ACCESS NEW VERSION FROM G: DRIVE

	EARNSHAW STATE COLLEGE	
	Student name:	**Student number:**
	Teacher name: MR CHAPMAN	**Date:** CHECK CRITERIA

Subject	Year 7 Industrial Technology and Design		
Technique	Project (Product and Theory Booklet)		
Unit	Manufacturing Design		
Topic	The Manufacturing of Key Rings		
Conditions			
Time	10 Weeks (ongoing assessment)	**Perusal**	-
Word length	-	**Seen/unseen**	Seen
Due Date		**Draft Due**	

SHEET NO. 6 EVALUATING MISSING

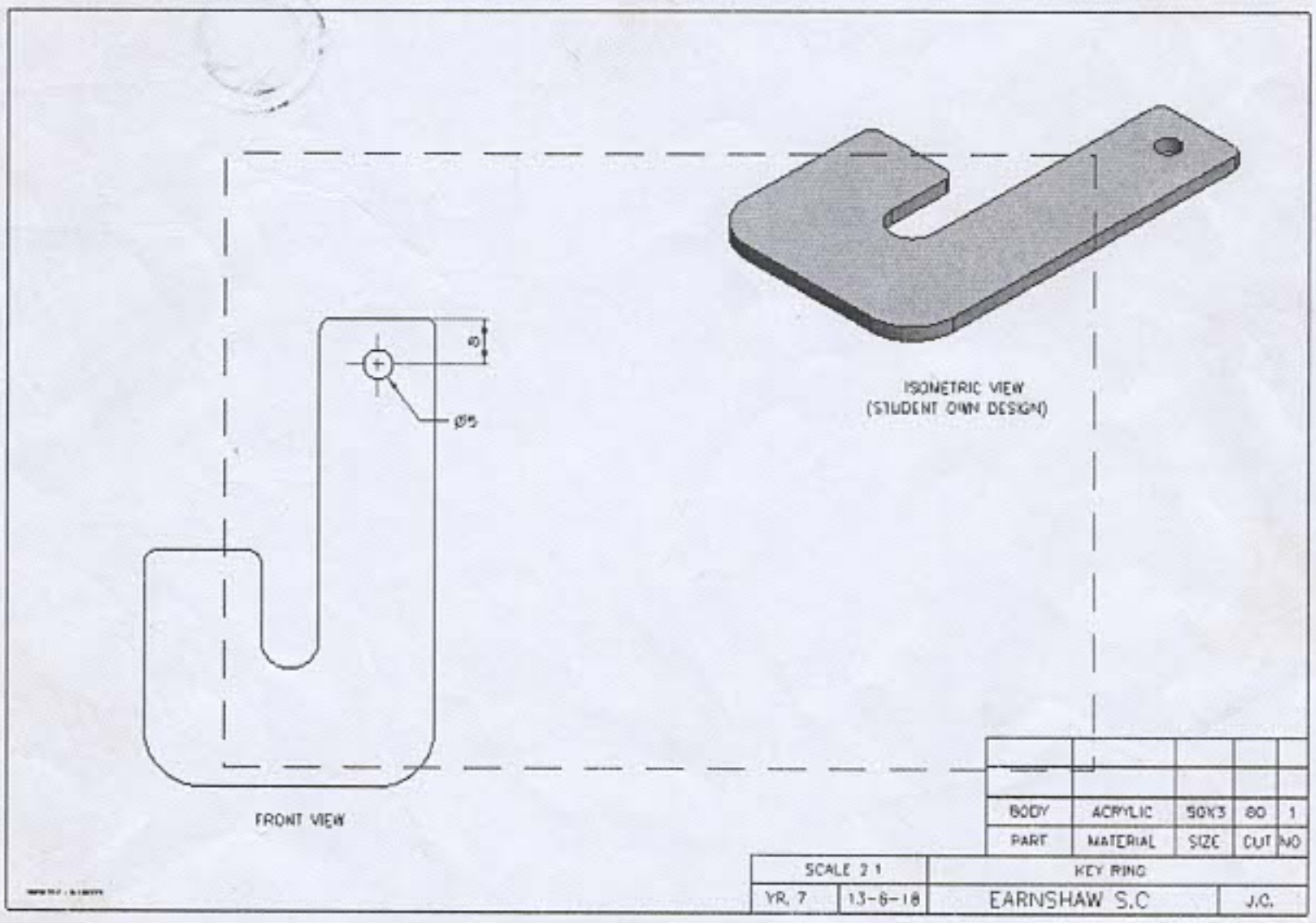
Instructions

- Work is to be completed individually, supervised with teacher assistance. Some assistance (e.g. assembly phase, occasional technical assistance) from fellow students is allowed.
- Questions 1, 2 and 6 to be done under exam conditions.

Task

You are a product designer for a company that has asked you to design and build a prototype Key ring.

Stimulus/Context



Assessment objective/s

- Knowledge and Understanding
- Processes and Production Skills

Year 7 / 8 I.T.D. Criteria Sheet

The folio of student work has the following characteristics

		A	B	C	D	E
Knowledge and Understanding	1. Technology & society	comprehensive explanation of: factors that influence the design of products, services and environments to meet present and future needs the contribution of design and technology innovations and enterprise to society	detailed explanation of: factors that influence the design of products, services and environments to meet present and future needs the contribution of design and technology innovations and enterprise to society	explanation of: factors that influence the design of products, services and environments to meet present and future needs the contribution of design and technology innovations and enterprise to society	description of: factors that influence the design of products, services and environments to meet present and future needs the contribution of design and technology innovations and enterprise to society	statements about: factors that influence the design of products, services and environments to meet present and future needs the contribution of design and technology innovations and enterprise to society
	2. Technologies contexts	comprehensive explanation how the features of technologies impact on designed solutions and influence design decisions for each of the prescribed technologies contexts	detailed explanation of how the features of technologies impact on designed solutions and influence design decisions for each of the prescribed technologies contexts	explanation of how the features of technologies impact on designed solutions and influence design decisions for each of the prescribed technologies contexts	partial explanation of how the features of technologies impact on designed solutions and influence design decisions for each of the prescribed technologies contexts	statements about how the features of technologies impact on designed solutions and influence design decisions for each of the prescribed technologies contexts
K. & U. Overall Standard						
