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GCSE

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Design & Technology

Textiles Technology (1971/3971)

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Summer 2006

Examiners' Report

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Summer 2006

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

Most candidates attempted all the questions although it was once again evident that candidates had a shallow understanding of the specification knowledge required to answer the technical side of the paper particularly in respect of Question 2. It should be noted that often candidates knew the information to produce good answers but failed to approach the question from the correct context – e.g. the manufacturer; the consumer; the retailer. Once again the majority of the marks were gained on the design question but candidates this year had a much better understanding of the requirements for the product analysis question. Candidates at this level continue to find the explain questions difficult and often repeat in their answers the stem of the questions - this is not worthy of any credit. Candidates need to improve their understanding of the use of technology within textiles. Teachers should be mindful of the need for candidates to have an awareness of A03.

Question 1

Candidates were able to recognise the different pieces of equipment but the vast majority did not recognise the toggle or know its purpose. Candidates had a good understanding of the safety rules for the iron as well as the need to have the iron at different temperatures. Very few candidates knew about the use of a needle bed for pressing velvet. Many candidates could not identify three reasons for using batch production. In the final part of this question candidates tended to repeat the same answer in several ways and therefore were unable to access the marks.

Question 2

Most candidates had a reasonable knowledge of this area but they did not understand how gingham check was created through weaving. Many looked at the diagram of the plain weave and explained how this was achieved. However, most candidates did know the properties of gingham fabric and correctly applied this knowledge to the question. Candidates were not sure of the value of adding polyester to a fabric and too many responded' with stretchy'. Very few candidates understood the characteristics of a manufactured fibre although the question only asked for very basic knowledge. The effects on the environment were well understood and answered but candidates struggled with advantages to the consumer of synthetic fabrics. Many candidates knew what biostoning was but did not know the effect on the fabric. Candidates clearly knew what branded goods were but could not explain why consumers bought them. Similarly candidates knew what CAD/CAM packages were but not the effect they have had on society.

Question 3

There were once again some very good responses to this question with candidates taking notice of the design criteria. Almost all candidates scored well on the design section of this question. However, candidates seemed to have difficulty with their knowledge of appliqué and decorative stitches and if marks were lost it was within this area. Candidates often described what they had designed in the second section of this question rather than evaluating the design and giving additional information.

Question 4

Candidates still have great difficulty in distinguishing between market, function and user requirements. Candidates who gave a correct answer under the wrong heading were credited with marks. Most candidates scored well on all aspects of this question and there was a marked improvement in the responses this year. Candidates observed the garment and then answered accordingly. Candidates should not try and invent aspects of the product which are either not drawn or labelled. The analysis should be totally from the drawings provided. Few candidates were able to identify two reasons for using Tencil for the jacket and many thought Tencil was waterproof or windproof rather than water/wind resistant. Candidates were able to give good answers for removing the sleeves and the use of Velcro for a fastening was clearly understood. The use of the zip also produced good responses, as did the explanations offered for the jacket achieving its purpose in the final part of the questions.

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

Most candidates attempted all of the questions with some writing considerably more than is required to access the maximum amount of marks. Once again it was evident that the vast majority of marks were gained on the product analysis and design questions and that from only a few centres were candidates able to gain high marks in questions 2 and 4. It was very clear that in these centres the specification had been well taught and that candidates had revised thoroughly. Candidates from these centres were also able to apply their knowledge to the specific context of the question.

Question 1

This question was well answered and at this level although candidates still had great difficulty in distinguishing between market, function and user requirements. Candidates who gave a correct answer under the wrong heading were credited with marks. Most candidates scored well on all aspects of this question and there was a marked improvement in the responses this year. Candidates observed the garment and then answered accordingly. Candidates should not try and invent aspects of the product which are either not drawn or labelled. The analysis should be totally from the drawings provided. Few candidates were able to identify two reasons for using Tencil for the jacket and many thought Tencil was waterproof or windproof rather than water/wind resistant. Candidates were able to give good answers for removing the sleeves and the use of Velcro for a fastening was clearly understood. The use of the zip also produced good responses, as did the explanations offered for the jacket achieving its purpose in the final part of the questions. This part of the question was very well answered by the majority of candidates but some missed out the explanation of light needed for the strips to reflect.

Question 2

This question varied considerably from those that didn't even attempt it to others who could explain well with good annotation. Candidates knew that the wadding (often incorrectly labelled) had to be sandwiched between two pieces of fabric.

Most candidates did not explain their reason for lining the oven glove although they had indicated a good reason.

