2008 Craft and Design

Standard Grade – F/G/C

Finalised Marking Instructions

2008 Craft and Design

Standard Grade – Foundation

Marking Instructions

Acceptable answers	Unacceptable answers or answers for discussion
1. (a) Third tick box (Acrylic)	
(b) (i) Second tick box (Try square)	
(ii) Third tick box (Coping saw)	
(iii) Flat file **or** file : hand file – 1	draw file – 0
(c) *2.* Draw File	
3. Smooth with wet and dry paper	
4. Polish with soft cloth	
(d) Second tick box (Twist)	
(e) Fourth tick box	
(f) Third tick box (Round head screw)	
(g) One from: • use appropriate abrasive paper • use a rubber • use a plane.	

Acceptable answers	Unacceptable answers or answers for discussion
2. **Fault 1** – One from:	
• too far from toilet • not close enough to toilet. • in wrong position – 1 mark	fixed to wall and not change – 0
Any acceptable answer indicating **distance** from toilet	
Fault 2 – One from:	
• too close to shower cabinet • not allowing cabinet door to open.	
Any acceptable answer indicating **proximity** to cabinet door	
Fault 3 – One from:	
• too low • not high enough.	
Any acceptable answer indicating **lack** of height	
Fault 4 – One from:	
• too high • not low enough to reach.	wrong position – 0
Any acceptable answer indicating **too much height**	
3. **(i)** Problem Analysis	
(ii) Brief	
(iii) Specification	
(iv) Ideas	
(v) Working Drawing	
(vi) Evaluation	
4. **(a)** Third tick box (It does not contain iron)	
(b) **(i)** Second tick box (metal lathe)	
(ii) Knurling	
(iii) Second tick box (Die)	
(iv) First tick box (Cutting an external thread)	
(c) Third tick box	
(d) Paint	

Acceptable answers			Unacceptable answers or answers for discussion
5.	**(a)**	Beech	
	(b)	Third tick box (The thickness of computer game) **AND** Fifth tick box (The number of computer games)	
	(c)	Second tick box (Through housing)	
	(d)	Steel rule Marking gauge G-clamp Tenon saw Bevel-edged chisel	
	(e)	Any one from the following: • disc sander • belt sander • sander • band saw • jig saw • hegner saw • scroll saw. • fret saw – 1 mark	saw – 0
	(f)	Fourth tick box (Forstner bit)	
	(g)	Paint brush **OR** brush : Spray – 1	paint it – 0 cloth – 0

Acceptable answers				Unacceptable answers or answers for discussion
6.	**(a)**	*Line 1* -	Oak	
		Line 2 -	264	
		Line 3-	12	
		Line 4 -	2 and 120	
	(b)	Template		stencil – 0
	(c)	Third tick box (Plane)		
	(d)	**(i)**	Woodwork lathe **OR** wood lathe : lathe – 1	
		(ii)	Driving fork	
		(iii)	Third tick box (Tool rest is secured) Fourth tick box (Material turns freely) Fifth tick box (Speed set correctly)	every box ticked over the answers take a mark off
7.	**(a)**	**(i)**	Spring dividers	
		(ii)	Engineer's square	
		(iii)	Centre punch	
		(iv)	Tin snips	
	(b)	Any suitable variation of the following: • safety guard not down • chuck key not removed • tool (spanner) on top of machine • material not held securely • handle would hit the spanner • no scrap wood.		