Processes and Production skills	3. Investigating and defining	comprehensive evaluation of needs or opportunities for each of the prescribed technologies contexts	detailed evaluation of needs or opportunities for each of the prescribed technologies contexts	evaluation of needs or opportunities for each of the prescribed technologies contexts	explanation of needs or opportunities for each of the prescribed technologies contexts	statement about needs or opportunities for each of the prescribed technologies contexts
	4. Generating and designing	purposeful creation and adaptation of design ideas making well-considered decisions	effective creation and adaptation of design ideas making considered decisions	creation and adaptation of design ideas making considered decisions	partial creation and adaptation of design ideas making decisions	fragmented creation and adaptation of design ideas
		comprehensive and effective communication to different audiences using appropriate technical terms and a range of technologies and graphical representation techniques	effective communication to different audiences using appropriate technical terms and a range of technologies and graphical representation techniques	communication to different audiences using appropriate technical terms and a range of technologies and graphical representation techniques	partial communication to audiences using technical terms and technologies and graphical representation techniques	fragmented communication to audiences using everyday language and graphical representation techniques
	5. Producing and implement-ing	proficient and consistent production of effective designed solutions for the intended purpose independently and safely	consistent production of effective designed solutions for the intended purpose independently and safely	production of effective designed solutions for the intended purpose independently and safely	guided production of designed solutions for the intended purpose safely	guided production of designed solutions for a purpose safely
		discerning use of criteria for success (including sustainability considerations) to judge the suitability of: • their ideas • designed solutions • processes	informed use of criteria for success (including sustainability considerations) to judge the suitability of: • their ideas • designed solutions • processes	use of criteria for success (including sustainability considerations) to judge the suitability of: • their ideas • designed solutions • processes	partial use of criteria for success (including sustainability considerations) to describe the suitability of: • their ideas • designed solutions • processes	fragmented use of criteria for success to make statements about: • their ideas • designed solutions • processes
	7. Collaborating & managing	application of project management skills to include comprehensive documentation and discerning use of project plans to manage production processes.	application of project management skills to include detailed documentation and informed use of project plans to manage production processes.	application of project management skills to document and use project plans to manage production processes.	application of project management skills to partially document project plans and use of production processes.	use of project management skills to partially document aspects of project plans and use aspects of production processes.
P.P.S. Overall Standard						

