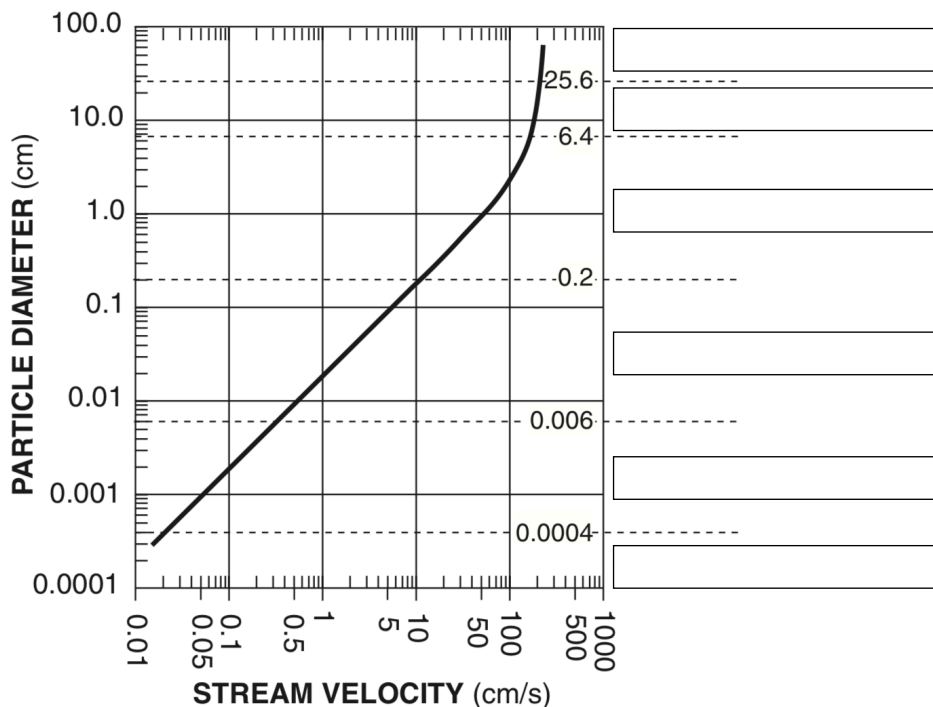




# Packet: Sedimentary Rocks

- Methods used to classify sedimentary rocks [continued]:

2. Grain Size - individual size of the grains when measured



3. Lithification - \_\_\_\_\_

- Cementation - \_\_\_\_\_

- Dissolved minerals in water hold the clasts together after evaporation

- Compaction - \_\_\_\_\_




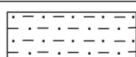

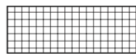


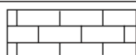

- Usually results in a more tightly packed form with a decrease in pore space

- Chemical Action - \_\_\_\_\_

# Packet: Sedimentary Rocks

- Methods used to classify sedimentary rocks [continued]:
  4. Characteristics - additional properties and traits that may help identify a sedimentary rock
    - Form \_\_\_\_\_ or \_\_\_\_\_ Earth's surface
    - Forms in \_\_\_\_\_ layers
    - May contain \_\_\_\_\_

## Scheme for Sedimentary Rock Identification

INORGANIC LAND-DERIVED SEDIMENTARY ROCKS					
TEXTURE	GRAIN SIZE	COMPOSITION	COMMENTS	ROCK NAME	MAP SYMBOL
Clastic (fragmental)	Pebbles, cobbles, and/or boulders embedded in sand, silt, and/or clay	Mostly quartz, feldspar, and clay minerals; may contain fragments of other rocks and minerals	Rounded fragments	<b>Conglomerate</b>	
			Angular fragments	<b>Breccia</b>	
	Sand (0.006 to 0.2 cm)		Fine to coarse	<b>Sandstone</b>	
	Silt (0.0004 to 0.006 cm)		Very fine grain	<b>Siltstone</b>	
Clay (less than 0.0004 cm)	Compact; may split easily	<b>Shale</b>			
CHEMICALLY AND/OR ORGANICALLY FORMED SEDIMENTARY ROCKS					
TEXTURE	GRAIN SIZE	COMPOSITION	COMMENTS	ROCK NAME	MAP SYMBOL
Crystalline	Fine to coarse crystals	Halite	Crystals from chemical precipitates and evaporites	<b>Rock salt</b>	
		Gypsum		<b>Rock gypsum</b>	
		Dolomite		<b>Dolostone</b>	
Crystalline or bioclastic	Microscopic to very coarse	Calcite	Precipitates of biologic origin or cemented shell fragments	<b>Limestone</b>	
Bioclastic		Carbon	Compacted plant remains	<b>Bituminous coal</b>	

