

# ROCKS

## Aim 3: What are sedimentary rocks?

### HW from “Reviewing Earth Science, the Physical Setting”

- Read “Sedimentary Rocks” 41
- Do all questions on Part A on p41-43

Sedimentary rocks are classified in two groups. See RT page 7.

- Inorganic Land-derived sedimentary rocks  
Those rocks are made of sediments or pieces of rocks.  
Ex: Sandstone is formed of sand particles (0.2 to 0.006 cm) that have been compacted and cemented.
- Chemically and/or organically formed sedimentary rocks  
Those rocks are chemically formed or made of organic matter such as shells.  
Ex: Rock Salt is formed chemically when sea water evaporates and limestone is made of fragments of shells compacted and cemented.

### Test your understanding

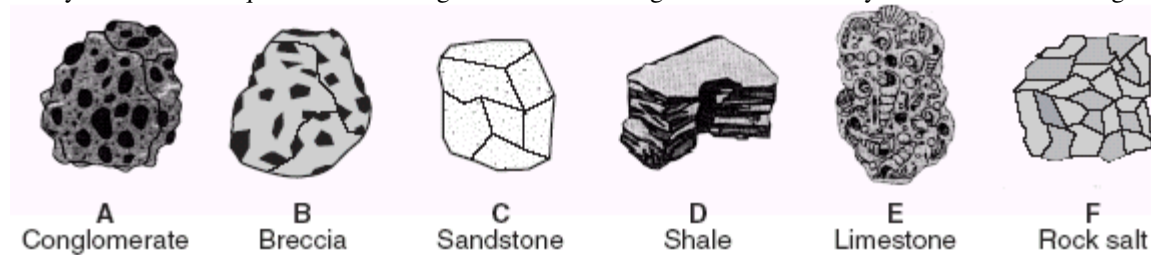
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10 Which rock was organically formed and sometimes contains fossilized plant impressions?

- (1) rock gypsum (2) phyllite (3) breccia (4) coal

8/06

Base your answers to questions 48 through 50 on the drawings of six sedimentary rocks labeled A through F.



48 Most of the rocks shown were formed by

- (1) volcanic eruptions and crystallization      (2) compaction and/or cementation  
(3) heat and pressure      (4) melting and/or solidification

49 Which two rocks are composed primarily of quartz, feldspar, and clay minerals?

- (1) rock salt and conglomerate      (2) rock salt and breccia      (3) sandstone and shale      (4) sandstone and limestone

50 Which table shows the rocks correctly classified by texture?

<b>Texture</b>	clastic	bioclastic	crystalline
<b>Rock</b>	A, B, C, D	E	F

(1)

<b>Texture</b>	clastic	bioclastic	crystalline
<b>Rock</b>	A, C	B, E	D, F

(3)

<b>Texture</b>	clastic	bioclastic	crystalline
<b>Rock</b>	A, B, C	D	E, F

(2)

<b>Texture</b>	clastic	bioclastic	crystalline
<b>Rock</b>	A, B, F	E	C, D

(4)

6/06

21 A student obtains a cup of quartz sand from a beach. A saltwater solution is poured into the sand and allowed to evaporate. The mineral residue from the saltwater solution cements the sand grains together, forming a material that is most similar in origin to

- (1) an extrusive igneous rock      (2) an intrusive igneous rock      (3) a clastic sedimentary rock      (4) a foliated metamorphic rock

1/06

35 Most rock gypsum is formed by the

- (1) heating of previously existing foliated bedrock
- (2) cooling and solidification of lava
- (3) compaction and cementation of shells and skeletal remains
- (4) chemical precipitation of minerals from seawater

1/04

18 Which phrase best describes coal?

- (1) low density, mafic
- (2) chemical precipitate
- (3) organic plant remains
- (4) glassy texture, volcanic

32. Which of the following rock types often forms by precipitation from evaporating seawater?

- (1) gypsum
- (2) sandstone
- (3) basalt
- (4) shale

33. What property is used to classify a rock as shale, siltstone, sandstone or conglomerate?

- (1) the mineral composition
- (2) the shapes of the mineral crystals
- (3) the overall color of the rock
- (4) the size of the particles in the rock

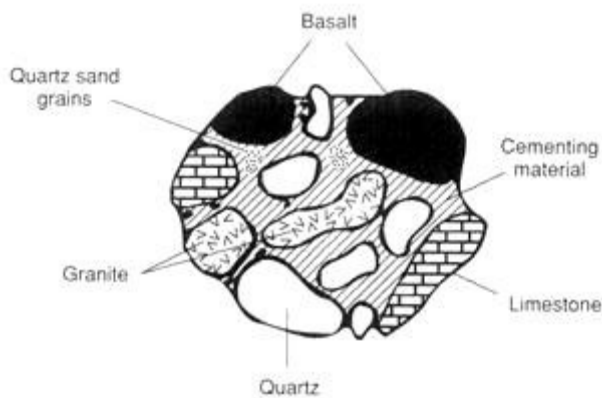
34. How does rock salt form?

- (1) by crystallization of molten rock
- (2) by the cementing of cobbles and boulders
- (3) by heating and compression of other rocks
- (4) by the evaporation of sea water

35. According to the Earth Science Reference Tables, what kind of sedimentary rock may be composed of marine skeletons, or seashell fragments cemented together?

- (1) limestone
- (2) rock salt
- (3) coal
- (4) siltstone

36. The accompanying diagram shows the actual size of a clastic (fragmental) sedimentary rock. According to the Earth Science Reference Tables, what kind of rock is it?



- (1) conglomerate
- (2) sandstone
- (3) shale
- (4) siltstone

37. What can we conclude about the particles in this rock?

- (1) They must be the same age.
- (2) They formed in different ways.
- (3) They came from the same igneous rock.
- (4) They all contain the same minerals.

38. According to the Earth Science Reference Tables, sandstone can be composed entirely of sedimentary particles with a diameter of

- (1) 1/1000
- (2) 1/10 cm
- (3) 1 cm
- (4) 10 cm

39. Where are sedimentary rocks usually found?

- (1) covering most of the continents
- (2) regions of recent volcanic activity
- (3) deep within the Earth's crust
- (4) next to igneous intrusions

40. Which processes change sediments into sedimentary rock?

- (1) melting
- (2) compression and cementing
- (3) extrusion and intrusion
- (4) metamorphism

41. Which feature provides the best evidence of the environment in which a rock was formed?

- (1) the overall color of the rock
- (2) the size of the rock sample
- (3) the texture of the rock
- (4) the thickness of the layer's

42. Unlike sediments, sedimentary rocks often contain

- (1) rounded grains
- (2) layers
- (3) mineral cement
- (4) sorted particles

43. Some sedimentary rocks form as a direct result of

- (1) evaporation of seawater
- (2) recrystallization just before melting
- (3) solidification of melted rock
- (4) the weathering of solid rock

44. Rocks made directly from sediments usually contain

- (1) rounded particles in layers
- (2) hard, intergrown crystals
- (3) banded zones of minerals
- (4) distorted structures