

Name: [Answer Key](#)
Earth Science

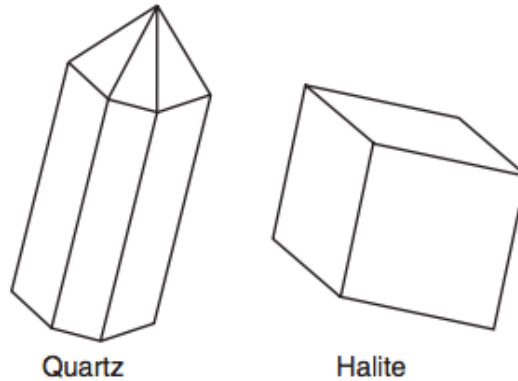
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Earth Science Regents Review Workbook

Part 5: Rocks & Minerals

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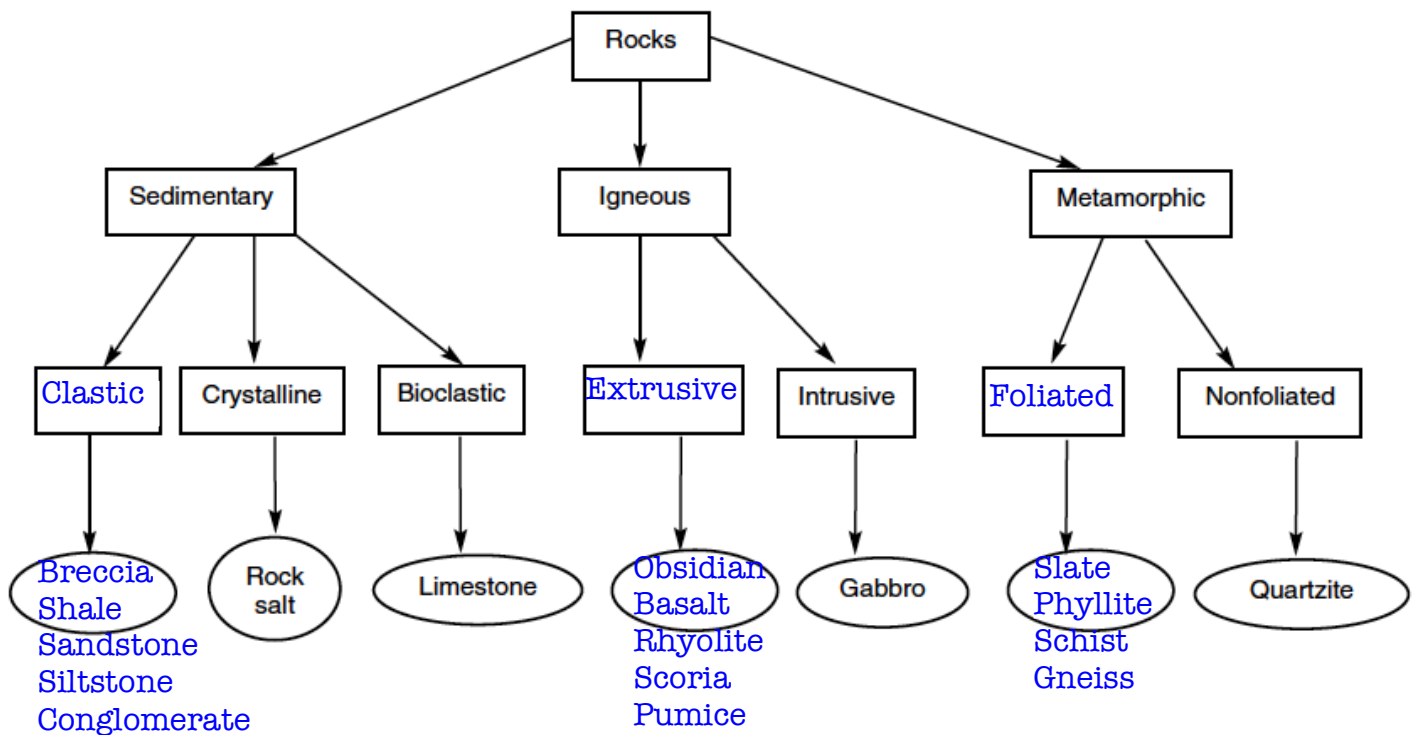
Minerals



1. What is the hardness and composition of quartz? Hardness = 7, Composition = SiO_2
2. What is the luster and form of breakage of halite? Luster = nonmetallic, Breakage = cleavage
3. What makes quartz different from halite? Hardness and cleavage
4. Which mineral has a metallic luster, hardness of 6.5, and is a brassy-yellow color? Pyrite
5. Which mineral has a non-metallic luster, has cleavage, and bubbles with acid? Calcite
6. Which mineral has a greasy feel and is used in ceramics? Talc
7. Why do minerals with the same composition have different physical properties?
Each mineral has a different internal arrangement of atoms.