2008 Craft and Design

Standard Grade – General

Marking Instructions

Acceptable answers	**Unacceptable answers or answers for discussion**
1. (a) Any suitable hardwood	balsa – 0
(b) Cross halving : halving – 1	
(c) (i) Marking gauge	
(ii) Tenon saw; dovetail saw; back saw	hacksaw – 0; handsaw – 0; gents saw – 0
(d) Wood lathe Lathe – 1 mark	
(e) (i) Outside callipers; external callipers Callipers – 1 mark	odd leg – 0; inside callipers – 0
(ii) Gouge	

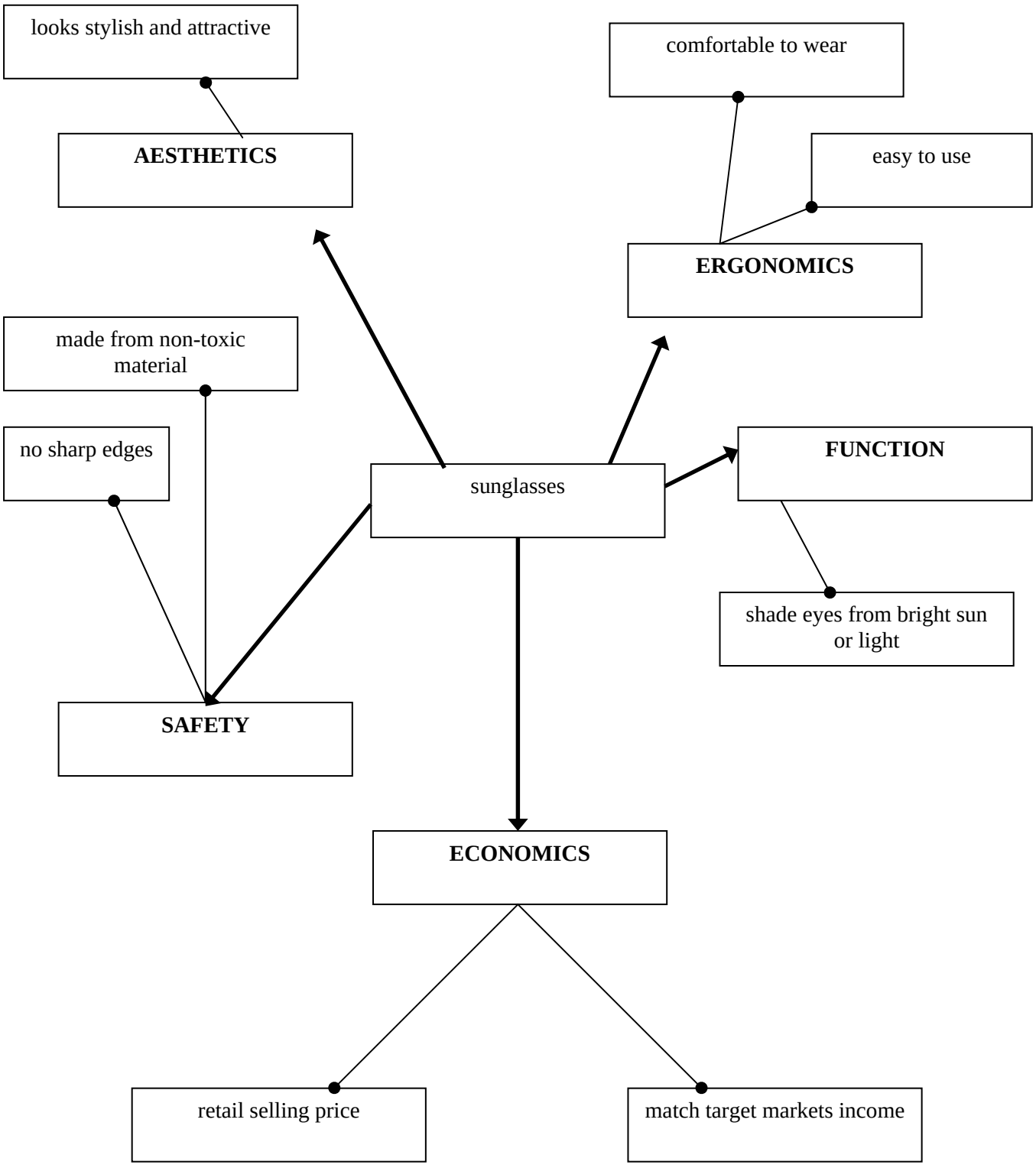
2.

