



ASSESSMENT and
QUALIFICATIONS
ALLIANCE

Mark scheme

June 2003

GCSE

Design and Technology

Graphic Products

3553 (Short Course)

Foundation

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

(a)	Bars	correct height	<i>pro rata</i>	4 x 1 mark	(4 marks)
(b)	Key	all bar colours (hatching) matches key		1 mark	(1 mark)
		Not completed		0 marks	
(c)	Colour	even, within borders		1 mark	
		Consistently outside borders, not attempted		0 marks	(1 mark)
					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	0 marks	(2 marks)
Logo			
	Two or more discrete ideas	1 mark	
	Evidence of some development of one of the ideas	1 mark	
	Animal theme	1 mark	(3 marks)
Evaluation:	Critical, relevant, justified	2 marks	
	Superficial, self congratulatory or descriptive	1 mark	
	None	0 marks	(2 marks)
Sketching (Best Evidence)			
Very effective:	Consistent e.g. sharp and faint, straight	5-4 marks	
Satisfactory:	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)			
Correct number	Black one colour (+ white) in Combination in all sections	1 mark	
	Consistently applied in all sections on the letter styles or logos	2 marks	
	Applied in one section	1 mark	
	Not used	0 marks	(3 marks)

Total 17 marks

Question 3 Presentation

(a)	(i)	Use of spec: <i>pro rata, one mark per criteria</i> charity name 'PETZONE' – letter style (font) – <i>Not single line letters</i> logo – animal theme colours – <i>black plus one other</i>	4 x 1 mark	(4 marks)
	(ii)	Quality of Drawing: Very good line quality, clear, neat etc Satisfactory, some sharp, neat etc Adequately drawn, some reasonable lines Not attempted	5 – 4 marks 3 marks 2 marks 0 marks	(5 marks)
	(iii)	Combining Ideas: Two elements faithfully brought forward Two elements reasonably brought forward One elements brought forward Nothing brought forward (<i>different design</i>) (Ignore any totally new element)	3 marks 2 marks 1 mark 0 marks	(3 marks)
	(iv)	Layout: Very effective, consistently good, e.g. spacing, proportion. Line, good use of space Satisfactory, sense of composition, adequate spacing, some imperfections An attempt but lacks clarity and/or poorly spaced, crowded Unrecognisable or not attempted	3 marks 2 marks 1 mark 0 marks	(3 marks)
	(v)	Colouring: Best evidence Good quality, enhanced drawing the achieves visual impact e.g. good block colouring Moderate quality, some enhancement (Good monochrome max.) An attempt at colouring No colour – line drawings only	3 marks 2 marks 1 mark 0 marks	(3 marks)
(b)	BS	most leaders gap to drawing Consistent, neat and correct arrowheads Dimension lines solid, parallel Dimension lines touching leaders Numbers, above line, centre position Correct numbers given (400, 240, 360)	1 mark 1 mark 1 mark 1 mark 1 mark 1 mark	(6 marks)

