

Name .....

Period .....

Date .....

Unit  
3

Handout  
\_\_\_\_\_

*Analyzing Metamorphic Data*

**Purpose:** To connect metamorphism to observable characteristics in metamorphic rocks.

**Resources:** Use the reading packet, your reading guide, or the textbook to help you if you have any questions! **Use the chart to answer most of these questions.**

**Instructions:** Complete the following questions using full and complete sentences.

**Question 1** What is foliation in metamorphic rock? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Look at the rocks mylonite and metaconglomerate. Why is their texture "weakly foliated" according to the chart? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

What is nonfoliation in a metamorphic rock? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Look at the rocks marble, quartzite, hornfels, anthracite, and fault breccia. Why are these rocks considered "nonfoliated?"  
\_\_\_\_\_  
\_\_\_\_\_

**Question 2** In class we learned there is a connection between an increase in pressure and foliation. What is that connection? \_\_\_\_\_  
\_\_\_\_\_

**Continue on to the back!**

**Question 2  
Continued**

Which of the foliated rocks (the top 5 on the chart) would have been put under the most pressure? \_\_\_\_\_

How do you know? \_\_\_\_\_

\_\_\_\_\_

**Question 3**

*For this question, only look at the first 5 rocks on the chart.*

According to the chart, what happens to grain size as metamorphism increases? \_\_\_\_\_

\_\_\_\_\_

According to the chart, what happens to texture (foliation) as metamorphism increases? \_\_\_\_\_

\_\_\_\_\_

**Question 4**

In our reading and class discussion, we learned there was a connection between the size of crystals and the temperature at which the metamorphic rock forms. What was that connection? \_\_\_\_\_

\_\_\_\_\_

In our reading we also learned that the highest temperatures are found where in the earth? \_\_\_\_\_

Based on your answer above, which rock of the top 5 (slate, phyllite, etc.) would have formed at the hottest temperature? \_\_\_\_\_

Which would have formed at the deepest point? \_\_\_\_\_

How do you know? \_\_\_\_\_

\_\_\_\_\_