Material	Classification	Properties
Mild Steel	Ferrous metal	Strong, magnetic, rusts
Plywood	Manufactured board	Strong, multi-layered board available in large sheets
Aluminium	Non ferrous metal	Lightweight, silver coloured
Acrylic	Thermoplastic	Available in many colours, can be heated and shaped
Pine	Softwood	Yellowish red coloured wood

Acceptable answers				Unacceptable answers or answers for discussion
3.	**(a)**	Any two of: • wall mounted • easy to put notices on and off • easy to get drawing pins in and out • displays/notices can be clearly seen • hold more than one notice • have a large display area • support system can move board up or down • adjustable height on notice board • bracket and chain corrosion resistance • easily changed • strength • safety • hangs level • looks nice • any other relevant answer.		easy to notice – 0 square – 0
	(b)	Countersink; slotted		
	(c)	Speed : all the same – 1; reuseable – 1 Accurate; easy; neater Repeatable – 1 mark		
	(d)	Stage 2	Mark the position of the hole; locate centre; mark indent	punch centre – 0
		Stage 3	Oddleg callipers; Jenny callipers	
		Stage 4	Cut waste; cut out shape; cutting metal	
		Stage 5	A file	emery cloth – 0
		Stage 6	Bend to shape/fold	
4.	**(a)**	**(i)** Crucible		
		(ii) Riser		
		(iii) Drag		
	(b)	Prevent slipping; stability Protect surface		
	(c)	Coping saw; abra file; fret saw		junior hacksaw – 0
	(d)	**(i)** Chuck key removed Work secure Drill in straight Correct speed Guard down		everything is tight – 0
		(ii) Support underside of acrylic Fast speed slow feed Step drill Clamp it down Pilot hole Drill slowly		‘go slowly’ – 0 masking tape – 0 heating acrylic – 0

Acceptable answers			Unacceptable answers or answers for discussion
(e)	**(i)**	Strip heater; line bender	
	(ii)	Gloves; leather apron; apron; hair tied back; loose clothing	rubber gloves – 0 tongs – 0

5.



MUST USE THE LIST

			Acceptable answers	Unacceptable answers or answers for discussion
6.	**(a)**	**(i)**	Mortise and tenon	
		(ii)	Mortise chisel	
		(iii)	Masking tape/mark on chisel	measure with rule – 0
	(b)		PVA	Bostick – 0
	(c)	**(i)**	Sash cramp; sash clamps	clamps – 0
		(ii)	To prevent bending/even out stresses Implies flatness	
		(iii)	Scrap piece of wood	paper towel/cardboard – 0
	(d)		Method 1 Tri Square; corner to corner Method 2 Check diagonals	steel rule – 0; set square – 0; truth justice stick – 0
	(e)		Varnish; stain; oil; wax; sanding sealer	paint – 0
	(f)		Vacuum former	vacuum heater – 0; vacuum – 0
	(g)	**(i)**	Rounded edges	
		(ii)	Tapered edges	
	(h)		Evaluation	
7.	**(a)**	**(i)**	Adjustable shelf height	add more shelves – 0
		(ii)	Blind hole	
	(b)	**(i)**	Housing/through housing	stopped housing – 0
		(ii)	Corner rebate/lap joint/rebate	
	(c)		Remove sharp edges/stop fingers being cut/safety Does not scratch the shelf; aesthetic reasons	easier to slot in the shelf – 0
	(d)		To get a grip of peg; stop shelf from slipping	
	(e)	**(i)**	Centre lathe/metalwork lathe/metal lathe	lathe – 0
		(ii)	Part A Headstock Part B Chuck Part C Tailstock	

