

## MINERALS AND MINERAL CHARACTERISTICS

### Word Bank

All of these words and abbreviations are used in the crossword puzzle:

Ag	Conchoidal	Hematite	Opal	Soro
Amazonite	Cu	Ino	Oxide	Sphalerite
Amphibole	Cyclo	Jasper	Pb	Staurolite
Apatite	Dolomite	Kaolinite	Phyllo	Streak
Asbestos	Epidote	Kyanite	Plagioclase	Sulfide
Au	Fe	Labradorite	Pyrite	Sulfate
Barite	Feldspar	Magnetite	Pyroxene	Sulfur
Biotite	Fluoresce	Mineraloid	Refraction	Talc
Calcite	Fluorite	Mohs	Rhodonite	Tecto
Carbonate	Galena	Muscovite	Rose	Tigereye
Chalcopyrite	Garnet	Na	Serpentine	Tourmaline
Chert	Graphite	Native	Silicates	Twinning
Chlorite	Gypsum	Nepheline	Sillimanite	Vitreous
Chrysocolla	Habit	Neso	Silky	Wollastonite
Cleavage	Halite	Olivine	Sodalite	

### Across

2. 6 planes of cleavage, ZnS
4. green phyllosilicate; hardness about 3; contains copper
5. fracture seen in quartz
7. solid solution of forsterite and fayalite; always green
8. varieties include alabaster, satin spar, and selenite
10. green, one plane of cleavage, flexible tenacity
11. \_\_\_ silicates have rings of silica tetrahedra; include beryl and tourmaline
12. \_\_\_\_\_ elements are minerals consisting of only one type of atom
13. phosphate mineral; 5 on the hardness scale
15. mineral group including celestite, barite, gypsum, and anhydrite
16. magnetic mineral
18. hardness scale for minerals
20. mineral group consisting of a metal and sulfur
21. silica with water; precious variety shows play of colors
24. inosilicate mineral group including augite, diopside, spodumene, and enstatite
25. copper iron sulfide with a brassy luster
28. chemical abbreviation for iron
31. chemical abbreviation for gold
32. chemical abbreviation for copper
33. varies of K-\_\_\_\_\_ include microcline and orthoclase
37. polymorph of kyanite and andalusite; often white; hardness about 7
39. light colored cryptocrystalline SiO<sub>2</sub>
40. chemical abbreviation for sodium
45. plagioclase showing play of colors
46. white, earthy clay mineral
52. \_\_\_ silicates are sheet silicates; include lepidolite, vermiculite, pyrophyllite, and phlogopite
53. blue tectosilicate named for its sodium content
55. cubic habit; "fool's gold"
56. mineral group including siderite, dolomite, and magnesite

- 57. pink variety of quartz
- 59. lead sulfide with three directions of cleavage at 90°
- 62. phyllosilicate with a hardness of 1
- 63. halide with cubic habit and octahedral cleavage
- 65. brown mica; one direction of cleavage
- 66. magnesium calcium carbonate
- 67. luster for satin spar
- 68. color of a mineral when powdered
- 69. glow in the presence of a black light
- 70. double \_\_\_\_\_; calcite makes this optical effect

### Down

- 1. yellowish-brown quartz with a silky luster or chatoyance
- 3. types include albite, anorthite, bytownite, andesine, and oligoclase
- 6. greyish white tectosilicate with greasy luster; found in igneous rocks;  $\text{Na}_3\text{KAl}_4\text{Si}_4\text{O}_{16}$
- 9. largest group of minerals on Earth
- 14. red cryptocrystalline  $\text{SiO}_2$
- 17. white mica; one direction of cleavage
- 19. \_\_\_\_\_ silicates contain two tetrahedra that share an oxygen; includes epidote
- 20. green color and scaly appearance are the basis for its name; phyllosilicate
- 22. mineral-like substance lacking a crystalline structure; includes amber and coal
- 23. reddish brown streak
- 26. chemical abbreviation for silver
- 27. hexagonal cyclosilicate; one variety is watermelon
- 29. effervesces easily in dilute HCl
- 30. \_\_\_\_\_ silicates have isolated silica tetrahedra; includes olivine, garnet, and staurolite
- 32. plane of weakness in a mineral
- 34. chemical abbreviation for lead
- 35. fibrous form of serpentine; health hazard when inhaled
- 36. natural crystal shape
- 38. pink inosilicate, surface oxidizes to black, triclinic, hardness about 6,  $\text{MnSiO}_3$
- 41. gemstone with a dodecahedral habit
- 42. cubic habit and cleavage; salty taste
- 43. hardness of 1; polymorph of diamond
- 44. nesosilicate often found as simple twins in the shape of a cross or X
- 47. inosilicate mineral group including actinolite, tremolite, and hornblende
- 48. blue bladed aluminum silicate
- 49. mineral group that includes hematite, psilomelane, chromite, and corundum
- 50. inosilicate, white, triclinic, hardness about 5,  $\text{CaSiO}_3$
- 51. \_\_\_\_\_ silicates have strong bonds; include quartz and feldspars
- 54. luster of quartz
- 58. diagnostic property of plagioclase; polysynthetic \_\_\_\_\_
- 60. blue-green K-feldspar
- 61. pistachio green sorosilicate
- 64. \_\_\_\_\_ silicates have chains of  $\text{SiO}_4$  tetrahedra; include amphiboles and pyroxenes
- 65. unusually high specific gravity for a nonmetallic mineral
- 68. yellow native element

# MINERALS

