



## General Certificate of Secondary Education

# Design and Technology: Textiles Technology 3557

*Short Course Foundation Tier*

## Mark Scheme

*2005 examination – June series*

Mark schemes are prepared by the Principal Examiner and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation meeting attended by all examiners and is the scheme which was used by them in this examination. The standardisation meeting ensures that the mark scheme covers the candidates' responses to questions and that every examiner understands and applies it in the same correct way. As preparation for the standardisation meeting each examiner analyses a number of candidates' scripts: alternative answers not already covered by the mark scheme are discussed at the meeting and legislated for. If, after this meeting, examiners encounter unusual answers which have not been discussed at the meeting they are required to refer these to the Principal Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of candidates' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

**NB** This mark scheme is intended as a guide to the type of answer expected but is not intended to be exhaustive or prescriptive. If candidates offer other answers which are equally valid **they must be given credit**.

Points given are examples only. When wording is in ‘child speak’ credit must be given. At this level, it is sometimes necessary to interpret what the candidate has written in order to give credit for what the candidate knows and understands.

- Level 1** The candidate has a basic but possibly confused grasp of the issues. Few correct examples are given to illustrate points made. This candidate does not have a clear idea of what s/he is talking about
- Level 2** The candidate has some knowledge but there will be less clarity of understanding. Some correct examples given to illustrate points made. This candidate knows what s/he is talking about but is confused in part.
- Level 3** This candidate has a thorough understanding of the issues and has provided relevant examples to support the knowledge shown. This candidate knows what s/he is talking about.

- 1 (a) Visitors to the museum want to buy products to remind them of what they have seen.**

**Explain two ways in which a designer can get ideas from the exhibition.**

e.g. incorporate colour or patterns into own design, use shape of exhibits, develop designs based on images of exhibits.

Marks awarded as follows:

Simple explanation, e.g. ‘I could see the colours’

1 mark

**Or** more detailed explanation

e.g. ‘I could print my fabric in the colours of the totem pole’

2 marks

2 methods each, 2 marks each

**(4 marks)**

- (b) The designer will have researched the Native American Indian culture. List four things they might have found out.**

e.g. information about homes, sports, occupations/ lifestyle, typical clothing / fabrics, colours relating to culture, traditions, beliefs and myths, decorative techniques, patterns, components.

4 points, 1 mark each

**(4 marks)**

2 (a) **You have been asked to show your design ideas.**

**Use the criteria given in the design brief for the option you have chosen.**

(i) **Draw and label two different ideas for your product.**

2 sketches to show **different** initial ideas for product. May be marked holistically.

**NB** Candidates are not to be penalised if they do not use pencil.

Marks awarded as follows:

Weak unimaginative idea presented. Little detail shown, or may be for decoration only 1 mark each

Unimaginative design idea with some detail, limited appeal to target market. May be just product without decoration 2 marks each

A quality design which will appeal to target market. Some attempt to be imaginative. May be a ‘tried and tested’ design with attempt to give it a new twist 3 marks each

A quality design with strong appeal to target market. Evidence of originality. It will be clear what is intended 4 marks each  
**(8 marks)**

(ii) **Give one reason why your idea will sell.**

Candidate should evaluate selected design for intended end use as considered by children and/ or adults who might choose to buy it.

Marks awarded as follows:

Simple statements, e.g. ‘Children will like the design’ 1 mark

More detailed statements with examples e.g. ‘the product can be used for many different occasions’. 2 marks  
**(2 marks)**

**(b) Use sketches, labelling and notes to present a final design for your product.**

**If you have chosen the dressing-up clothes you must show a back view.**

**Marks will be awarded for:**

- **use of theme;**
- **originality and quality of the design;**
- **use of colour in the product;**
- **use of fabrics and components;**
- **presentation of the final idea.**

**Use of theme**

<b>Level 1:</b>	Little relevance to theme or it is used inappropriately. An existing design may have been copied	1 mark
<b>Level 2:</b>	Clear use of theme but may not be most interesting or appropriate for product. An existing design may have been modified slightly.	2 marks
<b>Level 3:</b>	Thoughtful use of theme which is totally appropriate for product. Little evidence that an existing design has been copied	3-4 marks <b>(4 marks)</b>

**Originality and Quality of design**

The following should be considered:

modern, original and imaginative design, balanced composition/ effective. use of space, effective proportions, appropriate for intended use, will the design work? Ability of product to be manufactured, and marketability. Suitability for dressing up? Does it have a clear indication of learning value?