RESOURCES: 3 DIFFERENT HAND FILES, BATTERY DRILL, COPING & TENON SAW.

KNOWLEDGE AND UNDERSTANDING

1. Technology and society

A. Explanation of factors and technologies

(i) What is the name of the material used in the Key ring?

POLY-METHYL-METHACRYLATE (ACRYLIC) 1MK

(ii) A sheet of plastic 900mm long and 600mm wide material is cut into pieces 80mm long and 50mm wide. How many key ring blanks could be cut from this size sheet?

2MKS

900 (L) ÷ 80 (L)
= 11.25.

600 (W) ÷ 50 (W)
= 12

NO. OF PIECES =
11 × 12
= 132.

(iii) 95 key rings can be cut out of one large piece of plastic. How much would one key ring cost if a full sheet costs $76.45.

2MKS

$76.45 ÷ 95
= $0.80.

(iv) List six tools/equipment items used in the production of your key ring.

1. HOLDFAST PENCIL DRILL PRESS
2. DRILL BIT VICE
3. COPING SAW
4. FILE WET & DRY "V" CUTTING BOARD
5.
6.

6 MKS.

B. Changes to designed solutions

List 2 possible mistakes that could lessen the quality of your final key ring.

	POSSIBLE MISTAKE	HOW TO PREVENT THE MISTAKE OR CORRECT IT.
1.	e.g. BREAK. PLASTIC	(CORRECTION) START WITH A NEW PIECE. (PREVENTION) HOLD PLASTIC FIRMLY.
2.		

4MKS

TOTAL: 15 MARKS

2. Technologies contexts

A. Evaluation of tools (technologies).

In producing the key ring explain why / compare why we used certain tools and not others. Relate your answer to the key ring.

Why would you use a **Smooth File** compared to a **Bastard File**?

A BASTARD FILE PUTS DEEP SCRATCHES IN THE MATERIAL. WHEN A SMALL AMOUNT OF MATERIAL IS TO BE REMOVED

Which is better, drilling the key ring hole using a **drill press** or a **battery drill**?

IT IS DIFFICULT TO HOLD A BATTERY DRILL AT 90° TO THE JOB. HOLES WILL GENERALLY NOT BE SQUARE.

Coping saw or a **tenon saw**.

A TENON SAW IS USED TO MAKE STRAIGHT CUTS. A COPING SAW CAN MAKE CURVED CUTS

PROCESS AND PRODUCTION SKILLS

3. Investigating and defining

A. Context: You are a product designer for a company that has asked you to design and build a prototype Key ring.

B. Possible key ring shapes. These may include a surfboard, the first letter from a person's name, a sporting team logo (Broncos), a popular brand logo (Nike).

Below, list ten key ring shapes that appeal to you.

