

# If Minerals, Gemstones, and Rocks Could Talk: A Creative Research Project

Geology

Mr. Traeger

Name: \_\_\_\_\_

Period: \_\_\_\_\_

Subject: \_\_\_\_\_

## Purpose

The purpose of this project is to gain a more intimate understanding of the role that minerals, gems, precious stones, and rocks play in our everyday lives. It is the intent of this project to become more aware of the economic, aesthetic, cultural, and industrial impact of these gifts from the Earth.

## Assignment

- Your assignment for this project is to select a mineral, gemstone, birthstone/precious stone, or rock to research. Once you have selected a topic, you need to clear it with me. No more than two people in the class should be researching the same mineral, gemstone, or rock. This is an *individual* project. A list of possible mineral subjects is below. There are MANY more that you could select from that are not listed here.

▪ copper	▪ silver	▪ gold	▪ cinnabar	▪ platinum
▪ graphite	▪ diamond	▪ sulfur	▪ chalcopyrite	▪ galena
▪ pyrite	▪ halite	▪ sylvite	▪ fluorite	▪ magnetite
▪ corundum	▪ hematite	▪ rutile	▪ uraninite	▪ bauxite
▪ calcite	▪ dolomite	▪ azurite	▪ malachite	▪ colemanite
▪ barite	▪ gypsum	▪ wulfenite	▪ limestone	▪ borax
▪ turquoise	▪ quartz	▪ beryl	▪ tourmaline	▪ jadeite/nephrite
▪ talc	▪ muscovite mica	▪ biotite mica	▪ kaolinite	▪ feldspar
▪ topaz	▪ garnet	▪ zircon	▪ olivine/peridot	▪ serpentine
- You will be required to find a map of your mineral resource. There are numerous sources of mineral information online. I also have a mineral data set of the United States in ArcView ArcMap GIS if you would like to use that.
- Once you have done some preliminary research and have selected a topic, you will need to do more in-depth research. You should look at books, encyclopedias, and the Internet. See the class web site for links to mineral and rock sites. The link is <http://www.lcusd.net/lchs/ttraeger/> When you get to this link, scroll down to Geology Links and click on it. Under the Geology Links, you will find some nice web sites relating to minerals and gemstones.
- You should be looking for information such as physical properties (chemical formula, crystal form, streak, hardness, luster, etc.) and interesting facts (which include, but are not limited to, economic significance (you will analyze a dataset of US mineral value), cultural significance, aesthetics, industrial uses, etc.). Your report should highlight how this mineral, gemstone, or rock has affected and continues to affect human society. Also detail the geographic areas of the world, and particularly the U.S., where it is mined. Is your mineral/rock precious or abundant? Tell me *everything* about your mineral, gemstone, or rock that you can find!
- **Your project must be creative. If it is written in a report format like an encyclopedia, I will not read it.** I require that you take the role of the mineral/gemstone/rock and tell its story **from a first-person perspective**. Tell the story of the life of your mineral *creatively*. **Ask me** if you are unsure.
- Make sure you cite your sources in a bibliography. *Do not* cut and paste text off of a website. Any pictures that you use must be hyperlinked *and* cited in your works cited at the end of your PowerPoint. Rewrite the text in your own words. Use the Citation Machine website, <http://citationmachine.net/>, to make your works cited. You must have at least 3 sources that you will actually use. I want to see a mix of sources among books, encyclopedias, and the Internet.
- Compile your research into an attractive PowerPoint presentation. I will show you some [techniques and tips](#) for using PowerPoint. You should have around 15 slides in your presentation. When you are done, you will submit your project electronically to the network folder entitled Mineral Projects 2006+ under the appropriate period.
- You should have your PowerPoint completed *no later* than **Tuesday, November 14, 2006**.
- This project will be worth a total of 60 points. This is equivalent to just under 2 test grades, so it will help your grade considerably if you do a good job! The point breakdown is content (35), bibliography (10), and aesthetics (looks) (15).

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Period: \_\_\_\_\_

Mineral/Gemstone: \_\_\_\_\_

Use this rubric as a formula for getting a good grade. The closer you follow this rubric, the better your grade will be!

0 = F	1 = D	2 = C	3 = B	4 = A
<b>Content: Worth 35 points total</b>				
<ul style="list-style-type: none"> <li>▪ Project not done</li> <li>▪ Standard report form</li> <li>▪ Text not written in first person format gets a zero for content.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Project late 3 days</li> <li>▪ Poorly written</li> <li>▪ Insufficient amount of content (way less than 15 slides)</li> <li>▪ Missing 3 interest areas</li> <li>▪ No maps</li> <li>▪ No graphs of monetary mineral value</li> </ul>	<ul style="list-style-type: none"> <li>▪ Project late 2 days</li> <li>▪ Average writing</li> <li>▪ Missing 2 interest areas</li> <li>▪ No maps</li> <li>▪ No graphs of mineral</li> <li>▪ No graphs of monetary mineral value.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Project late 1 day</li> <li>▪ Good, standard level of writing</li> <li>▪ Missing 1 interest area</li> <li>▪ Maps of mineral distribution are limited in scope.</li> <li>▪ Graphs of monetary mineral value made, but no data analysis</li> </ul>	<ul style="list-style-type: none"> <li>▪ Project on time</li> <li>▪ Excellent, creative level of writing</li> <li>▪ <b>Addresses all interest areas</b> such as physical properties, economic significance (graph of mineral values in US made/analyzed), cultural significance, industrial uses, effect on human society, locations where it is mined</li> <li>▪ Has maps of where your mineral is mined.</li> </ul>
<b>Aesthetics (Looks and Layout): Worth 15 points total</b>				
<ul style="list-style-type: none"> <li>▪ Project not done</li> <li>▪ Standard report form</li> </ul>	<ul style="list-style-type: none"> <li>▪ Somewhat creative report</li> <li>▪ No pictures</li> </ul>	<ul style="list-style-type: none"> <li>▪ Somewhat Creative Power Point</li> <li>▪ Minimal use of pictures/visual aids</li> </ul>	<ul style="list-style-type: none"> <li>▪ Creative PowerPoint format</li> <li>▪ Pictures used sparingly</li> </ul>	<ul style="list-style-type: none"> <li>▪ PowerPoint uses full range of color and employs a layout that is pleasing to the eye</li> <li>▪ Pictures are integrated with the text.</li> </ul>
<b>Bibliography/Works Cited: Worth 10 points total</b>				
<ul style="list-style-type: none"> <li>▪ Project not done</li> </ul>	<ul style="list-style-type: none"> <li>▪ No citation used</li> <li>▪ No parenthetical documentation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Incorrect MLA citation format</li> <li>▪ No parenthetical documentation used</li> </ul>	<ul style="list-style-type: none"> <li>▪ Incorrect MLA citation format</li> <li>▪ Parenthetical documentation used</li> </ul>	<ul style="list-style-type: none"> <li>▪ Correct MLA citation format</li> <li>▪ Parenthetical documentation used</li> </ul>
<b>Final Grades</b>	<b>Content</b>	<b>Aesthetics</b>	<b>Bibliography</b>	<b>Totals</b>
<b>Grand Total out of 60 points possible:</b>				