to be checked during production but did not describe how to do the check. The final two specification points required a response which included an explanation. Most candidates did not provide the explanation.</p>
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GCSE Design and Technology: Textiles Technology
Principal Examiner's Report
Unit 1971, Higher Tier

Higher Paper

Question 1	Candidates could usually give one or two relevant specification points and give detailed reasons. Most candidates identified a safety point but many candidates repeated the information given in the stem of the question. Candidates were able to identify the reasons for buying standard components but few could explain two reasons why the dungarees used snap fasteners on the inside of the leg. Many candidates confused topstitching with constructing seams and therefore did not give two suitable quality control points for the topstitching. Most candidates identified a safety point to be checked during production but did not describe how to do the check. The final two specification points required a response which included an explanation. Most candidates did not provide the explanation.
Question 2	This question proved challenging for candidates - many were unable to give two fabric finishes that could be applied to cotton gingham. A surprising number of candidates could not show two main stages of constructing a plain seam - however the higher ability candidates produced some good responses to this part of the question. Few candidates of any ability could explain why the open seam made from cotton gingham should not be zigzagged. Many candidates scored well on the items made from waterproof fabric (although the understanding of textiles product in some cases was poor) and most could explain what happens to a water droplet. The AO1 C area of the Specification again challenged candidates. Many failed to read the questions and therefore did not give the correct response although they were clearly aware of the information. A high number of candidates did not know what EPOS did. Most candidates did not explain the advantage of CIM to the manufacturer.
Question 3	Most candidates made a good response to the design specification and also scored well on the second design. The better candidates made very good responses to the design specification showing different technical ideas in both designs. Evaluations of design ideas usually gained reasonable marks on the first two specification points however candidates often couldn't explain why their chosen design idea was suitable for batch production.

Question 4	<p>Candidates of all abilities found this question very difficult with few knowing about the properties of viscose and they had very little idea about changing the structural properties of a fibre. Candidates did not have the knowledge of 'properties of fibres' and 'characteristics of fibres'. In the majority of centres 'hot air bulking' had not been taught. The element of the question focussing on AO3 was very poorly answered - only the safety test was consistently correct. Few candidates were able to explain why consumers would expect products to conform to safety standards. Most candidates thought that bio-polishing makes a fabric shiny and an alarming number clearly think textile companies pour all their waste by-products 'down the drain' - very few acknowledge that pollution occurs occasionally and as a result of an accident.</p>
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GCSE Design and Technology: Textiles Technology
Principal Moderator's Report
Unit 1971, Coursework

General Comments

The overall quality of coursework submitted by centres this year was good. Centres' assessments were largely accurate and the presentation was mostly pleasing. However, there are still some administrative details that centres need reminding about:

- Centres must check the addition of marks on CMRBs and ensure that they are accurately transferred to the yellow OPTEMs.
- Centres are expected to have filled in annotation page numbers on the CMRBs correctly. Many centres also add on the back of the CMRBs further comments about the assessment of their candidates' work, which can often be helpful to the moderator.
- It is recommended that pages in the folios are tied together securely with treasury tags or something similar to ensure that folders can undergo the necessary handling during moderation without pages getting out of order.

This year, as always, candidates produced a wide variety of fabric products including garments, hats, bags, cushions, wall hangings and educational toys. Some of the products were unique and show that some candidates have genuine original design talent. Too many products, however, were copies or slightly modified versions of products already in the market place. Teachers should encourage and nurture candidates' originality (and perhaps even outrageousness) in order to avoid the production of only safe and conventional solutions to design tasks.

Criterion 1

Identify needs, use information sources to develop detailed specifications and criteria.

Needs

Candidates perform well if they are given a chance to identify a need for the product and to write a design brief of their own choice. Centres where candidates are prescribed a design brief do less well under this criterion.

Information

In general, candidates use a wide range of sources to find information about products. They present colourful themeboards, cut out pictures and take photographs of existing products in order to analyse them. They also make sensible use of the internet for further information about styles and materials. Many candidates also administer a questionnaire but, unfortunately, often fail to incorporate the information gathered into their design proposals. There should, in fact, be clear evidence of candidates using information gathered at this stage when designing and developing their product, otherwise this whole exercise has been meaningless.