2008 Craft and Design

Standard Grade – Credit

Marking Instructions

Acceptable answers				Unacceptable answers or answers for discussion
1.	**(a)**	Two from any design factor or any subdivision of one design factor: • the size of the DVD player • the size of a DVD • construction • the number of DVDs to be held • the space available for the unit • the size of the TV • access to remove/replace DVDs • shape/colour – 2 marks • safety • environmental • cost • target market • manufacture • joint etc. • width and height – 1 mark only • the height of the DVDs/the breadth of the DVDs – 1 mark only • ergonomics – 1 mark, aesthetics – 1 mark • design factor plus one from same design factor – only 1 mark • eg aesthetics/colour – only 1 mark		material – 0
	(b)	The joint is not strong enough		
	(c)	**(i)**	Stopped housing joint	housing joint – 0 marks
		(ii)	One from: • it looks neater from the front • the joint is not seen.	stronger – 0; flush – 0
	(d)	**(i)**	Answer should indicate slackening and tightening the screw (1 mark) and adjusting the height of the blade (1 mark) either by measurement or to the gauge mark	
		(ii)	Same depth Accurate Flat/level Easier (with explanation)	The bottom of the housing will be level (or it will give a neater finish – 0 marks). neater – 0; smooth – 0 easier (one word) – 0

			Acceptable answers	Unacceptable answers or answers for discussion
2.	**(a)**	**(i)**	How human beings interact with products or a similar answer comfort – 1 ease of use – 1	human dimensions – 0
		(ii)	A 2D/3D model of a human; or applied – 1	
		(iii)	One from: • to check how comfortable the chair might be • to check the correct height of the seat • to check the height of the back • testing • design aid • evaluating • check. • use of 'mannequins' to check widths – 1 mark	
		(iv)	One from: • the adjustment of the height • the padded arm rests • the shaped seat and back • rotates • leans back • castors. • castors for ease of movement – 1	height only – 0; sizes – 0 width only – 0
	(b)	**(i)**	The 95th %le (only answer)	
		(ii)	If it fits a person with a broad back it will fit people with narrower backs or similar answers. 95% of population – 1 implies larger people – 1	average – 0

Acceptable answers					Unacceptable answers or answers for discussion
3.	**(a)**	**(i)**	Process A	Facing off, facing	
			Process B	Chamfering or taper turning or tapering	
			Process C	Parting off or parting	
		(ii)	Two from: • because of the diameter of the material • the finish required • the type of material • the process being carried out • size of cut • quality of finish.		cutting compound – 0
	(b)	**(i)**	6mm		
		(ii)	It should be chamfered or similar Rounded off		flat – 0; cutting compound - 0
		(iii)	A split die or die Die stock – 1 mark		
		(iv)	Two from: • use cutting compound • turn die 180 degrees then back then cut again etc • make sure the die is at 90 degrees to the axis of the metal rod or similar • lubrication • align the die • back cutting • second cut.		do it slowly – 0
		(v)	The middle screw should be loosened (one mark) and the two outer screws should be tightened (one mark). Any adjustment – only one		

			Acceptable answers	Unacceptable answers or answers for discussion
4.	**(a)**		An appropriate idea generation technique eg shape manipulation (addition and subtraction of shapes); morphological analysis; 'taking the pencil for a walk'; SAM (shape and manipulation); brainstorming; thought showers; mind maps; spider diagram; analogy; mood board; look in magazines. Existing products – 1 mark	Themes – 0 Sketches – 0
	(b)		The group of people who the table is designed for; the group of people who would be attracted to the design; price; market to be sold; social grouping.	
	(c)	**(i)**	Two from: • the curves and the straight lines • the matt and polished finishes • the metal and the wood (including MDF) • the warm and cool colours used • 'paint' only 1 mark • 'material' only 1 mark • 'finishes' only 1 mark • 'shape' only 1 mark • colour.	does not look bland – 0
		(ii)	One from: • to give the design impact • to attract people to buy it • to make it look different to other tables or similar • interesting • stand out • eye catching • impact • draw attention • highlight.	modern – 0 appealing – 0 attractive – 0 better looking – 0
	(d)	**(i)**	Two from: • to test stability • to test aesthetics • to gauge customers' reaction to it • to see if people would buy it • evaluate aspects of design • test construction processes • test manufacturing processes • how it looks • economic before production. • make design changes – 1 mark	

