

Jen Chesnut – Geology of Iowa for Teachers assignment

Lesson Plan ideas

a. In our astronomy/geology course we talk about minerals and mining. I have not previously visited any mines in Iowa. The slideshow we currently use has mines in other areas of the US and we have videos with some famous mines around the world. I also have some information on restoration projects in the mountains. I am planning on re-doing the PowerPoint and including the information I now have for Iowa, adding my pictures and supplementing with the samples I have to pass around. This will make the information much more relevant for the students. We currently talk about the Limestone being the bedrock for the area but not the uses for the limestone. I would also like to add that information. We talk about cost/benefit associated with mining but the necessity of mining is more apparent with our limestone mines than with gemstone mines for example. I would like to have students take the introduction further and research a particular mine and present the details to the class. They could also incorporate some of the career opportunities associated with the mining industry.

I also plan on using the IOWATER stuff with our science club. We have been working with the city of Ottumwa to clean up the Kettle creek watershed. We have gone out with the city trucks/help to pick up trash along 5 different stretches of the creek. We talked about adding water quality testing but have never followed through. I now have the knowledge/materials to help make that happen.

b. Objectives: Students will have a better understanding of the geology of Iowa. They will also understand the importance of the mining industry in Iowa and how it contributes to their way of life. Time permitting we will also look at some of the career opportunities in the mining industry in Iowa.

c. In the third section of my binder I have information about Devonian limestone/fossils. In the last section I have the informational book on the Making of Portland Cement. If we have time in the year, we could have students look up information about different mining operations and their products. If we are short on time, I will incorporate an overview in our PowerPoint that includes resources and mining. The information in my binder will be used to update the introductory PowerPoint.

d. Evaluation: Students will be assessed on the information presented about their mine. Groups of students (4 students/group max.) researching should provide information about:

- what is mined and where is it located
- what is it used for
- what fossils can be found in the rock
- types of careers at the mine and summary of education required.

There will also be a portion of the information on our test for this unit.