



Notice of Assessment Task
Year 12 Earth & Environmental Science
Depth Study – Hazards

Date of initial notification: Week 2 Term 4 Thursday, 19 October, 2023	Date of submission of task: Week 7 Term 4 Friday, 24 November, 2023
---	--

Teacher: Ms Arts	Task Number: 1
----------------------------	--------------------------

Time Allowed: 5 weeks	Weighting of task: 30%
---------------------------------	----------------------------------

Course Component/Focus area/topic/module: Module 6: Hazards

Task Description: Scientific Investigation and application of knowledge

“Predict the location and intensity of Earthquakes and Volcanoes. Investigate and explain the associated hazards”

PART A: Investigation (30 marks)

During allocated class periods, students will be completing SEVEN first hand investigations using practical experiments and online simulators to;

- Using data predict the zones along which **earthquakes** and both **effusive and explosive Volcanic eruptions** are likely to occur
- Account for the type of magma in each Volcano Type
- Model the changing depth of earthquakes and differing plate boundaries
- Investigate and explain associated hazards of Earthquakes and Volcanoes

*Part A will contribute to 10 Depth Study Hours**

PART B: Application (40 marks)

- On the due date students will complete in class test (50 min), applying the skills and knowledge gained throughout the depth study investigation. Students will complete the set questions without the aid of notes or supplementary material

**students will use a logbook throughout the Depth Study (including the Practical investigation booklets and activities distributed) to record their ideas, thoughts, actions, modifications, reasoning, notes and maintain a record of the hours spent and the task being completed during that time.*

Outcomes/Competencies to be assessed in this task:

EES12-1 develops and evaluates questions and hypotheses for scientific investigation

EES12-2 designs and evaluates investigations in order to obtain primary and secondary data and information

EES12-3 conducts investigations to collect valid and reliable primary and secondary data and information

EES12-4 selects and processes appropriate qualitative and quantitative data and information using a range of appropriate media

EES12-13 describes and evaluates the causes of the Earth's hazards and the ways in which they affect, and are affected by, the Earth's systems

Feedback: How will I receive feedback on this task?

Written

Individual

MARKING CRITERIA 12EES Depth Study – HAZARDS PART A

Outcomes	Not evident	Elementary	Basic	Sound	Thorough	Extensive	MARKS
EES12-1 develops and evaluates questions and hypotheses for scientific investigation	- no research and inquiry present	- Requires teacher assistance to complete scientific investigation	-hypothesis designed for scientific investigation - Scientific Investigation completed -Demonstrates basic ability to interpret scientific investigations	-Sound hypothesis designed and tested through scientific investigation - Sound Scientific Investigation completed - Demonstrates sound Evaluation and interpretation of Scientific investigations	-Thorough and accurate hypothesis designed and tested through scientific investigation - Thorough Scientific Investigation completed - Demonstrates thorough Evaluation and interpretation of Scientific investigations	-Detailed and accurate hypothesis designed and tested through scientific investigation - extensive and detailed Scientific Investigation completed - Demonstrates extensive Evaluation and interpretation of Scientific investigations	
	<i>(0 marks)</i>	<i>(1-2 marks)</i>	<i>(3-4 marks)</i>	<i>(5-6 marks)</i>	<i>(7-8 marks)</i>	<i>(9-10 marks)</i>	
EES12-2 designs and evaluates investigations in order to obtain primary and secondary data and information	- no research and inquiry present	- Requires teacher assistance to demonstrate basic research Volcanic and Earthquake Hazards	-Demonstrates basic knowledge of scientific principles and methodology to obtain primary data -Demonstrates basic research of Volcanic and Earthquake Hazards	-Demonstrates sound knowledge of scientific principles and methodology to obtain primary data- -Demonstrates sound research of Volcanic and Earthquake Hazards	-Demonstrates thorough knowledge of scientific principles and methodology to obtain primary data- -Demonstrates thorough research of Volcanic and Earthquake Hazards	-Demonstrates extensive knowledge of scientific principles and methodology to obtain primary data - Demonstrates extensive research of Volcanic and Earthquake Hazards	
	<i>(0 marks)</i>	<i>(1-2 marks)</i>	<i>(3-4 marks)</i>	<i>(5-6 marks)</i>	<i>(7-8 marks)</i>	<i>(9-10 marks)</i>	
EES12-3 conducts investigations to collect valid and reliable primary and secondary data and information	- no research and inquiry present	Requires teacher assistance to collect and/or interpret data	-Demonstrates basic knowledge to collect and/or interpret data sets and information -Demonstrates basic ability to judge data and information to be accurate and reliable	-Demonstrates sound knowledge to collect and interpret data sets and information -Demonstrates sound ability to judge data and information to be accurate and reliable	-Demonstrates thorough knowledge to collect and interpret data sets and information -Demonstrates accurate and thorough ability to judge data and information to be accurate and reliable	-Demonstrates extensive knowledge to collect and interpret data sets and information -Demonstrates accurate and extensive ability to judge data and information to be accurate and reliable	
	<i>(0 marks)</i>	<i>(1-2 marks)</i>	<i>(3-4 marks)</i>	<i>(5-6 marks)</i>	<i>(7-8 marks)</i>	<i>(9-10 marks)</i>	