Acceptable answers	Unacceptable answers or answers for discussion
(ii) One from: • card • foam • paper • polystyrene • balsa • off cuts • plywood • acrylic • plastic • any other suitable material. • MDF – 1 mark	wire – 0 clay – 0 plasticine – 0
(e) Two from: • the sizes of different parts • the overall sizes of the table • construction methods • materials • different views • scale • cutting list or parts of cutting list. • the length; the height – 1 mark • number of parts – 1 mark	colour – 0

		Acceptable answers	Unacceptable answers or answers for discussion
5.	**(a)**	A mixture of two or more metals/elements. Metal plus something!! Carbon – 1 mark	does not rust – 0
	(b)	**Estimate** half way and scribe a line from one edge then scribe a line from the other edge (1 mark). **Adjust** the odd leg callipers and repeat scribing and adjusting until the marks are in the middle (1 mark). Answers should indicate scribing from each edge and adjusting to achieve both marks are on the centre. Full answer – 2 marks Part answer – 1 mark	join diagonals – 0
	(c)	The hide mallet will not mark the metal but the ball pein hammer would. Less damage to brass.	
	(d)	Work hardened – the metals get harder where it is bent or hammered; implies being worked on; brittle.	'harder' only – 0
		Annealed – made softer so that it can be bent or formed more easily. Full process on annealing. Soften metal.	'heated up' only – 0
		Malleable – can be hammered or shaped without fracturing (accept 'breaking'). Easily shaped. Easily bent.	
	(e)	A plastic which can be re-heated and re-shaped many times. Plastic memory.	recycled – 0
	(f)	Two from: • available in a variety of colours • can be heated and bent easily • no finish required • can be reheated and reshaped if mistakes are made • recycled • maintenance • looks good/nice • easy to shape • aesthetic. Must be two distinct areas.	cost – 0 strong – 0 durable – 0 easy to work with – 0 easy to cut – 0 rust – 0

Acceptable answers	Unacceptable answers or answers for discussion
(g) One from: • set up a production line • groups of people making the same parts then assemble • any answer which suggests a method of efficient production • stencil • Jigs/templates – 1 mark	machines – 0 vacuum forming – 0 more workers – 0

Acceptable answers	Unacceptable answers or answers for discussion
6. (a) Two from:	
• it is strong, stable (will not warp or twist) • can be painted • quality finish • defect free • exterior use • durable • lightweight. • Available in large sheets – 1 mark	Easy to cut – 0 marks easy to work – 0 easy to use – 0 cost – 0 cheap – 0
(b) One from:	
• a band saw • a jig saw • scroll saw • router. • Accept Hegner – 1 mark	
(c) (i) Drill a hole in the waste material.	
(ii) An answer which describes the slackening and retightening of the handle (1 mark) and moving the frame out of the way to allow for cutting the curve (1 mark). Accept any answer that gives two stages in manufacture of handle. Full answer – 2 marks Part answer – 1 mark	
(d) Use a template or cut one and use it as a template or tape together and cut both at the same time.	
(e) (i) Tool 1 a **twist** drill Tool 2 a **forstner** bit 'jobber'	drill bit – 0
(ii) Tool 2 will mark the centre for tool 1 or similar.	
(f) One mark for one of the following:	
• a dowel joint • a mortise and tenon • glued and screwed • biscuit joint • nut/bolt • knock down fitting. and one mark for a recognisable sketch of the joint named	screws – 0 butt joint – 0 housing – 0 bridle – 0 nailing – 0
(g) Primary colours are attractive to young children. Bright Aesthetically pleasing.	

[END OF MARKING INSTRUCTIONS]