



ORANGE HIGH SCHOOL

ASSESSMENT TASK NOTIFICATION

Subject	Prelim Physics – Assessment 2
Topic	Module 3 – Waves and Thermodynamics
Class Teacher	Miss J Percival
Head Teacher	Ms J Huggett
Year	11 Physics
Date Given	Week 3A, Term 3
Date Due	Week 8B, Term 3
Weighting	30%

Assessment Outline

This task contains three parts:

PART 1 – Conducting research using secondary sources.

To complete this task, you are required to plan, perform and conduct a second-hand investigation on a device, technology or phenomena that uses a type of waves.

You will be required to present your research as a scientific research report using the scaffold provided using appropriate headings and subheadings.

PART 2 – Creating a Digital Presentation

To complete this task students will need to convert their report into a digital visual presentation summary (students are not required to add audio).

Both your digital presentation and your scientific research report will need to be submitted for marking.

Non-completion of Task:

If you know you are going to be away on the day that the task is due, you must follow illness/misadventure procedures and 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 to support your claim for illness/misadventure.

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

PH11 – 1 Develops and evaluates questions and hypotheses for scientific investigation

PH11 – 2 Designs and evaluates investigations in order to obtain primary and secondary data and **information**

PH11 – 3 Conducts investigations to collect valid and reliable primary and secondary data and information

PH11 – 4 Selects and processes appropriate qualitative and quantitative data and information using a range of appropriate media

PH11 – 5 Analyses and evaluates primary and secondary data and information

PH11 – 6 Solves scientific problems using primary and secondary data, critical thinking skills and scientific processes

PH11 – 7 Communicates scientific understanding using suitable language and terminology for a specific audience or purpose

DEPTH STUDY: SCIENTIFIC SECOND HAND INVESTIGATION

Weighting: 30%

TOPIC: Waves and Thermodynamics

**Due: Before 10:56am to classroom teacher on Tuesday 5th September 2023 -
Week 8 Term 3**

PART 1 – Conducting research using secondary sources

To complete Part 1 of this task you must use a variety of secondary sources to conduct research to answer a scientific question of your creation on a device, technology or phenomena that uses a type of waves. Your report should not exceed 5 pages. Your report should be structured to contain appropriate headings and subheadings. Include appropriate diagrams and pictures in your report.

You must make sure that your research is written in your own words. You must not cut and paste. You must include a reference page and reference your work using APA referencing style.

Report structure:

1. Abstract: Summary of the overall project, completed after you have finished the report (approx. 1 -2 paragraphs)
2. Introduction: Gives background knowledge about the topic area (approx. 3 – 6 paragraphs)
3. Literature review: Analyses scientific articles from Google Scholar in relation to the chosen topic area (approx. 2 – 6 paragraphs)
4. Scientific question: The question specifically identifies the concept that you are exploring in your research (approx. 1 – 3 lines)
5. Scientific topic explanation: Gives a detail explanation of the chosen topic area. (approx. 2 – 4 paragraphs)
6. History of the concept: Gives a detailed history of how the chosen area has developed over the last 50 years (approx. 2 – 4 paragraphs)
7. Judgement statement: Gives a clear judgement statement on the potential future benefit of the chosen area on society. (approx. 1 paragraph)
8. Reference list and appendix: Detailed list of all sources used in the report (you may include diagrams in your appendix) and the digital presentation (none of these are included in the page limit)

PART 2 – Digital Presentation

To complete Part 2 of this task, you must create a digital summary presentation in the form of a PowerPoint or Google Slides of your research report. It should be visually appealing (including appropriate images and diagrams), include a summary of each section of your report and provide a clear understanding to the audience about your research.

