

Climate Change and Volcanoes (Indigenous Translation of Science Based Knowledge): Lesson Plan

Grade Level: College **Subject:** Environmental Science/Ethnic Studies

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Overview and Purpose: The purpose of this lesson, which may lead into more lessons, is to teach students that have a background in another language other than English to teach other students about Climate Change and volcanoes. The emphasis placed on this lesson plan is for students from Native American backgrounds in North and South America.

Education Standards Addressed: This lesson plan is meant to show students that they can, if they know the indigenous language, can convey this information in a very meaningful and articulate manner. They will have to brainstorm as a group in order to get the words right, and may even need the assistance of an elder member of their tribe, band, pueblo, or community to assist with the interpretation. The education standards, from a tribal college perspective, is to have the students incorporate their knowledge of volcanism with an indigenous and teach the younger students that may have limited exposure to their language and spark an enthusiasm to not only learn about the science, but also the language and cultural ramifications.

| | Teacher Guide | Student Guide | |
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| Objectives | This lesson is to show the students that with the knowledge they possess about a particular area of science, like the rain shadow effect, they too can teach others especially the young. | This is to show the student that they can teach other students, particularly younger students, about certain topics in science in their native tongue. | Material Needed: Models or diagrams printed from the internet If funding is available, models from the internet websites are very helpful like from Frey's Scientific |
| Information | Knowledge of the indigenous language | Knowledge of the indigenous language and culture; must be willing to coin or describe the scientific phenomenon into the indigenous language, may need to use an elder or fluent speaker as an assistant. | Other Resources Needed: Indigenous language dictionary for the language in question. Practice, practice, practice..it is like learning new vocabulary in the language you are translating into. |
| Verification | If the students successfully translate the concepts into the language in question and if the elders agree that they did a good | Verification from the students usually comes from the listener and, if they understood the presenter(s), they usually will let them | Additional Notes: NA |

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| | <p>job. Also may use a questionnaire to obtain this information from individuals that listened to the explanation.</p> | <p>know. A teacher that is knowledgeable about the language and concepts too can verify their grasp of the key concepts and translations skills.</p> | |
| Activity | <p>Present at a science fair to speakers that are able to understand English as well as a traditional, indigenous language to see if they can translate the concepts. The students must put time into this, they cannot do this the first time out since many of the terms either do not exist or may need to be described.</p> | <p>Presentation with feedback from the listeners. This will be best if there is a fluent speaker in the audience.</p> | |
| Summary | <p>This is hard to do with students since many of them seem to not learn their native tongue anymore, but for the ones that do, it is definitely a challenge and when they do a good job and get praise from their elders or older community members, it really does validate them and make them feel good.</p> | <p>Tell them to do their best, if they mess up and get the wrong words, encourage them not to get flustered and work it out with the assistant or elder that may be guiding them.</p> | |