Many candidates now also draw up a client profile where they describe in detail a particular person for whom the product is to be designed and made. This can be a good starting point for student designers who are beginning to develop an awareness of the importance of their client's needs. A more mature approach would be to think in more generalised terms not of an individual, but of a target group, its interests, tastes, activities and income.

Specification

It is worth emphasising once again how important it is to draw up a clear and detailed specification. Without a good specification, candidates are at a disadvantage later on when they come to review their design ideas and to evaluate their final product.

Many candidates fail to refer in sufficient detail to the form, function, user needs and budgetary constraints relating to their intended product. They therefore only achieve low or medium marks.

Criterion 2

Develop ideas from the specification, check, review and modify as necessary to develop a product.

Ideas

The drawings to illustrate design ideas this year were on the whole good, as were candidates accompanying descriptions of the design features to be incorporated. However, there was often insufficiently detailed reference to materials and components and to the reasons for their choice.

To gain high marks in this section, candidates should refer to their specifications and explain why, for example, felt is an appropriate choice of material for a toy, or why a particular selection of fabric would give a dress an elegant and glamorous look. They should also explain why, for example, a zip rather than velcro would be the appropriate choice for a particular fastening.

In this section, candidates' marks tended to cluster around the medium level, with few attaining the highest mark.

Develop

Most candidates quite properly illustrate the development of their ideas by means of drawings depicting changes in design features. Many also make toiles or paper prototypes of their products in order to test design features. Samples of seams, stitching, hems and methods of embellishment are also made for this section.

Unfortunately, some centres appear to carry out a standardised development programme, which involves all candidates including identical pieces of appliqué, quilting or beading exercises irrespective of whether or not there is any likelihood of a candidate using these techniques in his / her final product. This practice sometimes denies candidates the opportunity to develop their own products and as a result, they may not score highly in this section.

In general however, this section is reasonably well done and many candidates do achieve high marks.

Review

'Reviewing' is the process of assessing design proposals and the final design against the criteria listed in the specification. It is not about whether the candidate likes or dislikes the product. Candidates should ensure that their reviews are objective, critical assessments of the ideas. The use of tick boxes to compare the design with the specification is not, in itself, sufficient to gain high marks.

Most candidates were awarded medium marks in this section.

Criterion 3

Use written and graphical techniques including ICT and CAD where appropriate to generate, develop, model and communicate.

Written communication

Good written communication does not require the writing of lengthy essays at each stage of the design process; rather, it requires the candidate to inform the reader clearly about design intentions so that the reader can easily understand how the design process is progressing. Most candidates do this reasonably well, but sometimes teachers fail to give them sufficient credit when awarding marks under this heading.

Other media

Most candidates include in their folios digital or conventional photographs, cut-outs, tables, charts, samples of processes and components to illustrate their design ideas. They should bear in mind however, that to achieve a high mark in this section candidates are expected to use the graphic material 'with skill and purpose'. Some of the material used, while perhaps visually pleasing, is not always relevant to the product under consideration. Most candidates do well in this part.

ICT

To achieve a high mark in this section candidates need only demonstrate a minimum of two ICT skills. These could be, for example, word processing and the use of the internet. Just to use an item of clip art or a printed border round a page would be one skill and would warrant a low mark.

Most teachers fail to award enough marks to their candidates in this section.

Criterion 4

Produce and use detailed working schedules, which include a range of industrial applications as well as the concepts of systems and control. Simulate production and assembly lines using appropriate ICT.

Systems and control

Many centres still appear to be uncertain what is required in this section, with the result that their candidates fail to gain high marks.

Candidates should produce a flowchart illustrating the stages of manufacture of their product. The diagram should clearly indicate input, process and output. Feedback loops should also appear together with indications of performance checks where appropriate.

Schedule

A good schedule should show how a product is going to be made. It should take account of the making processes, materials, equipment and quality checks to be employed as well as indicating the time likely to be required for each stage of manufacture.

This information is usually best presented in flow chart or table form, and those candidates who clearly indicate the various elements of the schedule achieve high marks. It is important to remember however, that a schedule is a planning tool designed to help meet deadlines (and in industry to help control costs). It cannot therefore, be presented in the form of a diary written in the past tense, which is a clear indication that it has been produced after the event.