Marking Rubric: Part 1 – Conducting research using secondary sources

Outcomes Assessed:	Outstanding (A)	High (B)	Sound (C)	Basic (D)	Limited (E)	Marks:
<p>1. Abstract</p> <p>PH11 – 5 Analyses and evaluates primary and secondary data and information</p>	<ul style="list-style-type: none"> • Extensive understanding of the scientific question demonstrated • Detailed and condensed summary of the key aspects • History and applications of the research and has a link to future use in society. • Approximately 1 -2 paragraphs in length <p>(5 marks)</p>	<ul style="list-style-type: none"> • Thorough understanding of the scientific question demonstrated • Condensed summary of the key aspects • History and applications of the research and has a link to future use in society. • Approximately 1 -2 paragraphs in length <p>(4 marks)</p>	<ul style="list-style-type: none"> • Satisfactory understanding of the scientific question demonstrated • General summary • History and applications of the research and approximately 1 -2 paragraphs in length <p>(3 marks)</p>	<ul style="list-style-type: none"> • Basic abstract supplied • General summary • History and applications of the research and a couple of sentences used. <p>(2 marks)</p>	<ul style="list-style-type: none"> • General summary • A couple of sentences used <p>(1 mark)</p>	<p>PH11-1</p> <p>/5</p>
<p>2. Introduction</p> <p>PH11 – 4 Selects and processes appropriate qualitative and quantitative data and information using a range of appropriate media</p>	<ul style="list-style-type: none"> • Clear and detailed explanation of the project • Detailed and sophisticated explanation of the topic area of study. • 5 or more relevant pieces of scientific information given. At an extensive level. • Includes correct physics terminology • Approximately 3 – 6 paragraphs in length <p>(5 marks)</p>	<ul style="list-style-type: none"> • Clear explanation of the project • Detailed explanation of the topic area of study. • 4 or more relevant pieces of scientific information given. At a thorough level. • Includes correct physics terminology • Approximately 2 – 6 paragraphs in length <p>(4 marks)</p>	<ul style="list-style-type: none"> • Satisfactory explanation of the project and topic area of study • 4 relevant pieces of scientific information given. At a sound level. • Includes physics terminology • 4 or less paragraphs in length <p>(3 marks)</p>	<ul style="list-style-type: none"> • Basic explanation of the project or topic area of study • 3 relevant pieces of scientific information given • Attempts to include physics terminology <p>(2 marks)</p>	<ul style="list-style-type: none"> • Basic explanation of the project or topic area of study • a relevant pieces of scientific information given <p>(1 mark)</p>	<p>PH11-4</p> <p>/5</p>

<p>3. Literature Review</p> <p>PH11 – 3 Conducts investigations to collect valid and reliable primary and secondary data and information</p>	<ul style="list-style-type: none"> • The research is extensive • 6 or more detailed research ideas summarised. • Extensive use of scientific journals/ papers used and cited • Detailed analysis of the ideas and linked to focus area • Approximately 2 – 5 paragraphs in length <p>(10 – 9 marks)</p>	<ul style="list-style-type: none"> • The research is thorough • 5 or 6 detailed research ideas summarised. • Thorough use of scientific journals/ papers used and cited • Satisfactory analysis of the ideas and linked to focus area • Approximately 2 – 5 paragraphs in length <p>(8 – 7 marks)</p>	<ul style="list-style-type: none"> • The research is general • 3 or 4 research ideas summarised. • General use of scientific journals/ papers used • General analysis of the ideas • Less than 3 paragraphs in length <p>(6 – 5 marks)</p>	<ul style="list-style-type: none"> • The research is basic • 2 research ideas summarised • Basic analysis of the ideas <p>(4 – 3 marks)</p>	<ul style="list-style-type: none"> • The research is basic • No structure to the response <p>(2 – 1 marks)</p>	<p>PH11-3</p> <p>/5</p>
<p>4. Scientific question</p> <p>PH11 – 1 Develops and evaluates questions and hypotheses for scientific investigation</p>	<ul style="list-style-type: none"> • The question specifically identifies the concept that the student is exploring • Approximately 1 -3 lines in length <p>(3 marks)</p>		<ul style="list-style-type: none"> • The question generally identifies the concept that the student is exploring • Approximately 1 -3 lines in length <p>(2 marks)</p>		<ul style="list-style-type: none"> • The question is basic <p>(1 mark)</p>	<p>PH11-1</p> <p>/3</p>
<p>5. Scientific topic explanation</p> <p>PH11 – 6 Solves scientific problems using primary and secondary data, critical thinking skills and scientific processes</p>	<ul style="list-style-type: none"> • Gives a detailed and clear explanation of the chosen topic area • Includes correct physics terminology • Approximately 2 – 4 paragraphs in length <p>(4 marks)</p>	<ul style="list-style-type: none"> • Gives a clear explanation of the chosen topic area • Includes correct physics terminology • Approximately 2 – 4 paragraphs in length <p>(3 marks)</p>	<ul style="list-style-type: none"> • General explanation of the chosen topic area • Includes correct physics terminology • Less than 2 paragraphs in length <p>(2 marks)</p>	<ul style="list-style-type: none"> • Basic explanation of the chosen topic area • Incorrect physics terminology <p>(1 mark)</p>	<p>PH11-6</p> <p>/4</p>	

