

Minerals

Five letters spell CRUST, the solid, rocky shell of the Earth. Minerals occur naturally in the Earth's crust.

1. Use the clues to identify the minerals below. Each mineral name needs two or more letters from the word CRUST. Fill in the blanks with the missing letters.

Mineral	Clues
a. _ _ l f _ ⊖	1. yellow; found in matches
b. g _ a p h i _ e	2. pure carbon; pencil lead
c. _ _ _ i l e	3. TiO ₂ ; titanium ore
d. b a _ x i _ e	4. aluminum ore; fairly soft
e. _ e _ p e ⊕ _ i n e	5. yellow or green; used as decorative stone
f. b a _ i _ e	6. BaSO ₄ : "heavy spar"
g. ⊕ _ _ _ o v i _ e	7. mica; elastic, flexible
h. _ _ p _ i _ e	8. red copper ore
i. a z _ _ ⊙ _ e	9. bluish copper ore
j. f l _ o _ i _ ⊙	10. number 4 on hardness scale
k. _ h o d o n ⊙ _ e	11. shades of pink; prized as ornamental stones
l. o _ _ h o c l a _ e	12. feldspar; used in pottery and glass industries
m. c a _ _ i _ e _ i _ e	13. SnO ₂ ; tin ore
n. _ _ _ q _ ⊙ i _ e	14. greenish blue; semi-precious stone
o. _ o _ _ ⊕ d _ m	15. ruby and sapphire
p. _ o _ _ m a l i n e	16. used in gemstones and optical equipment
q. _ h e _ _	17. variety of quartz; known as hornstone

2. *Brain Buzzer:* If CRUST lost its C, it would become RUST. What mineral combined with oxygen forms RUST? Use FOUR of the eight circled letters to show your answer.

_ _ _ _

3. *Double Brain Buzzer:* Use the remaining four letters to identify a large excavation made in the earth to remove minerals.

_ _ _ _

Answer Key

MINERALS

1. a. sulfur, b. graphite, c. rutile, d. bauxite, e. serpentine, f. barite, g. muscovite, h. cuprite, i. azurite, j. fluorite, k. rhodonite, l. orthoclase, m. cassiterite, n. turquoise, o. corundum, p. tourmaline, q. chert
2. *Brain Buzzer*: iron
3. *Double Brain Buzzer*: mine