Industrial application

There are still too many centres that rely on the widespread use of the same duplicated pictures and generalised descriptions of industrial processes and machinery which fail to focus on the specific requirements for manufacturing a particular product. This is not good practice and deprives candidates of the opportunity of being awarded good marks.

To gain a medium mark, candidates need to show how their particular product would be made in industry. To gain a high mark, they should also provide evidence of having used an industrial manufacturing technique. For the purposes of this criterion, the use of overlockers, computerised embroidery machines or computer generated transfer prints can validly be considered industrial techniques and those candidates who employ them should be fully credited. Some teachers fail to award sufficient marks for the use of such methods.

Criterion 5

Select and use tools, equipment and processes effectively and safely to make single products and products in quantity. Use CAM appropriately.

Select and use

It should be noted that there are two parts to this requirement:

Evidence for the selection of appropriate tools during the manufacturing process can be provided by the use of photographic storyboards or 'making diaries' which show the different stages of production, or by ensuring that the necessary tools and equipment are listed in the schedule.

Evidence of the effective use of these tools must be photographic. A product which is well made and which includes various processes and embellishments should be awarded a high mark, but it is important that detailed photographic evidence justifies this. Poor photographs sometimes make it difficult for the moderator to agree with the centre-awarded mark.

Make products

The evidence in this section is also photographic. Candidates should ensure that their photographs clearly show how their finished product matches the requirements of their final design proposal. A finished product which bears only a resemblance to the design should be awarded low marks. Many candidates achieve medium or high marks in this section, but there is a tendency for teachers to be slightly generous.

Work safely

Candidates should be awarded high marks if they carry out a thorough risk assessment of their activities in class or if they show an awareness of how their activities can impinge on their own safety and that of others. There is no necessity in this section for candidates to demonstrate their familiarity with industrial safety standards. Some centres however, merely ensure that their candidates reproduce a common list of safety rules and this cannot merit a medium or high mark. Similarly if the only evidence of working safely is provided by teacher annotation then a low mark should be awarded.

Candidates' performances in this section were very variable.

Criterion 6

Devise and apply tests to check the quality of candidate's work at critical control points. Ensure that products are of suitable quality for the intended use. Suggest modifications that would improve their performance.

Tests and checks

Candidates should carry out tests to check the quality of their products against measurable points of the specification (such as size, colour-fastness, attractiveness to potential clientele, fitness for purpose, etc). Colour fastness could be checked by a washing test; attractiveness could be assessed by the use of a questionnaire; fitness for purpose could be gauged by user tests. Candidates should ensure that they not only describe their tests but also make clear the reasons for carrying them out.

Quality of performance in this section was variable.

Evaluate

Many candidates spend considerable time writing lengthy comments assessing the whole design process, which is not what is needed. Candidates are required to assess the final product made. They should write a report on their product, supporting their claims with evidence from test results (e.g. 'Colours remained bright, even after several washes') and potential users' views (e.g. 'I found it difficult to fasten the flap of the bag because the velcro was in the wrong place.') as well as from their own opinion.

Most candidates achieved medium marks for this section.

Modifications

Many candidates describe how they have changed or modified their products during the design and manufacturing process. That is not what is required here. In this section, candidates should refer back to their evaluation and suggest improvements that could be made to the product. Candidates who scored high marks in this section suggested more than one modification (each of which was drawn from a separate evaluation) and explained and justified how the proposed modification would improve quality or performance.

This year, teachers tended to overvalue work produced in this section.

GCSE Design and Technology: Textiles Technology
Principal Examiner's Report
Unit 3971, Foundation Tier

Once again most candidates attempted all of the questions in both the foundation and the higher tier and again this year it was a rare occasion for questions to be totally omitted. Candidates continue to demonstrate that their knowledge of the subject matter as stated in the Specification is still patchy. This leads to candidates performing at a lower level than that of which they are capable. The questions will always require the candidates to have a knowledge and understanding of the technical aspects of the subjects. Candidates also find it very difficult to 'explain' answers, often giving a very bland answer without justifying their response. Once again candidates did not read the questions carefully enough and this resulted in them tackling the subject matter from the wrong angle, this therefore resulted in marks being lost.

