



ASSESSMENT and
QUALIFICATIONS
ALLIANCE

Mark scheme

June 2003

GCSE

Design and Technology

Graphic Products

3543 (Full Course)

Foundation

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Design and Technology Graphic Products**Full Course Foundation Tier****Question 1 Data Representation**

(a)	Bars	All correct height	2 marks	(2 marks)
		Three / two correct height	1 mark	
		One / none correct, not attempted	0 marks	
(b)	Key	All bar matches key	2 marks	(2 marks)
		Three / two correct	1 mark	
		One / none correct, no completed	0 marks	
(c)	Colour	All even colour / hatching, within borders	2 marks	(2 marks)
		Some even colour etc. evident, one colour hatching only	1 mark	
		Scribble. Most outside borders, not attempted	0 marks	

Total 6 marks

Question 2 Designing**Letter style (Font)** – *not single line letters*

Two or more discrete ideas	1 mark	
Evidence of some development of one of the ideas	1 mark	(2 marks)

Evaluation:	Critical, relevant, justified	2 marks	
	Superficial, self congratulatory or descriptive	1 mark	
	None/Not relevant	0 marks	(2 marks)

Ventilation	Two or more discrete ideas	1 mark	
	Evidence of some development of one of the ideas	1 mark	(2 marks)

Evaluation:	Critical, relevant, justified	2 marks	
	Superficial, self congratulatory or descriptive	1 mark	
	None/Not relevant	0 marks	(2 marks)

Logo	Two or more discrete ideas (no slogan)	1 mark	
	Evidence of some development of idea	1 mark	
	Animal theme (at least one must relate to an animal)	1 mark	(3 marks)

Evaluation:	Critical, relevant, justified	2 marks	
	Superficial, self congratulatory or descriptive	1 mark	
	None/Not relevant	0 marks	(2 marks)

Sketching (*Best Evidence*)

Very effective:	Consistent e.g. sharp and faint, straight, evidence or guidelines	5-4 marks	
Satisfactorily:	Some differences in line, communicates idea	3 marks	
Adequate:	Poor pencil/line work – blunt, lacks quality	2 marks	
Poor:	An attempt, little evidence, scribble	1 mark	
	No attempt	0 marks	(5 marks)

Colour (*Accept pencil, notes, swatches etc. Do not mark the quality of colour*)

Correct number:			
Black, one colour (+ white) in combination on all sketches	1 mark		
Colours noted or applied on all designs			
For letter styles and logos	2 marks		
Limited evidence	1 mark		
Not used	0 marks		(3 marks)

Total 21 marks

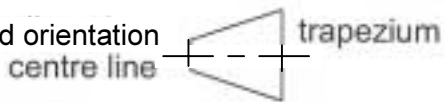
Question 3 Presentation

- (i) Use of spec: *pro rata one mark per criteria*
- | | | |
|--|------------|-----------|
| Charity name ‘PETZONE’ | 5 x 1 mark | |
| Letter style (font) – <i>Not single line letters</i> | | |
| Logo – animal theme – not slogan | | |
| Ventilation openings | | |
| Colours – <i>black plus one other</i> | | (5 marks) |
- (ii) Quality of drawing:
- | | | |
|---|-----------|-----------|
| Very good line quality, clear, neat etc | 5-4 marks | |
| Satisfactorily, some sharp neat etc | 3 marks | |
| Adequately drawn, some reasonable lines | 2-1 marks | |
| Not attempted | 0 marks | (5 marks) |
- (iii) Combining ideas: (Font, logo or slogan if used and ventilation)
- | | | |
|---|---------|-----------|
| Three elements brought forward | 3 marks | |
| Two elements brought forward | 2 marks | |
| One element brought forward | 1 mark | |
| Nothing brought forward (<i>different design</i>) | 0 marks | |
| (Ignore any totally new element) | | (3 marks) |
- (iv) Layout:
- | | | |
|--|-----------|-----------|
| Very effective, consistently good, e.g. spacing, proportion, line, good use of space | 4-3 marks | |
| Satisfactory, sense of composition, adequate spacing, some imperfections | 2 marks | |
| An attempt but lacks clarity and/or poorly spaced, crowded. | 1 mark | |
| Unrecognisable or not attempted | 0 marks | (4 marks) |
- (v) Colouring:
- | | | | |
|---------------|--|---------|-----------|
| Best evidence | Good quality, enhanced drawing the achieves visual impact e.g. good block colouring | 5 marks | |
| | Satisfactorily, controlled use of media, some attempt at higher skills e.g. tone, block colour | 4 marks | |
| | Moderate quality, some enhancement (good monochrome max.) | 3 marks | |
| | Poor quality, untidy, scribble does little to enhance product | 2 marks | |
| | An attempt at colouring | 1 mark | |
| | No colour – line drawings only | 0 marks | (5 marks) |