The question on digital printing proved to be challenging for candidates as very few were able to answer this well with the majority mentioning time and cost. They did not generally show a good understanding of the advantages to the manufacturer of digital printing. Candidates generally did not know the positioning or shape of a two-pointed dart. Some candidates understood tolerances but found it difficult to explain. Candidates did not understand the advantages of high volume production the answers tended to be linked to the

number of items produced. Candidates did provide some good answers in response to 'fixed quantities'. The majority of answers linked CAD to adapting designs and few could give good detailed answers therefore gaining only 1 or 2 marks. Many candidates mentioned the most effective lay to reduce fabric waste but most answers were linked to cost and time, once again this area of the specification was not well understood.

Question 3

Most candidates gained good marks in the design section of this question. Candidates noted the criteria and responded accordingly their second designs often scored well also as they had changed their design idea and construction methods. Some candidates included far too many notes in the design response making it almost impossible for them to provide any additional different information in the evaluation.

The evaluation element of the question still causes problems as many candidates just repeat what has already been marked rather than evaluating the designed product. Candidates should be advised that they are only required to evaluate the specification points not introduce new 'strands'

Question 4

Most candidates did reasonably well and were able to give three characteristics of fleece. However, many did answer 'fluffy' which was unacceptable.

Some candidates understood the construction method of warp knitting, mentioning that it did not ladder/unravel whilst others had no idea. Breathable was a common answer in response to the suitability of single jersey cotton for sports wear, as was anything related to cotton as a fibre rather than relating their answer to single jersey for sportswear. However, most candidates answered it reasonably well. Surprisingly few candidates were able to give three correct pieces of care information. This was surprising in the higher tier.

The level of answer for two environmental issues was poor with many vague and unrealistic responses. Many talked of pollution rather than air or water pollution. Many gave non- biodegradable as a correct response. The cause and issue were sometimes muddled but many were able to score some marks for each response. Candidates responded well to the moral issues regarding textile products. Some candidates failed to read the question carefully enough . They discussed the purchase of football shirts rather than manufacture in the Far East.

GCSE Design and Technology: Textiles Technology
Principal Moderator's Report
Unit 1971, Coursework

General Comments

This syllabus has now run for several years and centres are familiar with its requirements and marking scheme. In spite of this, many centres tend to overvalue their candidates' performances.
This year the products made were mostly items of clothing, which allowed candidates to demonstrate a wide variety of skills and processes in their manufacture. Some candidates, however, still produce very simple bags or quilt covers which do not always require many skills and which therefore prevent candidates from achieving high marks for their designing and making.

Administration

In general, most centres administer their coursework appropriately. This year, however, some centres failed to include the coursework of the highest and lowest scoring candidates in their moderation sample, some candidates failed to sign the authentication section on the CMRBs and some teachers forgot to sign CMRBs or the OPTEMS form. This lack of adherence to correct procedures involves extra correspondence with centres and causes unnecessary delay in the moderation process. Teachers are also reminded that it is important to check that the marks on the CMRBs have been added up correctly to avoid wrong marks and potentially wrong grades being allocated to their candidates.

Criterion 1

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

Needs

Too many candidates start their coursework with a statement such as 'I am going to make a shirt.' Sometimes a vague reference to a need for the product may follow, but this sort of approach cannot really be said to begin with the identification of a need and, consequently, does not merit a high mark. On the other hand, those candidates who start by clearly describing the need for a product and produce a brief explaining why the product is needed and by which market group are much more likely to gain a high mark in this section. Candidates should be allowed to produce their own design briefs because those centres which prescribe a common brief for all entrants are depriving their candidates of the opportunity to be awarded marks for identifying a need.
Centres tend to be over-generous in marking this section.

Information

This part is normally done quite well by the majority of candidates, with client profiles, moodboards, questionnaires, analysis of existing products, shop surveys and disassemblies all being appropriately used to source information which will guide the design process.

It is pleasing to see that most candidates are now more focused and selective in their choice of information than in previous years, and many of them now provide thorough and objective analysis of their research material before going on to write their specifications.

In general, this part is correctly assessed by centres.

Specification

A clear and detailed specification not only provides a solid basis for the design process but it also gives candidates an advantage later on when they come to review their design ideas and to evaluate their final product. Candidates should remember that, in this context, measurable detail is important. Details such as size, colour, cost or washability can be accurately assessed later: concepts such as stylishness, trendiness, glamour or comfort are not so easy to assess objectively.

Many candidates include some information about form, function, user requirements and budgetary constraints in their specification. To gain a high mark, candidates should address all these areas and should include more information than just a simple statement about each.

Centres tended to be slightly generous when assessing this section.

Criterion 2

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

Ideas

Most candidates make appropriate use of their research to inspire design ideas, the presentation of which is generally good. Students make effective use of a variety of colouring techniques to enhance the quality of their designs and some centres are now making use of computer generated design ideas.

