

1. CD-ROM: Go through the Metamorphic Rocks section of your lecture text CD-ROM (*and/or the chapter in your lab manual and/or lecture textbook, but most students like the CD-ROM better*)

2. Rock Types and Definitions:

Look up (and write down) short definitions/explanations for the following terms

3. Quiz questions: included here – answer them before taking the quiz online.

foliation

country rock (host rock)

contact metamorphism

slate

phyllite

schist

gneiss

quartzite

marble

serpentine

soapstone

Example Quiz Questions

1. Foliation refers to an alignment of the grains.

- True
- False

2. Foliation refers to how a loose collection of particles is turned into a rock.

- True
- False

3. Which of the following are foliated? (select all correct choices)

- basalt
- chert
- coal
- conglomerate
- gabbro
- gneiss
- granite
- gypsum (gypstone)
- limestone
- mudstone
- obsidian
- phyllite
- pumice
- rhyolite
- rock salt
- sandstone
- schist
- scoria
- serpentine
- slate

4. Phyllite is metamorphosed slate.

- True
- False

5. Slate is metamorphosed limestone.

- True
- False

6. Marble is metamorphosed schist.

- True
- False

7. Schist is metamorphosed phyllite.

- True
- False

8. Gneiss is metamorphosed quartzite.

- True
- False

9. Phyllite is metamorphosed gneiss.

- True
- False

10. Serpentine is metamorphosed schist.

- True
- False

11. Gneiss can be metamorphosed granite.

- True
- False

12. Marble is metamorphosed soapstone.

- True
- False

13. Soapstone is metamorphosed marble.

- True
- False

14. Quartzite is metamorphosed marble.

- True
- False

15. Quartzite is metamorphosed from quartz sandstone.

- True
- False

16. Marble is metamorphosed limestone.

- True
- False

17. Gneiss is metamorphosed schist.

- True
- False

18. Slate is metamorphosed shale (mudstone).

- True
- False

19. Marble can be formed from metamorphosed rock salt.

- True
- False

20. Marble can be formed from metamorphosed gypsum (gypstone).

- True
- False

21. Soapstone is metamorphosed rock salt.

- True
- False

22. Soapstone is metamorphosed gypsum (gypstone).

- True
- False

23. Marble is made of

- aluminum oxide
- calcium carbonate
- calcium fluoride
- calcium sulfate
- carbon
- copper carbonate
- iron oxide
- iron sulfide
- lead sulfide
- magnesium carbonate
- silicon dioxide
- sodium chloride
- zinc sulfide

24. Quartzite is made of

- aluminum oxide
- calcium carbonate
- calcium fluoride
- calcium sulfate
- carbon
- copper carbonate
- iron oxide
- iron sulfide
- lead sulfide
- magnesium carbonate
- silicon dioxide
- sodium chloride
- zinc sulfide

25. Foliation applies to (*choose all appropriate answers*)

- clastic (detrital rocks)
- conglomerate
- extrusive rocks
- igneous rocks
- intrusive rocks
- metamorphic rocks
- mudstone/shale
- plutonic rocks
- sandstone
- sedimentary rocks
- vesicular rocks
- volcanic rocks

26. These two photos are two examples of the same type of rock. Identify the rocks in these photos.



- basalt
- chert
- coal
- conglomerate
- gabbro
- gneiss
- granite
- gypsum (gypstone)
- limestone
- mudstone
- obsidian
- phyllite
- pumice
- rhyolite
- rock salt
- sandstone
- scoria
- serpentine
- slate

27. The rocks in these photos are



- biochemical
- clastic
- detrital
- extrusive
- foliated
- intrusive
- lithified
- plutonic
- porphyritic
- volcanic

28. Gneiss is a higher grade of metamorphism than slate.

- True
- False

29. Phyllite is a higher grade of metamorphism than slate.

- True
- False

30. Schist is a higher grade of metamorphism than gneiss.

- True
- False

31. Schist is a higher grade of metamorphism than slate.

- True
- False

32. Gneiss is a higher grade of metamorphism than phyllite.

- True
- False

33. Gabbro is metamorphosed granite.

- True
- False

34. Match the following

(each is used once, choose the best answers and the best pairings).

- foliation igneous
- lithification metamorphic
- vesicles sedimentary

35. Match the following

(each is used once, choose the best answers and the best pairings).

- collection of particles igneous
- deformed or recrystallized sedimentary
- intergrown, interlocking crystals metamorphic

36. Fossils are most likely found in what type of rocks?

- igneous
- metamorphic
- sedimentary

37. These types of rocks were once molten

- igneous
- metamorphic
- sedimentary

38. These types of rocks are an accumulation of particles or debris

- igneous
- metamorphic
- sedimentary

39. These types of rocks have been altered or deformed by heat or pressure (squeezed, smashed or cooked) – without being melted.

- igneous
- metamorphic
- sedimentary

40. Select all of the following that are correct/appropriate/true.

- basalt: foliated
- chert: foliated
- conglomerate: foliated
- foliation: igneous
- foliation: metamorphic
- foliation: sedimentary
- gabbro: foliated
- gabbro: igneous
- gneiss: foliated
- gneiss: igneous
- gneiss: metamorphic
- gneiss: non-foliated
- granite: foliated
- granite: igneous
- granite: plutonic
- lithification: igneous
- lithification: metamorphic
- lithification: sedimentary
- marble: metamorphic
- marble: metamorphosed limestone
- marble: sedimentary
- mudstone/shale: foliated
- phyllite: foliated
- phyllite: metamorphic
- phyllite: non-foliated
- phyllite: sedimentary
- quartzite: metamorphic
- quartzite: metamorphosed quartz sandstone
- quartzite: sedimentary
- rhyolite: foliated
- sandstone: foliated
- schist: foliated
- schist: metamorphic
- schist: non-foliated
- schist: sedimentary
- serpentine: igneous
- serpentine: metamorphic
- slate: foliated
- slate: metamorphic
- slate: non-foliated
- slate: sedimentary
- vesicles: igneous
- vesicles: metamorphic
- vesicles: pumice
- vesicles: quartzite
- vesicles: sedimentary
- vesicles: soapstone

The whole point of this pre-lab is to make the 3-hour lab easier for you. You need to be familiar with the vocabulary and concepts before the lab starts....otherwise you won't know what you are doing...and your lab partners aren't going to want to work with you! If you work through these questions and look up all of the answers and write them down, then the online quiz should be a "piece of cake". The online quiz is open notes and open book; however, it is timed...and if you have not looked up the answers ahead of time, you will not have time to look them up during the quiz.