NAME\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_PERIOD\_\_\_\_DATE\_\_\_\_\_\_\_\_\_

Mineral Properties Worksheet

If any of the following statements is a characteristic of a mineral, place a check mark beside it. If it is not, leave it blank.

1\_\_\_\_\_\_\_ Made of one or more elements on the periodic table

2\_\_\_\_\_\_\_ Is formed by years of compression under the earth’s crust

3\_\_\_\_\_\_\_ Is formed by cooling after a volcanic eruption

4\_\_\_\_\_\_\_ Is a solid

5\_\_\_\_\_\_\_ Has a unique crystalline shape

6\_\_\_\_\_\_\_ Can be melted easily with a simple campfire

7\_\_\_\_\_\_\_Has luster, a hardness number and specific density

8\_\_\_\_\_\_\_ Is usually found on the coastal areas of the United States

We use different tests to identify a mineral. Match each test with it’s name.

9\_\_\_\_\_\_\_Moh’s Scale A.Relative heaviness of a mineral

10\_\_\_\_\_\_Crystalline Structure B.Color it leaves when scratched on porcelain

11\_\_\_\_\_\_Specific Gravity C.How easily it scratches other materials or it’s hardness

12\_\_\_\_\_\_Streak D. Shape as it grows

13\_\_\_\_\_\_Luster E. Breaks along a plane/line

14.\_\_\_\_\_\_Fracture F. Appearance

15.\_\_\_\_\_\_Cleavage G. Breaks unevenly or shatters

Take the following list of items and give their hardness on the Moh’s scale. You may have to use a text book or the internet to find your answers.

Diamond A nail A penny Talc

Glass Steel Amethyst Topaz

**MAP SKILLS-ECONOMICS**

Here’s a list of countries that mine and trade in minerals and gems along with a key to what minerals and gems they trade and mine.

~ Amber ! Garnet # Opal $ Amethyst

^ Jade \* Topaz +Aquamarine Zircon

Lapis Lazuli \ Emerald

**Mexico** # \* ! ~ **Brazil** ! \* $ \

**Haiti** ~ **Namibia**  ! \* +

**South Africa**  ! ^ **Sri Lanka** ! \* + $

**India** ! ^ **Myanmar** ^ !

**Germany** \* ~ **Romania** ~

**Madagascar** $ + **Cambodia**

**United States** ^ # $ + ! **Uruguay** $

**Australia** # ~ $ \* **Columbia** \

**Zambia**  $ **Afghanistan**

**China**

Take the following list of countries and write beside each, what minerals and gems they mine. (using symbols, transferring information)

Mexico ­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Brazil \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Haiti \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Namibia \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

South Africa\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Sri Lanka \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

India \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Myanmar \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Germany \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Romania \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Madagascar \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Cambodia \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

United States \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Uruguay \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Australia \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Columbia \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Zambia \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Afghanistan \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

China \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Using the country list and symbol key, answer the following questions:**

1.What country has the most gems and minerals to mine and trade?

1b. Is that country a wealthy country or a poor country?

2.Australia would like to trade Opals for Lapis Lazuli, what country would make a good trading partner?

3. You can purchase emeralds in the United States, yet we do not mine them here. How is that possible?

4. Predict a possible trade arrangement between two countries:

5. There are 8 countries on the list that only mine or trade in one stone. Are they poor countries or wealthy countries?

6. What conclusion can you draw about the number of stones and gems a country can mine and it’s wealth as a country?

7. How many countries mine amethyst?

8. How many countries mine emerald?

9. Emerald is very expensive and amethyst is not, can you explain why?