

Data Integration Assignment

Title: Connecting Culture, Science and Self. Using the Ute Creation story to assess prior knowledge of the water cycle as well as connect with our past culture and ourselves.

Introduction: At the beginning of this assignment, I wanted to find a set of data in the form of charts or graphs. After teaching 8th graders a few years ago and then coming back to 6th grade last year, it was difficult for me to integrate the importance of analyzing data when they were so concrete in their thinking. They were just learning line graphs and I was taken aback somewhat at the scaffolding needed to really get them to interpret, analyze and take that giant step to form a conclusion. I thought this assignment would be the perfect chance to find real, meaningful data in the numbers and charts forms we scientists love so much. However, I learned through this assignment that data can be any information that is meaningful and can be observed and analysed.

While working on other research for a diversity assignment of my own, I came across a Ted Talk that would fit as data integration for this assignment. I have been working most of the summer on trying to finalize an assignment for the beginning of the school year that includes students learning about the diversity of science and scientists specifically addressing Black and Indigenous Americans and Science. I am new to Colorado and recognize that my current school has little to no diversity. I wanted to find out how to integrate knowledge of the indigenous native americans to my curriculum. I began researching the Ute Tribe due to coincidences of learning about Ute Trees on the hiking trails out here this summer. I originally wanted to use what I was learning about the trees as part of the Ecology unit. But, when I watched this Ted Talk about the Creation story of the Ute, a light bulb went off. I find it amazing that before their "Creator" made anything else, he made the Sun and placed it over his left shoulder and then made the rain and placed it over his other shoulder. My students have knowledge of the water cycle from elementary, but this was the perfect data to use to assess their prior knowledge at a deeper level as well as integrate the importance of learning about our ancestors and land.

1- Data Source Title and link:

Ute Creation Story

<https://youtu.be/gv201ILHXhc>

2-Lesson Enhancement- enhance topic/lesson/unit; new objectives can be addressed? How does it change teaching/learning? This data enhances my current lesson on water the cycle. Most students last year believed they knew the water cycle and were familiar with the key vocabulary words used in the water cycle. Therefore, the lessons we did to review the water cycle would deepen their knowledge as we could now integrate creation stories and the culture of the people who lived on the land we now live on.

Specifically, these are the directions I would add to the review of the water cycle:

- a. Watch the video through 5:35 min.
- b. Draw a model of what you imagine this looks like.
- c. Why do you think the Ute Creator made Sun and Rain/snow first, before everything else?

- d. What is the significance of placing the Sun over the right shoulder and then rain/snow over his left shoulder?

3- Using Data- opinion about using data in the classroom...collected from student observation or another source.

During the lesson, I would have the students' partner and group share their models/drawings and answers to the questions above before we share as a class. This is an opportunity for the students to see their input and thinking as real data. We could have a lesson here on the different kinds of data and how it is collected. Student generated is the most meaningful in my opinion but depending on what it was we were analyzing, such as weather or climate change, etc., then that is an opportunity to use professionally collected scientific data.

4 and 5- Rationale for use of the data source and how the data can be used to integrate across STEM content areas and Interdisciplinary STEM- how can the data help to integrate across STEM content/pedagogy?

Science connection to Social Studies/History and/or ELA:

Creation Stories: Greek and Roman myths are examples of people observing their environments and creating explanations for the natural events and behaviors. This is also an example of that.

SEL connection- 16 min + = we are all blessed with a gift. Do you know what yours is or are you still searching? (I did not know until I was 40...)

Ken Caryl Historical Society video data on the evidence of the Ute people found when developing the housing that we all currently live on.

<https://youtu.be/T6D8jCdBvcl>

Here is another non-traditional data (a meme) that I feel I could use to either assess knowledge of the vocabulary word condensation or to use to introduce it.

Condensation Meme: Copied and pasted this meme I saw scrolling on social media. It is perfect to evaluate student understanding of the vocab work condensation. This would work with ELA to integrate the lesson using comparison between Compensation and Condensation.

Directions:

- a. Draw a model of what you think it looks like to wear glasses and a mask at the same time.
- b. Explain what it might feel like to wear glasses and a mask at the same time.

- c. Read the meme. Intro that the meme is supposed to be funny and connect with ELA to show what word it should be (compensation)
- d. Explain why this meme is true. Integrate use of models by having students draw what the molecules are doing to produce the annoying condensation (similar to the “Fog on the mirror” on the OLS.)

Has COVID-19 forced you to wear glasses and a mask at the same time?

If so, you may be entitled to condensation.