Total 22 marks

Question 4 Orthographic drawing & B.S.

All lines to be in the correct position and the correct length

(a)	Plan	Flap	2 Inclined lines (not full length max 1 mark only)	2 x 1 marks	(2 marks)
			2 Vertical lines	2 x 1 marks	(2 marks)
		Centre	3 Horizontal lines to correct length	3 x 1 marks	(3 marks)
		Lock flap	Horizontal lines correct length Only three short vertical lines	3 x 1 marks 1 mark	(4 marks)
(b) (i)	3 rd Angle convention				
	aligned and orientation			1 mark	
	centre line			1 mark	(2 marks)
(ii)		correct features identified		3 x 1 marks	(3 marks)
	BS	most leader lines have a gap to drawing (majority)		1 mark	
		consistent, neat and correct arrowheads		1 mark	
		dimension lines solid, parallel		1 mark	
		dimension lines touching leaders		1 mark	
		all numbers, above line (roughly in centre)		1 mark	
		correct numbers given (400,240,360)		1 mark	(6 marks)

Total 22 marks

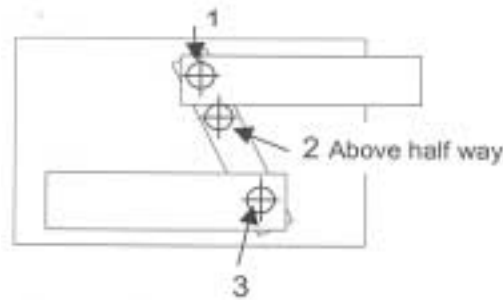
Question 5 Materials

(a)	Sketch	Correct structure e.g. in proportion, all layers in contact with facings.	2 marks	(2 marks)		
		A limited understanding of material structure	1 mark			
		Confused, incomprehensible	0 marks			
	Notes	Labels, and/or correct description	1 mark	(1 mark)		
	E.g	No attempt, incorrect (Cardboard – 1/2/3 core etc.)	0 mark			
(b)	<i>Pro rata</i>	A clear and reasoned understanding relating to weight, strength, cost, availability, safety, ease of processing, cushioning effect, non toxic, rigidity, etc	2 x 2 marks	(2 marks)		
		Some understanding but confused	1 mark			
		Incorrect, not attempted, 1 reason only	0 marks	(2 marks)		
(c)	Smart Material (<i>e.g. that which reacts in predictable way given external stimulus</i>)	(i)	Full, clear understanding e.g. Stimulus-reaction	3 marks	(3 marks)	
			Some understanding e.g. Clear example given, T-Shirt changes colour when being worn.			
			Materials which have a memory	2 marks		
				An attempt but confused	1 mark	
				wrong, no answer	0 marks	
			(ii) (<i>e.g. colour change due to temperature change</i>)	full, clear understanding	2 marks	(2 marks)
				some understanding	1 marks	
				wrong no answer	0 mark	
			(iii) Use	e.g. wine/beer bottle label, postage stamp	1 mark	(1 mark)
				T-shirts, or other clothes, mugs using temperature		
		Sensitive / decorative quality				
(d)	'Flat pack'	(i) <i>Advantage to manufacturer</i>	Full reasoned understanding	2 marks	(2 marks)	
			e.g. transport, storage, costs etc			
			An attempt, some understanding			1 mark
				Incorrect, confused	0 marks	
			(ii) <i>Advantage retailer</i>	Full reasoned understanding, e.g. storage, damage, quantity, costs etc	2 marks	(2 marks)
				An attempt, some understanding	1 mark	
				Incorrect, confused	0 marks	
			(iii) <i>Disadvantage to customer</i>	Full reasoned understanding	2 marks	(2 marks)
				e.g. customer provides labour, time consuming, difficult to assemble		
		An attempt, some understanding	1 mark			
		Incorrect, confused	0 mark			

