



ORANGE HIGH SCHOOL

ASSESSMENT TASK NOTIFICATION

Subject	Earth and Environmental Science
Topic	Module 7 Climate Science
Title	End of Module Review
Class Teacher	J Mansur
Head Teacher	J Huggett
Year	12
Date Given	Term 4 Thursday 28 th November 2024
Date Due	Term 4 Thursday 12 th December 2024
Weighting	35%

Assessment Outline

Research Investigation: 60 mins comprised of two parts

Part 1 (10 marks): You will create a summary report that will be completed outside class (1 period will be allocated in class). The summary report will be no longer than 2 double sided A4 sheets. The summary will be handed in at the completion of Part 2.

Part 2 (40 marks): You will answer structured questions in class using the information you have gathered in Part 1.

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 cases.

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 HSC booklet will be followed regarding the non-completion of assessment tasks.

Outcomes Assessed

Outcomes	A student:
EES 12-4	Selects and processes appropriate qualitative and quantitative data and information using a range of appropriate media
EES 12-5	Analyses and evaluates primary and secondary data and information
EES 12-7	Communicates scientific understanding using suitable language and terminology for a specific purpose or audience
EES 12-14	Analyses the natural processes and human influences on the Earth, including the scientific evidence for changes in climate

Task Details: You will need to:

Part 1 (10 marks)

You will create a summary report that will be completed outside class (1 period will be allocated in class). The summary report will be no longer than 2 double sided A4 sheets. The summary will be handed in at the completion of Part 2.

Part 2 (40 marks)

You will answer structured questions in class using the information you have gathered in Part 1.

You are to complete research in and out of class time in the following areas:

1. Inquiry question: How long does it take for the climate to change naturally and what causes these changes?

- use modelling to explain the causes of the natural greenhouse effect and examine the timescales in which changes occur
- using secondary sources, assess the different causes of natural climate variation and the timescales in which changes occur, including:
 - the plate tectonic supercycle
 - massive volcanic eruptions, in the Deccan and Siberian Traps
 - changes in the Earth's orbit around the Sun
 - changes in ocean currents and ocean circulation

2. Inquiry question: What scientific evidence is there of climate variations in the past?

- describe and discuss ancient evidence of variations in global temperature, including but not limited to:
 - pollen grains in sedimentary rocks
 - changes in rock types
 - fossils and microfossils
 - changing isotope ratios in rocks and deep sea sediments
- identify and explain more recent evidence of climate variation, including but not limited to:
 - ice cores containing gas bubbles and oxygen isotopes
 - dendrochronology
 - Aboriginal art sites showing now-extinct species and environments
 - human instrumental records
 - isotope ratios shown in stalagmites, stalactites and corals

3. Inquiry question: Is there scientific evidence that demonstrates how humans could minimise and respond to the effects of increased global temperatures?

- investigate scientific evidence suggesting ways in which humans may assist to minimise any human contribution to the greenhouse effect in their daily lives
- evaluate scientific evidence for the usefulness of a range of mitigation and adaptation strategies, including but not limited to:
 - urban design
 - geo-engineering strategies
 - alternative energy sources
 - using or changing agricultural practices of a range of cultural groups, including those of Aboriginal and Torres Strait Islander peoples