<b>Level 1:</b>	Lack of detail, unimaginative design which may not be appropriate for intended market, may not clearly relate to specification, poor use of space	1-2 marks
<b>Level 1/2:</b>	Unimaginative design with some thought given to intended end use or target market. Relates to specification but may not be clear, overall balance weak. May not be easy to manufacture in quantity. Max of 4 if only accessory.	3-4 marks
<b>Level 2:</b>	Sound design related to specification with clear detail about product and end-use - this may be inappropriate in places. Design lacks some imagination but is likely to be popular with target market. Overall composition may be weak. Product may not be easy to manufacture in quantity and may have some weaknesses	5-6 marks
<b>Level 2/3:</b>	Product will have strong appeal to target market, will be modern and likely to sell well. Design clearly related to specification. Good quality and imaginative design for product, suitable for end use. Space used effectively. Products will be able to be manufactured in quantity	7-8 marks <b>(8 marks)</b>

**Use of colour(s)**

- |                 |  |                  |
|-----------------|--|------------------|
| <b>Level 1:</b> | Colour indicated but immature and not used to effect         | 1 mark           |
| <b>Level 2:</b> | Choice is pedantic, does not make product exciting           | 2 marks          |
| <b>Level 3:</b> | Used effectively/ imaginatively, mature and sensitive choice | 3 marks          |
|                 |  | <b>(3 marks)</b> |

**Fabrics and components**

- |                 |   |                  |
|-----------------|---|------------------|
| <b>Level 1:</b> | Poor choice of fabric/ components, inappropriate for product, do not reflect theme  | 1 mark           |
| <b>Level 2:</b> | Sound choice of fabric/ components but will not be used to advantage/ may lack clear indication of what they are.         | 2 marks          |
| <b>Level 3:</b> | Good choice of fabric/ components, may not be a wide choice but used effectively.<br>For 4 marks, must state main fabric. | 3-4 marks        |
|                 |   | <b>(4 marks)</b> |

**Presentation**

- |                 |  |                  |
|-----------------|--|------------------|
| <b>Level 1:</b> | Lack of care in presenting work, candidate will not communicate detailed information about product   | 1 mark           |
| <b>Level 2:</b> | Candidate has taken care with presentation and labelling and most information about product is clear   | 2 marks          |
| <b>Level 3:</b> | Well presented showing detail of product which will include extra information, labelling is clear and there is clear communication of what is intended.<br>Back view of garment must be shown. | 3 marks          |
|                 |  | <b>(3 marks)</b> |

**3 (a) Products should be environmentally friendly.**

**Tick the right answer for each of the following.**

- |            |   |                 |
|------------|---|-----------------|
| <b>(i)</b> | <b>An environmentally friendly fabric will need to be dyed</b><br>in factories which recycle water. | <b>(1 mark)</b> |
|------------|---|-----------------|

- |             |   |                 |
|-------------|---|-----------------|
| <b>(ii)</b> | <b>An environmentally friendly product will</b><br>not have a lot of packaging. | <b>(1 mark)</b> |
|-------------|---|-----------------|

- |            |  |                  |
|------------|--|------------------|
| <b>(b)</b> | <b>Explain what this label tells the consumer about textile products:</b>  |                  |
|            | Eco-label  | 1 mark           |
|            | Indicates that the product meets ‘green’ textile standards   | 1 mark           |
|            | e.g. in relation to energy/ water consumption during manufacture, use of pesticides in cotton growing, environmentally friendly. | 1 mark           |
|            | NOT made from re-cycled material.  |                  |
|            |  | <b>(2 marks)</b> |

(c) Write a three point specification for the main fabric in your product.

**Explain why each point is important.**

e.g. hardwearing, appropriate weight, does not require special care. Strong, able to be decorated in various ways, light resistant, aesthetically pleasing, stiff or soft according to product, reflect light.

Reasons should be related to need for property in candidate's product

3 qualities, 1 mark each

3 reasons, 1 mark each

(6 marks)

4 (a) Name two different ways of adding colour to your product. Give one advantage and one disadvantage for each way.

E.g. tie-dye, batik, embroidery, appliqué, stencilling, fabric pens, image transfer, flexi foil, marbelling, components.

NOT 'quick and easy' or just CAD.

Paint must be specified as fabric paint.

Any 2 different techniques, 1 mark each

plus 1 mark each for relevant advantage

and 1 mark for each relevant disadvantage related to product/ end use.

2 techniques, 3 marks each

(6 marks)

(b) The design team will make a *prototype* of a new product.

**This may be part of a *user trial* of the product.**

(i) What is a prototype?

e.g. trial product, mock-up

(1 mark)

(ii) What is a user trial?

e.g. representative testing of typical end use to see how product performs

(1 mark)

(iii) Give two reasons for making a prototype.

e.g. to test size/ shape of product, to check on methods of manufacture, iron out potential problems, seek opinions of others.

Mark awarded as follows:

Simple statements, e.g. 'to make sure the product works'

1 mark

More detailed statements, e.g. 'to check on the size so that it will fit average size children'.

2 marks

2 reasons, up to 2 marks each

(4 marks)

5 (a) The textile industry uses computers for many different things.

**Give two ways in which computers can help with each of the following.**

(i) Cutting out fabric

E.g. efficient pattern layouts, computer controlled cutters, safer, accuracy, cut more than one at a time, reduce labour costs.

Quicker / faster / cheaper only if qualified.