MARKING CRITERIA 12EES Depth Study – HAZARDS PART B

EES12-4 -selects and processes appropriate qualitative and quantitative data and information using a range of appropriate media

EES12-13 -describes and evaluates the causes of the Earth's hazards and the ways in which they affect, and are affected by, the Earth's systems

HSC Band Descriptors:

Band 6

- Demonstrates an extensive knowledge and understanding of Earth and Environmental Science concepts, including complex and abstract ideas
- Demonstrates an extensive understanding of the historical development of Earth and Environmental Science concepts, their applications and implications for society and the environment, and the future directions of Earth and Environmental Science research
- Interprets and/or draws very detailed, accurate and labelled diagrams using appropriate scales illustrating abstract and complex three-dimensional concepts and processes
- Analyses and evaluates data effectively in written, tabular, graphical and diagrammatic form, identifies relationships, quantifies explanations and descriptions and synthesises information to draw conclusions
- Displays mastery of performing complex calculations using data sourced from Earth and Environmental Science processes, concepts and scales
- Produces a comprehensive series of detailed diagrams to illustrate stages within an Earth and Environmental Science process
- Displays outstanding ability to relate theory to a practical application in Earth and Environmental Science
- Applies knowledge and information to unfamiliar situations and designs an original solution to an Earth and Environmental Science problem

Band 5

- Displays thorough knowledge and understanding of most abstract concepts related to Earth and Environmental Science
- Demonstrates a thorough understanding of the historical development of Earth and Environmental Science concepts and their applications and implications for society and the environment
- Interprets and/or draws detailed, accurate and labelled diagrams using appropriate scales illustrating three dimensional Earth and Environmental Science concepts and processes
- Analyses data given in written, tabular, graphical and diagrammatic form, interprets information to draw conclusions and identifies relationships
- Performs calculations using data sourced from Earth and Environmental Science processes, concepts and scales
- Produces a series of labelled detailed diagrams to illustrate stages within an Earth and Environmental Science process
- Displays advanced ability to relate theory to practical application in Earth and Environmental Science

Band 4

- Demonstrates a sound knowledge of facts, processes and concepts related to Earth and Environmental Science using appropriate terms and some illustrative examples
- Demonstrates a sound understanding of the historical development of Earth and Environmental Science concepts and their applications for society and the environment
- Interprets and/or draws clear, labelled diagrams of Earth and Environmental Science concepts and processes
- Displays competence in interpreting written, tabular, graphical and diagrammatic forms in Earth and Environmental Science
- Performs elementary calculations using data sourced from Earth and Environmental Science processes, concepts and scales
- Produces a series of labelled diagrams to illustrate stages within an Earth and Environmental Science process
- Displays ability to relate theory to practical application

Band 3

- Recalls basic knowledge and communicates concepts using some basic terms related to Earth and Environmental Science
- Demonstrates a basic understanding of the historical development of Earth and Environmental Science concepts and their applications for society and the environment
- Interprets and/or draws simple diagrams of common structures and processes in Earth and Environmental Science
- Displays understanding of and obtains information from simple graphs, tables and other forms of data
- Performs basic calculations using data sourced from Earth and Environmental Science processes

