

# ROCKS AND MINERALS

November 4<sup>th</sup> Scrimmage



*Exploring the World of Science*

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

Directions: DO NOT open the packet until prompted to.  
The test will be a 50 minute test and answer each question  
to the best of your ability.

Total: \_\_\_\_\_/

PART 1: Rocks and Minerals ID

For numbers 1-21, identify the rock/mineral and what group it is classified under. Spelling counts. (2 pts each)



1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_



4. \_\_\_\_\_ 5. \_\_\_\_\_ 6. \_\_\_\_\_



7. \_\_\_\_\_ 8. \_\_\_\_\_ 9. \_\_\_\_\_



10. \_\_\_\_\_



11. \_\_\_\_\_



12. \_\_\_\_\_



13. \_\_\_\_\_



14. \_\_\_\_\_



15. \_\_\_\_\_



16. \_\_\_\_\_



17. \_\_\_\_\_



18. \_\_\_\_\_



19. \_\_\_\_\_



20. \_\_\_\_\_



21. \_\_\_\_\_

## PART 2: Multiple Choice

For questions 22-32, select the best answer. (1 pt each)

22. Which of the following is not a clastic rock?
- Coquina
  - Oolite
  - Diatomite
  - Arkose
23. Of the following types of coal, which contains the least energy when burned?
- Lignite
  - Anthracite
  - Bituminous
  - Subbituminous
24. What is the main ore of lead?
- Pyrite
  - Galena
  - Bauxite
  - Sphalerite
25. What is the most abundant mineral in earth's mantle?
- Orthoclase
  - Plagioclase
  - Kaolinite
  - Olivine
26. Which of the following minerals has the highest specific gravity?
- Copper
  - Galena
  - Bauxite
  - Gold
27. Which of the following minerals does not have a botryoidal habit?
- Hematite
  - Malachite
  - Fluorite
  - Jasper
28. From which environment is beryl formed?
- Pegmatite environment
  - Metamorphic environment

- c. Hydrothermal environment
- d. Magmatic environment

29. What is the generic formula of limonite?

- a.  $\text{Fe}_2\text{O}(\text{OH})$
- b.  $\text{Fe}_2\text{O}(\text{OH})_2$
- c.  $\text{FeO}(\text{OH})$
- d.  $\text{Fe}_2\text{O}_2(\text{OH})$

30. What is the luster of sphalerite?

- a. Vitreous
- b. Resinous
- c. Pearly
- d. Dull

31. Based on Bowen's Reaction series, at which temperature would minerals have the most calcium?

- a. 800 °C
- b. 1000 °C
- c. 1400 °C
- d. 3000 °C

32. What is another name for azurite?

- a. Chessylite
- b. Peacock ore
- c. Television stone
- d. Fool's gold

PART 3: Short Answer

Questions 33-37 refer to the mineral below.



- 33. What is the name of the mineral? \_\_\_\_\_
- 34. What is it composed of? \_\_\_\_\_
- 35. What is its hardness and specific gravity? \_\_\_\_\_
- 36. What is its crystal system? \_\_\_\_\_
- 37. When exposed to ultraviolet light, this mineral “glows” or fluoresces. What causes this phenomenon? \_\_\_\_\_

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Questions 38-42 refer to the mineral below.



- 38. What is the name of the mineral? \_\_\_\_\_
- 39. What is this mineral mainly composed of? \_\_\_\_\_
- 40. What color does its streak have? \_\_\_\_\_
- 41. What would happen if it were placed in hydrofluoric acid?

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42. This mineral is piezoelectric, what does that mean?

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43. Amethyst derives from the Greek word “amethystos”. What was this mineral mainly used for during ancient Greece?

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44. Occasionally, andesites contain large, visible grains of plagioclase, amphibole, or pyroxene. These large crystals are known as "phenocrysts." How are they formed?

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45. Describe the difference between pumice and scoria as a result of their composition.

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46. Aragonite and calcite both have the same chemical formula,  $\text{CaCO}_3$ , how do they differ?

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47. What gives bornite it's colorful appearance?

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48. What is the difference between basalt and gabbro?

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