

**Summary and Reflection:** Must be at least 3 sentences long and must have clarity (examples, elaboration)

**Homework:**

- 1) Complete the textbook review questions **16-34, and 37** on pages 232-234. Do NOT just give me the answer, rewrite the question as a statement with the answer in it. **Example: Question #20:** The formation of which sedimentary rock is shown in the diagram?  
**Answer I want to see:** *The diagram shows the formation of a conglomerate rock because the pebble-sized grains have rounded edges and are cemented together. Your answer **CANNOT** be: Conglomerate*
- 2) Make flashcards or a foldable for each of the following words. You **MUST** include a picture on the front that will help you to remember the word's meaning when you study.

Front (word and picture)	Back (definition)
Glassy	An igneous rock texture where the rock has no crystals.
Vesicular	An igneous rock texture where the rock has holes that formed because gas pockets were in the lava.
What are 3 ways to tell that a rock is igneous?	1) No layers or foliation 2) Glassy texture → coarse crystal texture 3) Vesicular texture in some rocks
Clasts	Rock fragments found in inorganic sedimentary rocks found on land; inorganic sediments
Cementation	Process to make sedimentary rocks where sediments are glued together by minerals
Compaction	Process to make sedimentary rocks where sediments are squeezed and pressed together because of pressure from above.
Weathering and erosion	Processes to make sedimentary rocks where old rock is broken down by weather and carried away.
Igneous rocks ("Fire" Rocks)	Rocks that form from magma cooling and solidifying.
Sedimentary rocks	Rocks that form from sediments being deposited then compacted/cemented together.
Metamorphic rocks ("Changed" rocks)	Rocks that form by changing other rocks by adding heat, pressure, or chemical fluids.
Chemical/mineral Precipitation	A process to form sedimentary rocks where minerals or organic material (like shell fragments) drops out of water as water evaporates.
Bioclastic	A word to describe rocks that have pieces of organic material in it. (Example: clam shells, teeth, other fossils)
Contact metamorphism	A type of metamorphism where heat from lava or magma comes into direct contact with surrounding rock and changes them.
Regional metamorphism	A type of metamorphism where heat and pressure is caused by crustal plates colliding and changes the rocks in the area.
Foliation	When there are layers of mineral crystals (minerals are aligned)
Recrystallization	A process where heat and pressure rearranges the atoms and causes minerals or clasts to change without melting.

- 3) Study your vocabulary cards and notes for Unit 3 to prepare for quiz on Monday.

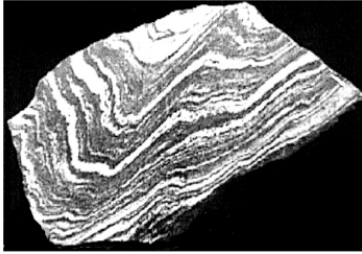
**AIM:** How do we identify metamorphic rocks?

**Unit 3:** Rocks and Minerals: How does the Earth make rocks?

**Do Now:** Next to each statement below, write igneous, sedimentary, or metamorphic.

- 1) If you see a rock with a fossil, the rock is likely to be \_\_\_\_\_
- 2) Fire rock \_\_\_\_\_
- 3) Rock that forms when magma cools and solidifies \_\_\_\_\_
- 4) Rock that forms from the compaction and cementation of clasts and bioclasts \_\_\_\_\_
- 5) Rock that forms by adding heat and pressure to other rocks \_\_\_\_\_
- 6) If a rock has layers of different sized-grains, it is likely to be \_\_\_\_\_
- 7) If a rock has a glassy texture and is vesicular, it is likely to be \_\_\_\_\_

8)



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



**By the end of the class, you should be able to:**

- Identify one way to tell that a rock is metamorphic
- Distinguish between foliated and non-foliated rocks

	<p>1) When rocks undergo metamorphism, they often become _____</p> <p>2) Many metamorphic rocks have _____ and have a layering of mineral crystals called _____</p> <p style="margin-left: 40px;">a. Why? _____</p> <p style="margin-left: 40px;">_____</p>
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- 1) Take out rock #1: is it foliated or nonfoliate? How can you tell?
- 2) Look at rock #2. This rock is a schist. Is this rock foliated or nonfoliated? Where can you find this information?
- 3) Look at rock #6. This is slate, which is often used to make tiles. What about the rock do you think makes it ideal for making tiles?
- 4) Look at rock #9. This rock is quartzite. Answer the following questions about quartzite:
  - a. Is this rock foliated or nonfoliated?
  - b. Quartzite was originally what rock?
  - c. What is the grain size in quartz?
- 5) Take out rock #12. This is a type of marble. What does marble come from?
- 6) How can you test to see if a marble is metamorphosed limestone or if it is metamorphosed dolostone? Explain.
- 7) List the numbers of at least 3 rocks that are nonfoliated:

Gneiss

8) Order the following rocks so that they go in order from lowest-grade metamorphism to highest grade of metamorphism (increasing in heat and pressure): schist, phyllite, slate, gneiss.