Two areas, however, require attention: back views of items are often missing and many designs lack adequate details of materials, components and proposed methods of construction. This second shortfall could often be easily overcome by proper labelling of the design diagrams. A candidate who scored highly might include a label to indicate that a garment was to be manufactured in cotton elastane to make it comfortable and close-fitting; a candidate whose label read 'Blue fabric' would score far less highly.

Many teachers overvalue their candidates' attainment in this section.

Develop

Many candidates develop their design ideas quite well, improving on their initial ideas with more detailed drawings of design features, which allows the moderator to see the development moving towards a final proposal. On the other hand, some candidates develop several design ideas but fail to indicate clearly which alternative is the final proposal. This can cause difficulties for the moderator when it comes to assessing the product made against the final design idea.

Some candidates make effective use of paper prototypes or fabric toiles, which can provide valuable information about the viability of a proposed design; other candidates carry out additional experiments with embellishment techniques such as tie-dying, fabric-painting, quilting or embroidery. Unfortunately, in some centres all candidates apparently carry out the same experiments with techniques whether or not they use any of these methods in their finished product. The inclusion of such material in folios is irrelevant.

In general, centres tend to be over-generous in this section.

Review

Candidates should be reminded that the use of tick boxes to compare the design with the specification is not, in itself, sufficient to gain high marks. Instead, they should explain clearly how the final design meets the requirements listed in the specification. If, for example, a candidate has a specification point saying that the product must keep the user cool, then one would expect a corresponding statement in the review section, indicating how this objective was achieved.

Many candidates were marked generously in this section.

Criterion 3
Use written and graphical techniques including ICT and CAD where appropriate to generate, develop, model and communicate.

Written communication

It is pleasing that the majority of candidates can write about their designing work in a fluent, comprehensible and easy manner. The train of thought is normally easy to follow and specialist vocabulary is used appropriately.

In general, this criterion is accurately assessed by centres.

Other media

Most candidates make use of a wide variety of techniques to illustrate their design thinking: they use photographs, cut-outs, charts, graphs, and paper or fabric models with skill and purpose; many also include appropriate samples of fabric or fastenings. The resulting folders are often interestingly laid out and a pleasure to look at. However, this year a number of moderators commented on a profusion of coloured card inserts, fold-out pieces of paper and pop-up windows which would have been more appropriate in an Advent calendar. Such embellishments sometimes took the number of pages well beyond the recommended limit and are very time-consuming for moderators to deal with.

Most candidates are accurately assessed in this part.

ICT

Teachers tend to undervalue their candidates' performance in this section. They should remember that the use of two or more different ICT techniques by a candidate merits a high mark. Some centres, it is true, produce folios entirely by ITC with the text laid out in a page-layout program and incorporating digitised photographs and illustrations produced in draw programs. The results, when printed on an A3 colour laser printer, can be most impressive. However, the candidate who uses word-processing and incorporates, for example, computer-generated graphs into her folder is equally entitled to be awarded a high mark.

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

The performance of candidates in this section has improved considerably since last year. Many candidates now draw clear diagrams of the manufacturing process, indicating input, process, output and quality control stages and including feedback loops where appropriate. Such diagrams merit high marks. Some candidates, however, while drawing clear diagrams, fail to point out where the input, process, output and quality control stages are. Such diagrams do not gain high marks. Consequently, it should be emphasised to candidates that the words 'input', 'process', 'output', 'quality control' and 'feedback' actually need to appear in the relevant places on the diagram. Teachers' assessments of this section were inconsistent.

Schedule

A schedule is a planning tool which allows predictions to be made about how long the manufacture of an item is likely to take. It obviously has to be produced before manufacturing begins and indicates the time likely to be taken by each of the stages in the manufacturing process. Consequently, schedules written in the past tense are worthless, as they have served no planning purpose.
Many candidates draw up Gantt charts, which is acceptable so long as the chart indicates in detail how the product is actually to be manufactured: Gantt charts which also include the design stages are not appropriate. Similarly, flowcharts which are vague and lacking in appropriate detail do not merit a high mark.
Performance in the section is improving and teachers are assessing it more accurately than before.

Industrial application

It is worth reminding candidates that they need only employ an industrial manufacturing process in the making of their product to merit a high mark in this section. While few centres will be in a position to allow their candidates access to sophisticated industrial machinery, most will be able to make computerised embroidery machines or overlockers available. Candidates who use such processes in making their product do not need to give a written account of how their product might be made in industry.

Many centres produce much more work than is necessary in this section and teachers still appear uncertain about how it should be marked.

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

Candidates from many centres produce excellent photographic storyboards to illustrate the various stages in manufacturing their products; this is a good method of providing evidence for the selection of tools and equipment. Candidates from other centres merely provide lists of tools, or incorporate into their flowcharts mentions of the equipment being used.