<p>6. History of the concept</p> <p>PH11 – 7 Communicates scientific understanding using suitable language and terminology for a specific audience or purpose</p>	<ul style="list-style-type: none"> • Gives a detailed history of how the chosen area has developed over the last 50 years • Demonstrates an extensive knowledge of the development of the scientific idea • Presented it in a clear, detailed and logical manner • Discusses the direction and implications for society in the use of this science. Gives a relevant example. • Includes correct physics terminology • Approximately 2 – 4 paragraphs in length <p>(5 marks)</p>	<ul style="list-style-type: none"> • Gives a detailed history of how the chosen area has developed over the last 50 years • Demonstrates a thorough knowledge of the development of the scientific idea • Presented it in a clear and logical manner • Discusses the direction and implications for society in the use of this science. Gives a relevant example. • Includes correct physics terminology • Approximately 2 – 4 paragraphs in length <p>(4 marks)</p>	<ul style="list-style-type: none"> • General history of how the chosen area has developed over the last 50 years • Demonstrates a satisfactory knowledge of the development of the scientific idea • Discusses the direction and implications for society in the use of this science. • Includes some correct physics terminology • Approximately 3 paragraphs <p>(3 marks)</p>	<ul style="list-style-type: none"> • Basic history of how the chosen area has developed over the last 50 years • Demonstrates a basic knowledge of the development of the scientific idea • Attempts to include physics terminology • Approximately 2 paragraphs <p>(2 marks)</p>	<ul style="list-style-type: none"> • Basic explanation of the chosen topic area • No physics terminology used <p>(1 mark)</p>	<p>PH11-7</p> <p>/5</p>
<p>7. Judgement statement</p> <p>PH11 – 2 Designs and evaluates investigations in order to obtain primary and secondary data and information</p>	<ul style="list-style-type: none"> • Gives a clear and concise judgement statement on the potential future benefit of the chosen area on society • Approximately 1 paragraph in length <p>(3 marks)</p>	<ul style="list-style-type: none"> • Gives a satisfactory judgement statement on the potential future benefit of the chosen area on society • Approximately 1 paragraph in length <p>(2 marks)</p>	<ul style="list-style-type: none"> • Gives a basic judgement statement <p>(1 mark)</p>	<p>PH11-2</p> <p>/3</p>		

<p>8. Reference list, appendix and overall report structure</p> <p>PH11 – 7 Communicates scientific understanding using suitable language and terminology for a specific audience or purpose</p>	<ul style="list-style-type: none"> • Reference list present and correct (12 or more sources used) • Minimal spelling, punctuation and grammatical errors (2-3) • Images are included in the appendix • Follows report format extensively • Report does not exceed the 5-page limit (excluding reference list) <p>(5 marks)</p>	<ul style="list-style-type: none"> • Reference list present and correct (11 to 9 used) • Minimal spelling, punctuation and grammatical errors (4-6) • Images are included in the appendix • Follows report format thoroughly • Report does not exceed the 5-page limit (excluding reference list) <p>(4 marks)</p>	<ul style="list-style-type: none"> • Reference list present and correct (6 to 8 used) • Minimal spelling, punctuation and grammatical errors (7-12) • Follows report format satisfactorily, images in appendix • Report does not exceed the 5-page limit (excluding reference list) <p>(3 marks)</p>	<ul style="list-style-type: none"> • Reference list present (6 to 8 used) • Minimal spelling, punctuation and grammatical errors (13-18) • Attempted to follow the report format • Images are included in the appendix <p>(2 marks)</p>	<ul style="list-style-type: none"> • No reference list present • More than 18 errors • Images are included in the appendix <p>(1 mark)</p>	<p>PH11-7</p> <p>/5</p>
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------

Part 2 – Digital Presentation

Outcomes assessed:	Outstanding (A)	High (B)	Sound (C)	Basic (D)	Limited (E)	Marks:
<p>Digital Presentation</p> <p>PH11 – 4 Selects and processes appropriate qualitative and quantitative data and information using a range of appropriate media</p>	<ul style="list-style-type: none"> • Detailed summary of sections 1 to 8 • Is a digital presentation • Extremely visually appealing • Clearly articulates students deep understanding of the focus area to the audience • Correct use of physics terminology • High level use of images <p>(10 – 9 marks)</p>	<ul style="list-style-type: none"> • General summary of sections 1 to 8 • Is a digital presentation • Satisfactorily visually appealing • Clearly articulates students satisfactory understanding of the focus area to the audience • Correct use of physics terminology • High level use of images <p>(8 – 7 marks)</p>	<ul style="list-style-type: none"> • General summary of sections 1 to 8 and is a digital presentation • Satisfactorily visually appealing • Satisfactory understanding of the focus area to the audience demonstrated • Physics terminology is present • Satisfactory use of images <p>(6 – 5 marks)</p>	<ul style="list-style-type: none"> • Basic summary of sections 1 to 8 and is a digital presentation • Basic understanding of the focus area to the audience demonstrated • Physics terminology is attempted • Satisfactory use of images <p>(4 – 3 marks)</p>	<ul style="list-style-type: none"> • Basic summary of sections 1 to 8 and is a digital presentation • Basic understanding of the focus area to the audience demonstrated • Some images used <p>(2 – 1 marks)</p>	<p>PH11-4</p> <p>/10</p>

Outcomes

PH11 – 1 (Section 4)	PH11 – 2 (Section 7)	PH11 – 3 (Sections 3)	PH11 – 4 (Sections 2 and Digital Presentation)	PH11 – 5 (Sections 1)	PH11 – 6 (Sections 5)	PH11 – 7 (Sections 6 + 8)
= / 3	= / 3	= / 5	= / 15	= / 5	= / 4	= / 10

Total Grade

/ 45

Feedback: