Teaching Statement

John C. Volesky, PhD

I have worked with students as an Upward Bound Instructor of Science at the University of Kansas in June 2025 teaching Introduction to Imagery Interpretation and Analysis: Kansas' Climate, Biomes, Water Resources, Energy Resources, and Agriculture for high school students planning on pursuing an undergraduate degree as first-generation college students. I was also an Upward Bound Summer Academy Instructor at Kansas State University in June 2024 teaching Chemistry of Climate Change. I am currently an Assistant Professor of Environmental Geosciences at the University of Tulsa teaching Remote Sensing, GIS, Environmental Studies and Geology classes and was previously an Instructor at the U.S. Air Force Academy as an Instructor in Remote Sensing, Brookhaven College and Tarrant County College as an Adjunct Professor in Physical Geology, Earth Science, and Environmental Science, the University of Texas at Dallas as a Teaching Assistant in Remote Sensing, Rock and Minerals, and Oceanography and the University of Kansas as a Research Assistant in the Department of Environmental Science.

I feel that it is important to provide students with a basic understanding of the subject matter, raise the students' consciousness of the story that the geology they see every day has to tell, encourage the students' natural curiosity by discussing real world examples, stimulate creativity by requiring the students to prepare and present the results of research projects, and to stress the fundamental importance of critical thinking. The significance of environmental and geologic issues is that they are interconnected with economics, politics, history, and culture and that if a raw material can't be grown, then it must be mined from the planet we call home, Earth.

The basic understanding or knowledge base is achieved by assigning reading and homework, lecturing using real world examples, and hands on laboratory experience. An important part of homework and the laboratory experience is preparing research projects

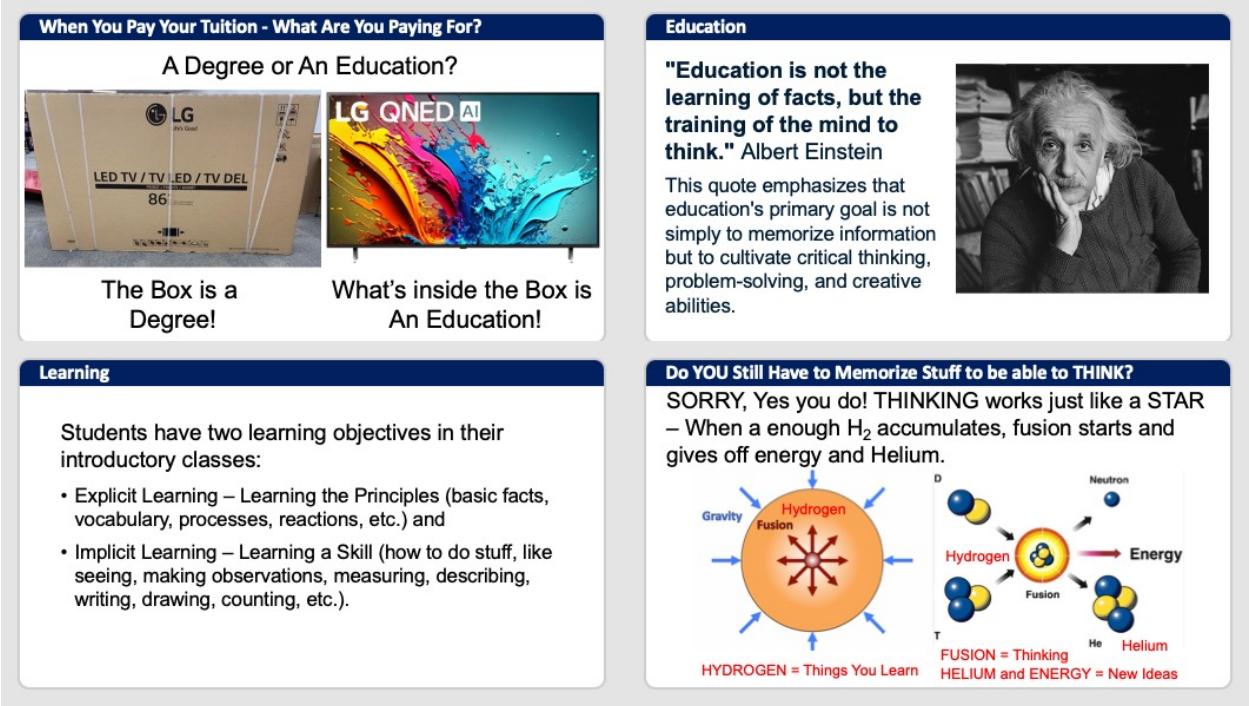
and presenting the results of these projects. Developing the research project allows students to choose the subject matter in which they are most interested and develops their ability to write and critically think about the information.