The evidence for the appropriate selection of tools is usually well done; however, the evidence for their skilful use is less clearly presented. The syllabus requires the use of photographs which clearly show how well a product has been made. That is to say, the photographs must illustrate the quality of workmanship and show clear details of both the inside and outside of the product. If photographs are of poor quality and do not show, for example, how well a zip has been inserted or how neatly and straight seams have been sewn, then a high mark cannot be justified.

Teachers tended to be rather over-generous in marking this section.

Make products

Candidates continue to produce a wide variety of products such as clothing, bags, soft furnishings, wall hangings and toys. Normally, these products have been developed in such a way that their manufacture demonstrates the use of a variety of processes, techniques and skills appropriate to a KS4 performance; some candidates, however, are still producing items such as simple draw-string bags or cushions, which cannot merit a high award.

It is again worth emphasising the importance of good photographic evidence – not only to show that the product is well-made, but also to demonstrate that the finished product matches closely the requirements of the final design proposal. Those products which are only similar to the design proposal, no matter how well-made, will merit a lower mark.

The quality of evidence provided by centres varied considerably, and teachers' assessments tended to be slightly generous.

Work safely

Some candidates deal with this requirement by inserting comments concerning safety into their schedule. This is, of course, acceptable so long as the comments relate to the candidate's own safety and the safety of others in the Textiles room. Other candidates produce proper risk assessments outlining the potential for accidents posed by each piece of equipment. Yet others rely, less satisfactorily, on the repetition of the same list of safety precautions (usually beginning 'Tie hair back') each time they mention a new piece of equipment.

Candidates may be awarded one mark in this section if the teacher notes on the CMRB that the candidate has been witnessed using tools safely.

This section is normally correctly assessed.

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

Many candidates now carry out tests for qualities such as colour-fastness or shrink-resistance. This is obviously appropriate if the product specification has stated that the product should have those characteristics. What candidates need to be reminded of, however, is that these tests must be relevant: that is, they must relate to points listed in the specification. There is no point in doing a flamability test on fabric if the product is not required to be fire-resistant.

User tests are another common feature of this section. These can be very helpful if they elicit information which can be used later in the evaluation or modification stages, and are particularly convincing when accompanied by photographs of the product in use.

Teachers sometimes gave credit for irrelevant testing.

Evaluate

Many candidates write purely subjective comments in this section, which is unfortunate, as it prevents them from gaining a high mark. If a candidate writes, 'My product is well made,' that is a subjective comment. If, instead, she uses a questionnaire to find out from potential users whether they think the product is well made and incorporates that information into her evaluation then she is being far more objective.
Candidates who draw conclusions from test results and use evidence from user reports gain better marks.
Assessment of this section was variable.

Modifications

Very often candidates write about changes they have introduced during the manufacturing process. However, the marks in this section are awarded for modifications that a candidates suggests should be made after the product has been completed and tested. Too often, candidates make vague remarks, such as, 'I would like to make my product more carefully,' which do not gain any credit. High scoring candidates make pertinent comments such as, 'The user test showed that the bag handles were too short. I would now make them both longer and adjustable so that clients could carry the bag comfortably on the shoulder.'

For a high mark, more than one modification should be proposed.

There was some inconsistency in the marking of this section.

GCSE Design and Technology: Textiles Technology
Unit 3971, Foundation Tier
Unit 3971, Higher Tier
Unit 3971, Coursework

Introduction

The low number of entries for the short course makes it difficult to provide comments on the performance of the candidates. However, the comments made on the full course common questions or elements are relevant and helpful for the short course and should be read in conjunction with any general comments provided below.

General Comments: Coursework

This year there were fewer candidates than last entered for the short course. Candidates again used the Edexcel *pro forma* for their design work, which made the coursework very concise and focused. Products made by these candidates were often complex enough to satisfy the requirements of the full course

The comments made concerning the criteria for the full course are equally applicable to the short course.

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

Grade Boundaries – Summer 2006

Overall Grades

The figures given below are the minimum subject marks required for each overall grade in the summer 2006 examinations.

(Foundation Tier out of 100)

C	D	E	F	G
53	42	31	21	11

(Higher Tier out of 100)

A*	A	B	C	D	E
80	69	58	48	40	36

Component Marks

The figures given below are the minimum marks required for each component grade in the summer 2006 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
46	37	28	19	10

(Paper 2H out of 88)

A*	A	B	C	D	E
55	48	41	34	29	26

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

Grade Boundaries – Summer 2006

Overall Grades

The figures given below are the minimum subject marks required for each overall grade in the summer 2006 examinations.

(Foundation Tier out of 100)

C	D	E	F	G
52	41	31	21	11

(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 2006 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
27	23	19	16	13	11

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