Logarithms and seismology

Please submit on Compass, as a .pdf file or Word file,

by Friday 12 November 2021.

Put your full name on your essay. Don't leave this until the last minute.

Write an essay in which you explore an application of logarithms to seismology.

The essay should be 500-600 words, not including the references. Structure your essay with five paragraphs as below, plus references; approximately 100 words per paragraph would be sensible. The marking rubric that follows sets out what is expected. **Using your own examples and your own words will help to illustrate your point.**

Your essay will contain a list of references. Do not read widely. The references listed below should be sufficient for your essay. To get the right format of a reference to put in your list, just cut and paste the reference from the list below.

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1. Introduction: state your aim in writing this essay; define key terms "seismology", "magnitude of an earthquake", "logarithm".
2. Who was Charles Richter? When did he live? What was his background? Why is he famous?
3. What is the Richter scale? Describe it and explain how it works.
4. What is the connection between logarithms and the Richter scale? Use earthquakes in Victoria, especially the recent earthquake to illustrate your answer.
5. Conclusion. Summarise what you have achieved in this essay. Have you achieved your aim stated in the introduction?

References

Charles Francis Richter. (2021). In *Wikipedia.*
https://en.wikipedia.org/wiki/Charles_Francis_Richter

Earthquake Track. (2021). Recent earthquakes near Victoria, Australia.
https://earthquaketrack.com/p/australia/victoria/recent

USGS. (2016). The severity of an earthquake.
https://pubs.usgs.gov/gip/earthq4/severitygip.html

USGS. (n.d.) Education. https://www.usgs.gov/natural-hazards/earthquake-hazards/education

Marking scheme

Total possible marks = 18

Feature	3 marks	2 marks	1 mark	0 marks
Introduction			**States** the aim.	No attempt to state the aim.
		Defines terms correctly	**Defines** terms but not correctly.	No attempt to define terms
Charles Richter	**Summarises** key aspects of Richter's life and work in own words.	**Summarises** parts of Richter's life and work mainly through quotes.	**Identifies** some points in Richter's life.	Insufficient evidence of reading about Richter.
Richter scale	**Explains** some key features in own words	**Summarises** some key features mainly through quotes.	**Identifies** some key features of the scale	Insufficient evidence of reading about the scale
Logarithms and Richter scale	**Explains** the connection using examples from Victoria.	**Summarises** the connection.	**Identifies** the connection.	No effort to deal with the connection.
Conclusion	**Describes** how the aim has been achieved.		**States** that the aim has been achieved.	No reference to the aim of the essay.
Language	Uses complex or uncommon words.	Spells familiar and frequently used words correctly.	Uses familiar and frequently used words.	

26 October 2021