1. _____ 2. _____ 3. _____ 4. _____

5. _____ 6. _____ 7. _____ 8. _____

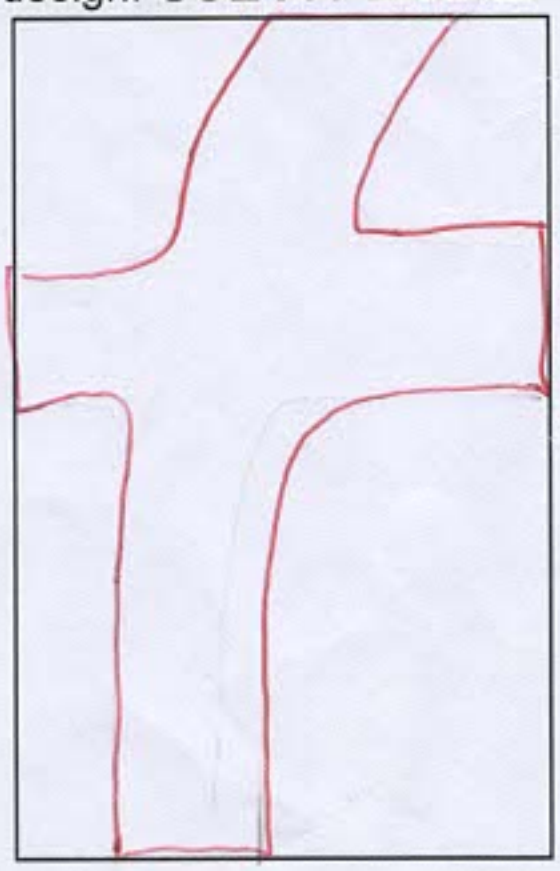
9. _____ 10. _____

C. Tick "√" 3 shapes you think are the best.

D. Overall shape.

- Think about the outside of a possible shape.
- Think about the only internal details that can be used are circles which are created by a drill.
- Think about the example of a smiley face with eyes and mouth. The mouth would not be possible to create as it is not circular and so can't be used in the design.

After considering all possible factors, sketch a possible key ring design. **USE A PENCIL.** (Do not to use an eraser or ruler).



Don't start a sentence with "<u>because</u>", "<u>and</u>", "<u>but</u>", "<u>also</u>".

E. Explain <u>why you have chosen this design</u> and <u>list 2 aspects that you like and 2 aspects you dislike</u> about your first attempt. <u>Start each sentence with a capital letter and end with a full stop</u>.

Word List: Symmetrical, break, shape, circular, straight, parallel, square.

+'s- _____

_____

_____

-'s - _____

_____

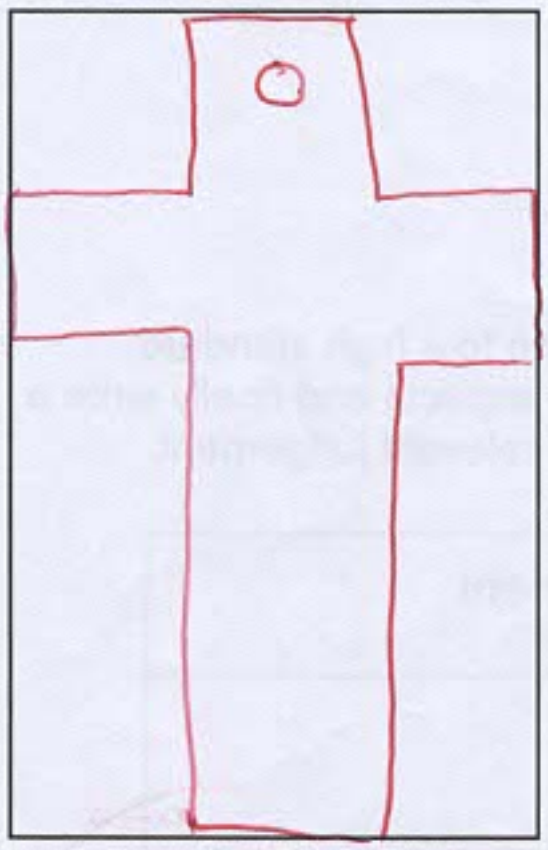
_____

EXAMPLE: LETTER "T".

4. Generating and designing

Sketch three different design **variations** of your chosen shape. Think about square corners versus rounded corners. Think about the size of the shape compared to the size of the plastic. Think about the position of the key ring hole. Think about the symmetry of the shape. Now write a comment (+ / -) about each one and pick the final design you will use. Explain why!!! **USE A PENCIL.**

Start a sentence with a capital letter and end with a full stop.



