



ORANGE HIGH SCHOOL

ASSESSMENT TASK NOTIFICATION

Subject	Engineering Studies Preliminary Course
Topic	Reverse Engineering Report
Class Teacher	Mr D Boundy
Head Teacher	Mr D Wait
Year	2019 Preliminary
Date Given	Friday 5 th April 2019
Date Due	Term 1, Week 10
Weighting	30%

Assessment Outline

The Engineered Products module is a 7-week unit of work that encompasses the history and development of various household appliances. The application and manufacturing processes of materials are explored along with engineering mechanics principles that associate with Household appliances. This assessment task is a combination of these parts and the compilation of this information is to be presented in the form of an Engineering Report, which is a common task of Engineers.

What the Task Involves: (What to Do)

In this task students are to choose a household kitchen appliance, which they are to research and investigate the following criteria to compile into an Engineering Report:

- 1. Identify the household appliance of choice and how it is used and why you chose it. You should have a image to identify the appliance.**
- 2. Answer the following questions:**
 - i. What type of materials are identifiable? Choose at least 4 different components/parts of different materials (2 metals and 2 non-metals)
 - ii. What are the atomic structures, bonding and mechanical properties of the materials chosen?
 - iii. Why are the appliance components/parts you have chosen, manufactured from these materials? Identify with images of each component
 - iv. What are the forming processes used for each component/part? Use images to identify each process in addition to your explanation.
- 3. Explain the influence that engineering has made to design, technological and historical change in the production of the household appliance and its effect on people in relation to the use of household appliances.**
- 4. Complete the following orthographic drawing that best demonstrates the design of the appliance you have chosen.**
 - a. Dimensioned Orthogonal to AS1100 standards
- 5. Ensure that the report you submit follows the following format:**
 - a. Title Page
 - b. Contents page
 - c. Summary
 - d. Introduction
 - e. Body/research/data analysis
 - f. Conclusion
 - g. Bibliography/Reference list.
 - h. Appendix

Important Notes:

- **Engineering Report will be presented in electronic format via the Google Classroom platform.**
- **The Engineering Report Drawings should be presented in a plastic sleeve only.**
- Should the assessment task be submitted after the delivery date the student will be awarded a zero (0) mark.
- To avoid conflicts of plagiarism all sources of research should be referenced.
- Refer to the assessment booklet for Assessment Guidelines.

Non-completion of Task:

If you know you are going to be away on the day that the task is due, you must make alternative arrangements with your teacher beforehand. If you are suddenly away on the day that the task is due, you must contact your teacher or Head Teacher on your return to school. Documentation will be required in both classes.

Plagiarism:

Plagiarism, the using of the work of others without acknowledgement will incur serious penalties and may result in zero award. Any cheating will also incur penalties.

Failure to follow the above procedures may result in a zero award.

The policies and procedures that are outlined on the ROSA booklet will be followed regarding the non-completion of assessment tasks.

Outcomes Assessed

P1.2 – explains the relationship between properties, structure, uses and applications of materials in engineering.

P2.2 – describes the nature of engineering in specific fields and its importance to society.

P3.2 – develops written, oral and presentation skills and applies these to engineering reports.

P3.3 – applies graphics as a communication tool.

P4.2 – describes the influence of technological change on engineering and its effect on people.

P6.1 – applies knowledge and skills in research and problem solving related to engineering

P6.2 – applies skills in analysis, synthesis and experimentation related to engineering.

Marking Rubric

This marking rubric is intended to assist students in identifying where the allocation of marks are aligned and what is required to gain the maximum mark.

Criteria for:	Mark Range
1. Choice of Household Appliance	
Clearly Identifies and clarifies the appliances intended use.	4-5
Clearly identifies and briefly clarifies the appliances intended use.	2-3
Identifies Appliance and does not clarify its use.	1
2. Materials, Components & Processes	
Comprehensively describes the types and structure/bonding of materials, components and their manufacturing process in relation to a household appliance. Complete 4 different materials as per requirements	8-10
Describes the types of materials, components and their manufacturing process in relation to a household appliance. Completes some/or all the materials as per criteria.	4-7
Briefly describes the types of materials, components and their manufacturing process in relation to a household appliance. Complete only some of the materials as per criteria.	1-3
3. Engineering Influence on Technological Change	
Shows detailed knowledge on the technological and historical change in engineering and its effect on people in relation to household appliances.	8-10
Shows a moderate level of knowledge on the technological and historical change in engineering and its effect on people in relation to household appliances.	4-7
Briefly describes the technological and some historical change in engineering and its effect on people in relation to household appliances.	1-3
4. Freehand Drawings	
Demonstrates excellent skills in drawing the appliance following AS 1100 standards. Drawing completed on A3 paper size	4-5
Shows moderate skills in drawings to AS 1100 standards, all or some drawing components have been completed.	1-3
Engineering Report Structure	
Demonstrates a precise and clear understanding of the engineering report format, covers all heading clearly.	4-5
Covers all or some of the engineering report format headings to a moderate standard.	1-3
Assessment Total:	35