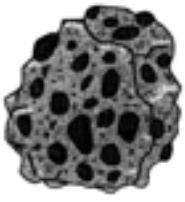
Directions: Fill in the blanks on the flowchart below.

Rock Classification Flowchart



Part 5: Rocks & Minerals

Sedimentary Rocks



A
Conglomerate



B
Breccia



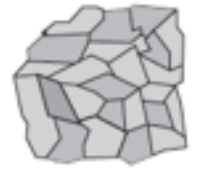
C
Sandstone



D
Shale



E
Limestone



F
Rock salt

1. Which rock(s) above are clastic? A, B, C, D
2. Which rock(s) above are bioclastic? E
3. Which rock(s) above are crystalline? F
4. How does a chemical rock form? Seawater evaporates leaving behind mineral deposits.
5. Describe the process for the formation of a clastic rock. Burial, deposition, compaction, and cementation of sediments
6. What is the particle size of a sandstone rock? 0.006 to 0.2 cm
7. What is the difference between conglomerate and breccia? Conglomerate has rounded fragments. Breccia has angular fragments.
8. Which rock is made of particles less than 0.0004 cm? Shale
9. Which bioclastic rock is made from dead plants? Bituminous coal
10. What is the composition of rock gypsum? Gypsum
11. How are clastic sedimentary rocks classified? According to their grain size
12. How are chemical rocks classified? According to their composition
13. Which of the rocks above will bubble in acid? Limestone because it is composed of calcite.

Part 5: Rocks & Minerals

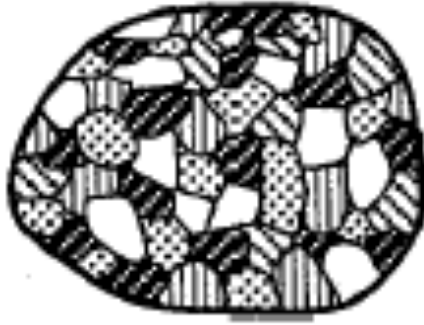
Metamorphic Rocks



1. Which rock is shown in the picture above? Gneiss (it has banding)
2. Name the two processes that produce a metamorphic rock. Heat and pressure
3. What are the two types of metamorphism? Regional and contact
4. Which sedimentary rock forms anthracite coal? Bituminous coal
5. Which sedimentary rock forms quartzite? Quartz sandstone
6. Which sedimentary rock forms marble? Limestone or dolostone
7. Which metamorphic rock shows low-grade metamorphism? Slate
8. Which metamorphic rock shows high-grade metamorphism? Gneiss
9. How are nonfoliated rocks classified? According to their composition
10. Which metamorphic rock has platy mica crystals? Schist
11. Which metamorphic rock only forms from contact metamorphism? Hornfels
12. Which metamorphic rock is made directly from shale? Slate

Part 5: Rocks & Minerals

Igneous Rocks



1. Name the two processes that form an igneous rock. Melting and solidification of magma
2. Where do extrusive igneous rocks form? On or near Earth's surface
3. Where do intrusive igneous rocks form? Deep beneath Earth's surface
4. How are igneous rocks classified? According to their texture and mineral composition
5. Which igneous rock has a very coarse texture? Pegmatite
6. What is the color, density, and composition of granite? Light color, low density, felsic
7. What is the color, density, and composition of basalt? Dark color, high density, mafic
8. Name the coarse grained rock that contains mostly olivine. Peridotite or dunite
9. Name the vesicular, glassy, felsic rock. Pumice
10. What is the texture of gabbro? Coarse and non-vesicular
11. Describe the rate of cooling for a rock that has large crystals. Very slow cooling rate
12. Describe the rate of cooling for a rock that has very small crystals. Very fast cooling rate

Part 5: Rocks & Minerals