+'s - _____

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-'s - _____

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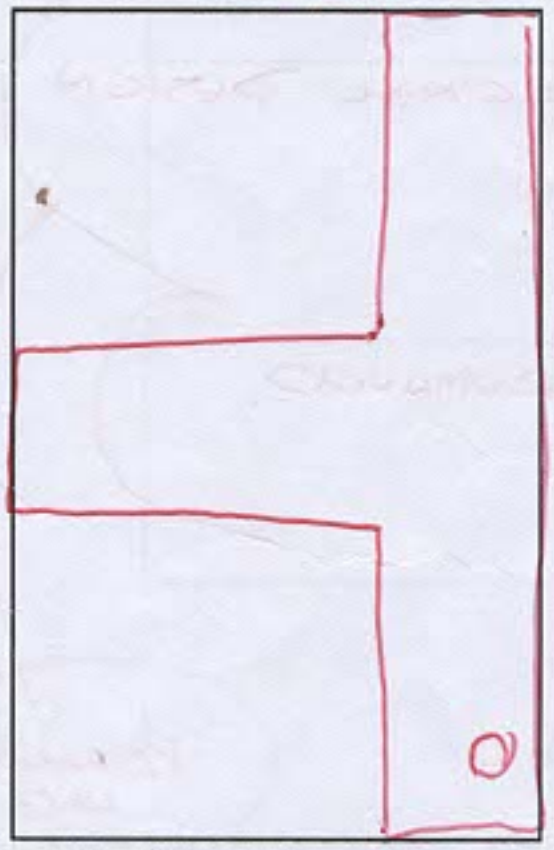

+'s - _____

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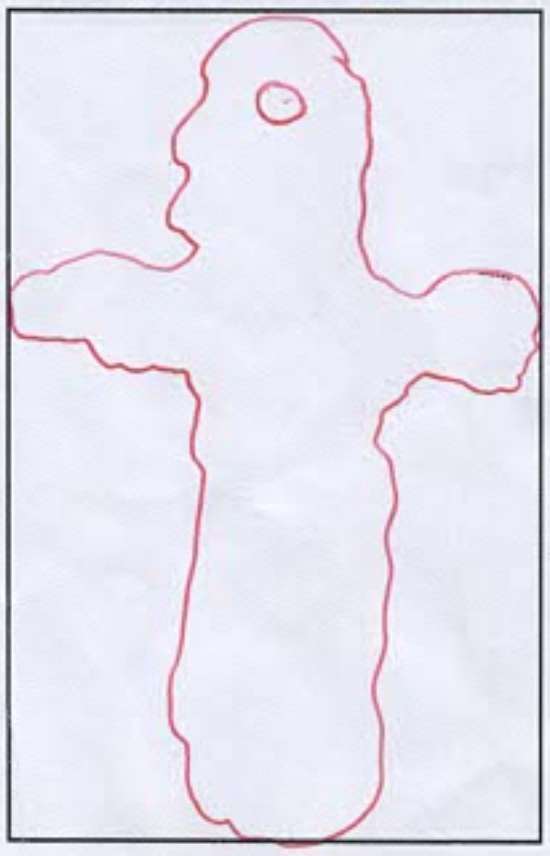

+'s - _____

_____

_____

_____

-'s - _____

_____

_____

5. Producing and implementing

Key Ring production.

This relates to the quality of your final key ring.

6. Evaluating

Evaluation

To produce a well-made Key Ring, it's important that your work is done to a high standard. Make a judgement of **your** project (tick the relevant box) about these aspects and finally write a comment justifying your decision, explaining why you have made the relevant judgement.

Aspect	Judgement				Comment
	V. G.	G.	S.	P.	
1. How strong and durable is my key ring?					
2. To what extent is the final key ring shaped and proportionally correct in relation to the chosen design?					AS PER ORIGINAL DESIGN
3. How well have my Key Ring edges been polished? WHAT IS THE QUALITY OF MY KEY RING EDGES.					SCRATCHES REMOVED.

½ MARK EACH

1½ MARKS EACH

7. Collaborating and managing

Making adjustments to the project where necessary and working independently and in a cooperative manner.

Your teacher will make continual observations regarding these things.

IS MY FINAL KEY RINGSHAPE THE SAME AS MY CHOICE IN SECTION 4 >