Having a healthy skepticism of information, being able to think critically about the information, and having an intense curiosity (Asking Why, How, What) enables the students to become problem solvers who:
Can make observations of the world around them,
Determine if the observations support current knowledge,
Can formulate a hypothesis,
Figure out how to test the hypothesis,
Can collect and analyze data,
Can draw conclusions from the results,
Can compare their results to real world examples and models, and
Determine if the conclusions support the hypothesis.

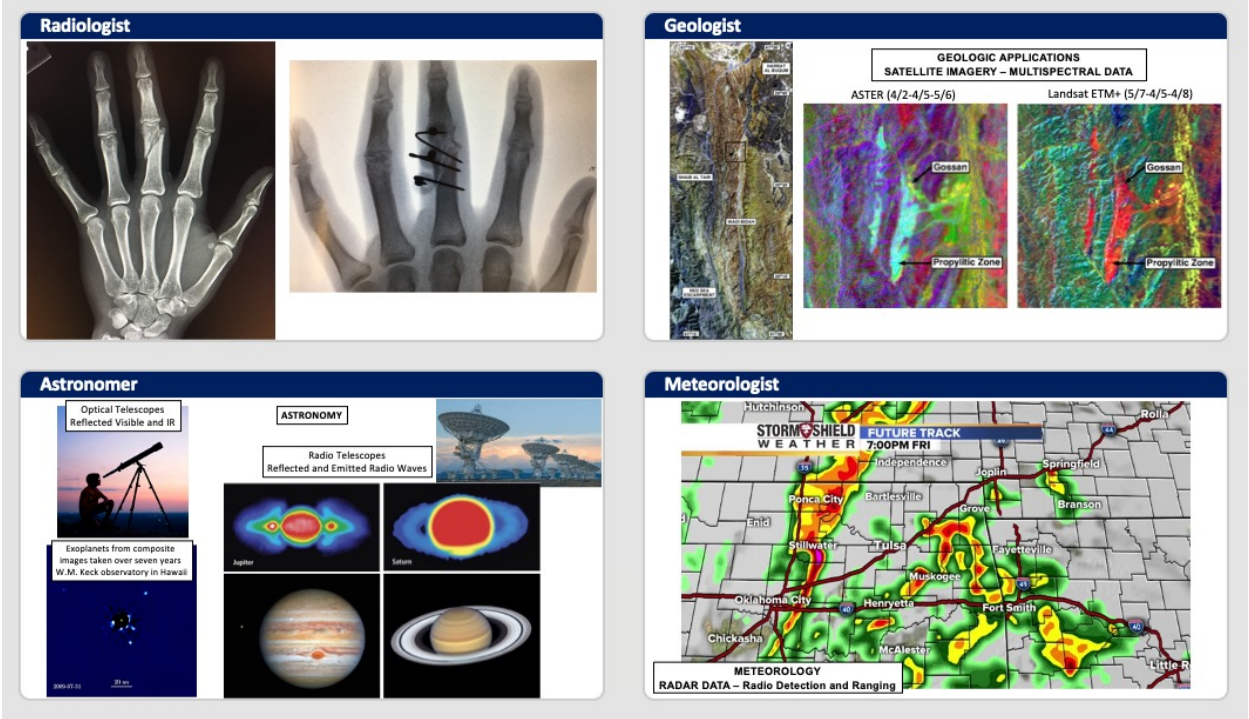
The student can then ask:
Has the question been answered?
What is the significance?
How can this new knowledge be applied?

As an Assistant Professor of Environmental Geosciences at the University of Tulsa teaching Remote Sensing, GIS, Environmental Studies and Geology classes. I was also the Geoscience Graduate Student Advisor, involved in community outreach and education (giving presentations to Boy Scout and school groups), and represented the University of Tulsa at recruiting events.

As an Upward Bound STEM Instructor at the University of Kansas and at Kansas State University, I helped students understand what they should except to get out of the money they are paying for tuition (Graphic 1) and introduced them to some of the career opportunities they might be able to pursue after graduation (Graphic 2).



Graphic 1 – When students pay tuition, they are paying for an education not a degree.



Graphic 2 – Some of the many career paths in Imagery Analysis.

These are a few of the comments from student course evaluations in my classes:

Geomorphology

1. This was by far my favorite class I have ever had at TU. The content was cool. Volesky is a great professor who makes his class environment feel safe and engaging. If my schedule were less full I would take more classes with Volesky just for fun.
2. He was very knowledgeable and taught like he was having a conversation rather than a lecture. It kept students involved and made a great environment.

Remote Sensing

1. Dr.Volesky is quite approachable and always willing to help! He was always prepared for class and he kept it interesting in class.
2. Gave enough time and lectures to understand the basics of subject. Started from the basics so everyone can grasp the importance and foundation of remote sensing.

Physical Geology

1. He was very thorough with his teaching and with all the material you were able to feel like you were still learning in and outside of lecture.
2. Really nice teacher. Always in a positive mood and has a calm way of lecturing that is both interesting and easy to understand. I learned a lot from this class which I did not expect going in.
3. Going over all the material in great depth made sure there was a very clear understanding of the material.