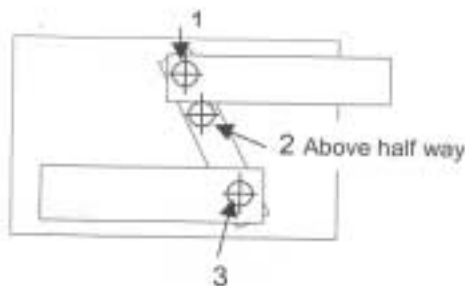
Total 24 marks

Question 4 Materials

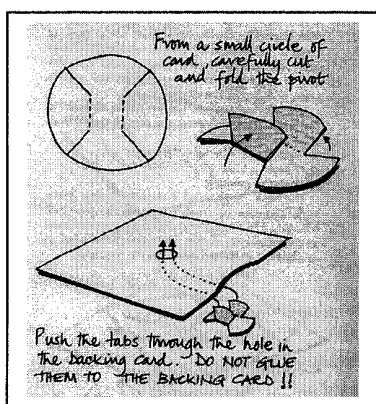
(a)	Sketch	correct structure e.g. in proportion, all layers in contact with facings	2 marks		
		an understanding of material structure e.g. some inaccuracies	1 mark		
		confused, incomprehensible	0 marks	(2 marks)	
	Notes	labels, and/or correct description	1 mark		
		No attempt, incorrect	0 marks	(1 mark)	
(b)	(i) (ii) <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 only if it does not refer to structure	1 mark		
		incorrect, not attempted.	0 marks	(2 marks)	
(c)	Smart Material (<i>e.g. that which reacts in predictable way given external stimuli</i>)	(i)	full, clear understanding	3 marks	
			some understanding	2 marks	
			an attempt but confused	1 mark	
			wrong, no answer	0 marks	(3 marks)
		(ii)	(<i>e.g. colour change due to temperature change</i>)		
		full, clear understanding	2 marks		
		some understanding	1 mark		
		wrong, no answer	0 marks	(2 marks)	
(d)	‘flat pack’	<i>Advantage to manufacturer</i>			
		full reasoned understanding e.g. transport, storage, costs etc	2 marks		
		an attempt, some understanding	1 mark		
		incorrect, confused	0 marks	(2 marks)	

Total 14 marks

Question 5 Mechanics

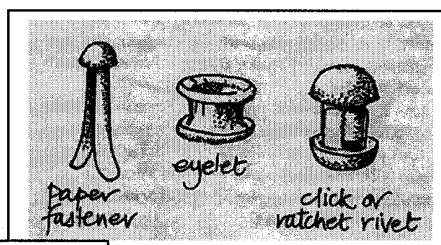


- (a) Use of given symbol for centre(s) (1 mark)
 Three pivots as shown (3 x 1 marks) (3 marks)
 Centre pivot to be above half way (1 mark)
 e.g.



Paper pivot

OR



bifurcated

Components

Accept split pin, butterfly pin/clip (not paper clip), paper fasteners, crimped eyelet, star binder, brass fasteners

- (b) Sketch Would it work? 1 mark (1 mark)
 Well communicated 2 marks
 An attempt, some understanding 1 mark (2 marks)
- Name Identifiable name matches sketch 1 mark
 Incorrect, not attempted 0 marks (1 mark)
- (c) Equipment to be 'making', relates to tool 2 x 1 marks
 e.g. craft knife, cutting mat, hot glue gun, scissors (2 marks)
- safety infers prevention of harm to user & related to
 named equipment, rule 2 x 1 marks (2 marks)

Total 13 marks

Question 6 Quality Control & Computer

(a)	Batch		1 mark	(1 mark)
(b)	(i) Computer Aided Manufacture	-fully correct	2 marks	
		-two words correct	1 mark	
		-one word/incorrect	0 marks	(2 marks)
	(ii) Any reasoned response e.g. reliability, accuracy, easy of modifying output etc		2 marks	
	Some understanding		1 mark	
	One word/incorrect		0 marks	(2 marks)

Total 5 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*
- | | | |
|---|---------|-----------|
| reasoned response, clear concise | 2 marks | |
| partial response, confused | 1 mark | |
| incorrect, no attempt | 0 marks | (2 marks) |
| About looking after product and the packaging | | |
- (ii) Images – e.g. umbrella, or roof or shelter etc and rain drops (both)
- | | | |
|-------------------------|---------|-----------|
| some images appropriate | 1 mark | |
| not appropriate images | 0 marks | (2 marks) |
- Style – monochrome
- | | | |
|---|--------|-----------|
| Simplified drg, e.g. stylised, 2-D | 1 mark | |
| Word-less | 1 mark | |
| Well drawn – straight lines, proportion, neat lines etc | 1 mark | (4 marks) |
- (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, effect house prices, building restrictions etc.*
- | | | |
|--------------------------------|---------|-----------|
| clear concise correct response | 2 marks | |
| partial response, confused | 1 mark | |
| incorrect, no attempt | 0 marks | (2 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 | 3 marks | (3 marks) |
| Partial response | 2 marks | |
| Valid attempt, one word related to question, vague | 1 mark | |
| Incorrect, no attempt | 0 marks | (3 marks) |

Total 21 marks**Total Paper 100 Marks**