**Earth Science Issue 1, Option 3: Volcanoes and Climate**

***ESI 1 is due in the Brightspace assignment folder before class on Feb 9***

Volcanic eruptions have had have had an important influence on global climate, both over the history of the whole earth and at short time scales observed in modern history. If you choose this ESI option, you’ll learn about how volcanoes affect climate and the way we study these effects.

For all ESI assignments, your response should include **three parts**. The **first part** should be a brief summary of this event/issue (with two creditable sources cited), the **second part** should focus on the **three questions** listed below (with at least two creditable sources), and the **third part** should be a personal response describing how your understanding of the science has impacted your perspective of this issue. Note that this last part is not just a statement of your perspective, but a reflection on how knowing the background science affects your perspective.

**Questions:**

(1) What do we understand about how volcanoes affect climate and what is the evidence for this?

(2) Describe one example of a past volcanic eruption that changed climate, including how it affected global climate.

(3) What are the relative contributions of anthropogenic (human-made) processes and volcanic processes to our changing climate? Which is more significant?

**Format for all ESI assignments:**

* 1-2 pages
* 12 point, Times New Roman font
* Double spaced, no extra lines between paragraphs, begin on first line of page 1
* Put name, date, and course assignment in the header, single spaced (example above).
* There should be no direct quotations in your response.
* Citations should be in APA format, with parenthetical in-text citations (author, date) and a reference list at the end. Reference list does not count toward your page limit. This website shows how to follow this citation style, which is commonly used in the sciences. <https://owl.english.purdue.edu/owl/resource/560/05/>
* Check out this website to help evaluate whether your sources are credible: <https://owl.english.purdue.edu/owl/resource/588/02/>. Note that groups that have a specific agenda other than education or spreading of science are likely not credible sources of science. News media is fine for summarizing your event, but should not be relied on for scientific information.

**Grading Rubric:**

30 pts - Included everything in the assignment (three parts, answered all questions, formatted correctly, citations/references included, proper length)

30 pts - Content was complete and correct

30 pts - Response is clear and coherent (this means it has to be well written, proofread, etc.)

10 pts - Response was particularly thoughtful and/or creative