

**Minerals Study Guide****MULTIPLE CHOICE**

1. The most abundant element in Earth's crust (by weight) is \_\_\_\_\_.  
a. calcium    b. silicon    c. oxygen    d. sodium
2. The tendency of minerals to break along smooth flat surfaces is called \_\_\_\_\_.  
a. cleavage    b. conchoidal    c. fracture    d. streak    e. polyhedral
3. The most common mineral in Earth's crust is \_\_\_\_\_.  
a. quartz    b. feldspar    c. mica    d. hornblende    e. olivine
4. The central region of an atom is called the \_\_\_\_\_.  
a. neutron    b. nucleus    c. electron    d. proton    e. shell
5. The mass number of an atom is obtained by totaling the number of \_\_\_\_\_.  
a. neutrons and positrons    b. electrons and protons  
c. positrons and neutrinos    d. electrons and neutrons  
e. protons and neutrons
6. The most unreliable (variable) diagnostic property of minerals such as quartz is \_\_\_\_\_.  
a. crystal form    b. color  
c. specific gravity    d. luster  
e. hardness
7. If the atomic number of an element is 6 and its mass number is 14, how many neutrons are contained in the nucleus?  
a. 20    b. 0    c. 6    d. 8    e. 84
8. Each element is defined by the number of \_\_\_\_\_.  
a. protons    b. atoms    c. isotopes    d. neutrons    e. nuclei
9. A(n) \_\_\_\_\_ has a negative charge and a very small mass.  
a. electron    b. nucleus    c. proton    d. isotope    e. neutron
10. The positively charged particles that compose atoms are called \_\_\_\_\_.  
a. shells    b. neutrons    c. nuclei    d. electrons    e. protons
11. The mass of an atom is concentrated in its \_\_\_\_\_.  
a. neutron    b. isotope    c. electron    d. nucleus    e. angstrom
12. Isotopes of the same element differ in the number of \_\_\_\_\_.  
a. nuclei    b. ions    c. protons    d. electrons    e. neutrons
13. The building block of the silicate minerals is called the \_\_\_\_\_.  
a. aluminum-silicon tetrahedron    b. silicon-oxygen tetrahedron  
c. aluminum-silicon octahedron    d. silicon-oxygen octahedron  
e. none of these
14. The resistance of a mineral to abrasion is known as \_\_\_\_\_.  
a. conchoidal    b. resistance    c. fracture    d. cleavage    e. hardness

# Geology

Lancaster High School

Name \_\_\_\_\_

Date \_\_\_\_\_

Block \_\_\_\_\_

## Minerals Study Guide



15. The most abundant mineral group in Earth's crust is \_\_\_\_\_.  
a. carbonates   b. sulfides   c. silicates   d. halides   e. oxides
16. An atom that loses or gains electrons is called a(n) \_\_\_\_\_.  
a. neutrino   b. neutron   c. proton   d. isotope   e. ion
17. Orbiting the central region of an atom are negatively charged \_\_\_\_\_.  
a. electrons   b. protons   c. nuclei   d. neutrons
18. All silicate minerals contain the elements \_\_\_\_\_.  
a. silicon and magnesium   b. silicon and calcium  
c. silicon and oxygen   d. silicon and sodium  
e. silicon and iron
19. The appearance or quality of light reflected from the surface of a mineral is called \_\_\_\_\_.  
a. sheen   b. color   c. streak   d. fluorescence   e. luster
20. On Mohs hardness scale, which is the softest mineral?  
a. calcite   b. feldspar   c. apatite   d. quartz   e. talc

### SHORT ANSWER

21. The hardest naturally occurring mineral is \_\_\_\_\_.
22. The central region of an atom is known as the \_\_\_\_\_.
23. The \_\_\_\_\_ is the smallest part of matter that still retains the characteristics of an element.
24. Most minerals are composed of two or more elements joined to form a chemically stable \_\_\_\_\_.
25. The tendency of a mineral to break along planes of weak bonding is called \_\_\_\_\_.

### TRUE/FALSE

26. Most minerals have a higher specific gravity than water.
27. Over 100 elements are currently known.
28. Because silicon-oxygen bonds are strong, silicate minerals tend to cleave between silicon-oxygen structures rather than across them.
29. Minerals, like all matter, are composed of elements.
30. All atoms with the same number of protons are given the same name.
31. The micas exhibit sheet-type cleavage.
32. All minerals exhibit cleavage.
33. In the silicon-oxygen tetrahedron there are more silicon atoms than oxygen atoms.
34. The silicon-oxygen tetrahedron is a stable chemical compound.
35. A mineral can be composed entirely of one element.