

Should We Allow New Mining In the U.P.

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Objectives:

- Explain how common objects are made from Earth materials and why Earth materials are conserved and recycled.
- Evaluate alternative long-range plans for resource use and by-product disposal in terms of environmental and economic impact.
- have students analyze claims for their scientific merit and explain how scientists decide what constitutes scientific knowledge; how science is related to other ways of knowing; how science and technology affect our society; and how people of diverse cultures have contributed to and influenced developments in science. (Reflecting on Scientific Knowledge)

State Standards:

- Science/Strand V/Content Standard 1/High School/Benchmark 3
- Science/Strand V/Content Standard 1/High School/Benchmark 4
- Science//Strand II/Content Standard 1/High School

Description:

Over the course of approximately one week, students will study what is involved in mining from exploration to reclamation often referring to the proposed mining operation on the Yellow Dog Plains near Marquette.

Day 1: We will begin with the DHMO activity (www.dhmo.org), approx:10-20 min, as a way of getting students to be aware of how media can and does influence people in their decision making processes. Students will either be given a handout on DHMO FAQ's or visit the web site, depending on availability of the computer lab, in order to make a decision on whether or not to ban DHMO. Following this activity, students will be assigned to read and write a one page response to a few short articles dealing with the Kennecott Eagle Project clipped from the Daily Mining Gazette over the course of the last couple of months. Toward the end of the hour students are given a chance to respond verbally if they wish.

Day 2: Students will begin the class period by being challenged to think of any material item they have that does not have to be grown or mined with the emphasis on mining. (approx 3-5 min) We will then watch the Video Common Ground – Modern Mining and You, (approx 27 min) followed by a brief discussion. As an Assignment, students will be assigned to read and write a response to another article from the mining Gazette.

Day 3: Students will make a cross section map using a simplified version of the one we did during the institute. If time permits this will be followed by a brief explanation of how several cross sections may be put together to form a 3-D model (possibly constructing one for the class to see using overhead transparencies). This will be followed by showing the power point on computer modeling provided for us

Day 4: We will start out doing the Cookie Mining Activity with the emphasis being on profit/loss and how well reclamation was carried out. We will then watch the Video The Republic Wetlands Preserve Wetland Creation for Generations to come(approx: 12:25) followed by the video I filmed while at Tilden to further emphasize this point.

Day 5: As a class we will look at the potential problems associated with ARD (Acid Rock Drainage) and how Kennecott proposes to address this issue by looking at the information provided by Kennecott and WLUC TV6 (including excerpts from the March 2004 public meeting held at NMU)and other local sources as they become available.

<http://www.kennecottminerals.com/Eagle-Project/WelcomeToEagleProject.htm>

<http://www.wluctv6.com>

Assessment:

Students will be asked to write a 1 to 2 page paper on whether or not the proposed mine near Marquette should be opened. Students must defend their position and consider and address as many relevant issues as possible.

Enrichment:

Students will be made aware of some of the mine tours available within the Central and Western U.P. If bussing and scheduling work out, a possible field trip to the Empire / Tilden Mining and Pellet Processing Facility may be arranged. In addition, students will be encouraged to follow this issue as it continues to develop.