1 mark for each valid method

(2 marks)

- (ii) Keeping a check on components in stock**  
 E.g. use of bar code labels to record stock in factory and order automatically, use of spreadsheets to record materials bought and used, bar code labels to record use of stock.  
 1 mark for each valid method **(2 marks)**
- (iii) Putting colour and pattern on to fabric**  
 E.g. software used to design patterns, automated pattern printing, computerised knitting, embroidery and weaving machines. Accuracy, all the same.  
 Quicker / faster / cheaper only if qualified.  
 1 mark for each valid method **(2 marks)**
- (b) Industrial sewing machines work very fast.**
- (i) Give two dangers when using an industrial sewing machine.**  
 Candidate should identify safety issues associated with industrial sewing machines.  
 e.g. needles in fingers, lack of concentration leading to accidents, training of workers, fingers cut on overlocker blades, long hair/ loose clothing caught in machines  
 Any 2 appropriate risks, 1 mark each **(2 marks)**
- (ii) How can you reduce these dangers?**  
 E.g. use of guards near needles and blades, tie back long hair, wear overall to cover loose clothing, avoid distracting workers using machines, training of workforce, maintenance or equipment  
 Either 3 points, 1 mark each **3 marks**  
 Or Fewer points with detail/ expansion **3 marks**  
**(3 marks)**
- 6 (a) What are smart fabrics?**  
 Smart fabrics are ones which can react / change automatically to their surroundings  
 2 marks for correct definition **(2 marks)**

**(b) Describe one smart fabric you have researched.**

**What is special about the features of the fabric? What is it used for?**

e.g. fabrics which; change colour with different temperature, give off a smell when scratched, (micro-encapsulated), lamination with lenses which change pattern as fabric moves, memory textiles, body monitors, wearable electronics, medical textiles, fibre optics. NOT Lycra, Gortex, Sympatex, Coolmax, microfibres (these are modern fabrics, NOT smart fibres).

Marks awarded as follows:

1 mark for fabric, e.g. 'Fastskin', laminated fabric or other description

2 marks for description of fabric's qualities

2 marks for description of use

NB It is possible for a candidate who gives a very detailed description in one area to be awarded more than the marks suggested above, provided that the total mark for each fabric does not exceed 5 marks

**(5 marks)**

**7 Study the photograph of the cushion.**

**Answer the questions which follow.**

**(a)**

**(i) Explain one way in which the fabric makes the cushion attractive.**

e.g. use of toning colours, use of shiny fabrics, use of different fabrics, layering of fabrics

Marks awarded as follows:

Simple statements, e.g. '2 colours have been used'

1 mark

More detailed statements, e.g. 'Purple and pink have been used to contrast with each other'

2 marks  
**(2 marks)**

**(ii) Explain one way in which components make the cushion attractive.**

e.g. use of beads to represent flowers and leaves, use of pearls to represent flowers, use of threads to stitch outlines

Marks awarded as follows:

Simple statements, e.g. 'beads have been used'

1 mark

More detailed statements, e.g. 'Beads have been used to show flowers'

2 marks  
**(2 marks)**



**(b) The back of the cushion is fastened with a zip.**

**Give one other fastening which could be used.**

**Give one advantage and one disadvantage of using this fastening on this cushion.**

e.g. buttons and buttonholes, ties, Velcro

1 mark for an alternative fastening

Plus 1 mark for each appropriate advantage

Plus 1 mark for each appropriate disadvantage

1 mark

1 mark

1 mark

**(3 marks)**

**(c) The label says that the cushion cover must be dry cleaned.**

**Explain why it should not be washed.**

e.g. fabrics/ components delicate, washing may damage them, fabrics may shrink, will be difficult to iron

Either 3 points, 1 mark each Or fewer points with detail/ expansion

**(3 marks)**

**(d) If the cushion is to sell it will need to be made to a high standard.**

**Explain one quality check which will be needed on the cushion.**

e.g. size of different panels, accuracy of decoration, even stitching to join panels, size/ placement of fastening

Any appropriate quality check, 1 mark,

Plus some explanation/ expansion of point, 1 mark

**(2 marks)**

**(e) Look carefully at the cushion.**

**(i) Give one way in which you could change the *design* so it is cheaper to make.**

E.g. use only 1 fabric for cushion, omit centre seamed section, do not layer fabrics, simplify design / surface decoration.

NOT fastenings, or ‘make it smaller’.

Marks awarded as follows:

Simple statements, e.g. ‘don’t have seams on front’

1 mark

More detailed statements,

e.g. ‘Use only 1 layer of fabric to reduce sewing costs’

2 marks

**(2 marks)**

**(ii) Give one way in which you could change the *fabric or components* so it is cheaper to make.**

E.g. print design, or use threads and omit beads, use fewer layers of fabric, use same fabric for all cushions.

Marks awarded as follows:

Simple statements, e.g. ‘don’t use beads’

1 mark

More detailed statements,

e.g. ‘Print design to reduce sewing costs’

2 marks

**(2 marks)**

**(f) Explain why some textile products are packaged before going to the shops.**

E.g. to keep them clean, to protect delicate fabric/ components, for transportation, to carry consumer information, for marketing/ advertising purposes.

Any four appropriate reasons, 1 mark each

An expansion of a point may be counted as a reason

***(4 marks)***