Foundation Paper

Question 1	Many candidates were able to identify most pieces of the equipment give an accurate description of their use. Most candidates were able to make the correct choice of scissors for cutting out, but did not gain many more marks. It was evident that most candidates did not understand the term 'nap' and how it affects the laying of a pattern.
Question 2	Candidates usually knew one product that could be made from felt, but it was clear that they did not understand the advantages of using this fabric. A few candidates could explain why Vilene is used in fabric construction. The knowledge about wool was generally very weak with many candidates referring to the fabric 'trapping heat'.
Question 3	Candidates could usually give one or two relevant specification points and give detailed reasons. Most candidates identified a safety point, but many candidates repeated the information given in the stem of the question. Candidates were able to identify the reasons for buying standard components but few could explain two reasons why the dungarees used snap fasteners on the inside of the leg. Many candidates confused topstitching with constructing seams and therefore, did not give two suitable quality control points for the topstitching. Most candidates identified a safety point to be checked during production but did not describe how to do the check. The final two specification points required a response which included an explanation, most candidates did not provide the explanation.

Higher Paper

Question 1	Candidates could usually give one or two relevant specification points and give detailed reasons. Most candidates identified a safety point but many candidates repeated the information given in the stem of the question. Candidates were able to identify the reasons for buying standard components but few could explain two reasons why the dungarees used snap fasteners on the inside of the leg. Many candidates confused topstitching with constructing seams and therefore, did not give two suitable quality control points for the topstitching. Most candidates identified a safety point to be checked during production but did not describe how to do the check. The final two specification points required a response which included an explanation, most candidates did not provide the explanation.
Question 2	This question proved challenging for candidates, many were unable to give suitable fabric finishes that could be applied to cotton gingham. Candidates produced some good responses to the construction of a plain seam. Few candidates of any ability could explain why the open seam made from cotton gingham should not be zigzagged. Many candidates scored well on the items made from waterproof fabric (although the understanding of textiles product in some cases was poor) and most could explain what happens to a water droplet.
Question 4	Candidates of all abilities found this question very difficult with few knowing about the properties of viscose and they had very little idea about changing the structural properties of a fibre. Candidates did not have the knowledge of 'properties of fibres' and 'characteristics of fibres'. In the majority of centres 'hot air bulking' had not been taught.

GCSE Design and Technology: Textiles Technology
Principal Moderator's Report
Unit 3971, Coursework

General Comments

The short course is often used by those centres who offer candidates an opportunity to sample more than one area of Design Technology. Not many centres do so. However, centres with candidates for this course tend to present their coursework according to the *pro forma* devised by the examination board, which helps keep total page numbers within the recommended limits.

Products made for the short course are nearly always sufficiently complex and could, in many cases, meet the requirements of the full course.

Since the content of the short course is very similar to that of the full course, recommendations and comments made above with reference to the long course are equally applicable here.

In general, those candidates who are entered for the short course perform very well.

**GCSE Design & Technology: Textiles Technology
(Full Course: 1971)**

Grade Boundaries - Summer 2005

Overall Grades

The figures given below are the minimum subject marks required for each overall grade in the summer 2005 examinations.

(Foundation Tier out of 100)

C	D	E	F	G
52	42	32	22	12

(Higher Tier out of 100)

A*	A	B	C	D	E
79	68	57	47	38	33

Component Marks

The figures given below are the minimum marks required for each component grade in the summer 2005 examination.

(Coursework 01 out of 102)

A*	A	B	C	D	E	F	G
92	80	68	56	45	34	23	12

(Paper 2F out of 88)

C	D	E	F	G
45	36	27	19	11

(Paper 2H out of 88)

A*	A	B	C	D	E
53	46	39	32	26	23

**GCSE Design & Technology: Textiles Technology
(Short Course: 3971)**

Grade Boundaries - Summer 2005

Overall Grades

The figures given below are the minimum subject marks required for each overall grade in the summer 2005 examinations.

(Foundation Tier out of 100)

C	D	E	F	G
52	42	32	22	12

(Higher Tier out of 100)

A*	A	B	C	D	E
78	67	56	46	37	32

Component Marks

The figures given below are the minimum marks required for each component grade in the summer 2005 examination.

(Coursework 01 out of 84)

A*	A	B	C	D	E	F	G
76	66	56	46	37	28	19	10

(Paper 2F out of 44)

C	D	E	F	G
22	17	13	9	5

(Paper 2H out of 44)

A*	A	B	C	D	E
26	22	18	15	12	10

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