Total 19 marks

Question 6 Mechanisms

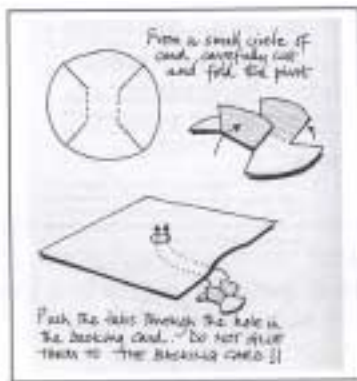
(a)



Use of given symbol for centre(s) (1 mark)
 Three pivots as shown approx in the centre of all strips (3 marks)
 Centre pivot (2) to be above half way (1 mark)

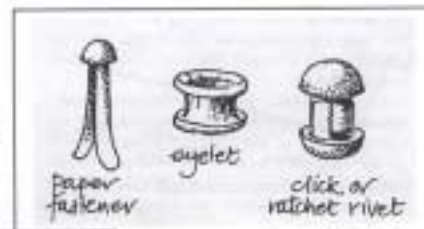
3 x 1 mark

(b) e.g.



Paper pivot

OR



bifurcated

Components

E.g.
 Butterfly clips
 Split pins

(i)	Sketch	Would it work?	1 mark	(2 marks)	
		Well communicated notes/labels	1 mark		
		Clear, explicit drawing, <u>exploded</u> , aligned parts	3 marks		
		Mostly correct, details missing	2 marks		
(ii)	Parts	An attempt, some understanding	1 mark	(3 marks)	
		Use of glue, incorrect	0 marks		
		Identifiable name matches sketch	2 x 1 mark		(1 mark)
		Incorrect, not attempted	0 marks		
		Accept <u>Strip of card</u> as a component.		(1 mark)	
		Do not accept card or cardboard			

Total 12 marks

Question 7 Environmental, cultural, Social Issues

- (a) *e.g. some have moral or religious significance, offensive etc*
 reasoned response, clear concise, example given 3 marks
 good response 2 marks
 an attempt, some understanding 1 mark
 incorrect, no attempt 0 marks (3 marks)
- (b) (i) *e.g. universal understanding, easy & quick to read, instantly recognisable*
 reasoned response, clear concise 2 marks
 partial response, confused 1 mark (2 marks)
 incorrect, no attempt 0 mark
- (ii) Images – umbrella, or roof, or shelter etc and rain drops (both) 2 marks
 Some images appropriate, only shelter or rain (partial meaning) 1 mark (2 marks)
 Not appropriate images 0 marks
- Style –monochrome 1 mark
 Simplified drg, e.g., stylised, 2-D 1 mark
 Word-less 1 mark (4 marks)
 Well drawn – straight lines, proportion, neat line etc 1 mark
- (c) (i) *e.g. rubbish buried in holes in the ground, disused quarries, sand pits limit life of quarry etc*
 understanding, clear concise correct response 2 marks
 partial understanding / response 1 mark
 incorrect, no attempt 0 marks (2 marks)
- (ii) *e.g. blight, waste of resources, visual pollution, litter, vermin affects house prices, building restrictions etc*
 clear concise correct response 2 x 2 marks (2 marks)
 partial response, e.g. it smells, pollution 1 mark (2 marks)
 incorrect, no attempt 0 marks
- (d) Accept either answer A or B
Two valid reasoned ‘environmental friendly’ responses.
e.g. A recyclable, refillable, conserves resources. (2 x 3 marks)
B compactable, minimal materials, conserves resources. (Waxed card on the outside, foil lined, recyclable, but not for food products)
- Full, clear, concise correct response related to choice with justification or example 2 x 3 marks (3 marks)
 A reasoned response 2 marks
 Valid attempt, one word related to question, vague 1 mark
 Incorrect, no attempt 0 marks (3 marks)

Total 23 marks**Total Paper 125 Marks**