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# Packet: Sedimentary Rocks

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## PART I QUESTIONS: MULTIPLE CHOICE

1. Which sedimentary rock would be formed by the compaction and cementation of particles 1.5 centimeters in diameter?
  - a. shale
  - b. conglomerate
  - c. siltstone
  - d. sandstone
2. Some sedimentary rocks form as the direct result of the
  - a. melting of minerals
  - b. solidification of molten magma
  - c. cementation of rock fragments
  - d. recrystallization of material
3. Which rock is most likely a sedimentary rock?
  - a. a rock composed of distorted light-colored and dark colored mineral bands
  - b. a rock consisting of intergrown crystals
  - c. a rock containing dinosaur bones
  - d. a rock with a glassy texture
4. Limestone is a sedimentary rock which may form as a result of
  - a. biologic processes
  - b. melting
  - c. recrystallization
  - d. metamorphism
5. A sediment contains particles that range in diameter from 2 to 4 centimeters. Which sedimentary rock would be formed when this sediment is compressed and cemented together?
  - a. sandstone
  - b. shale
  - c. siltstone
  - d. conglomerate
6. Which rock was formed by the compaction and cementation of particles 0.07 cm in diameter?
  - a. sandstone
  - b. basalt
  - c. limestone
  - d. shale
7. The sedimentary rock, gypsum, forms as a result of
  - a. evaporation of seawater
  - b. metamorphism of limestone
  - c. weathering of siltstone
  - d. faulting and folding of shale

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## Packet: Sedimentary Rocks

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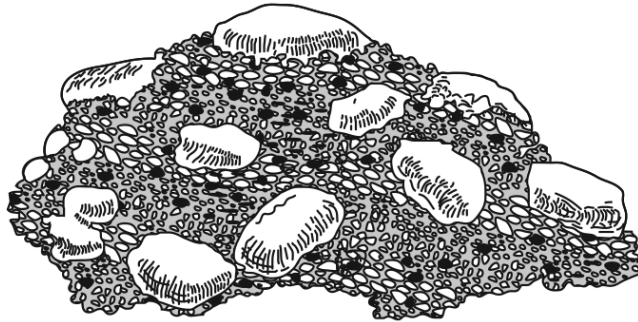
8. Sedimentary rocks formed by compaction and cementation of land-derived sediments are classified on the basis of
  - a. particle size
  - b. rate of formation
  - c. composition
  - d. type of cement
  
9. Which sedimentary rock is composed of fragmented skeletons and shells of sea organisms compacted and cemented together?
  - a. shale
  - b. sandstone
  - c. gypsum
  - d. limestone
  
10. Which is a sedimentary rock that forms as a result of precipitation from seawater?
  - a. shale
  - b. gypsum
  - c. conglomerate
  - d. basalt
  
11. Most sedimentary rocks form by which processes?
  - a. subduction and melting
  - b. heat and pressure
  - c. melting and solidification
  - d. compaction and cementation
  
12. Most of the sediment that is compacted and later forms shale bedrock is
  - a. clay
  - b. sand
  - c. silt
  - d. pebbles
  
13. Which mineral precipitates from oceans and forms rock salt?
  - a. quartz
  - b. halite
  - c. fluorite
  - d. olivine
  
14. Most rocks that form from fragmental rock particles are classified as
  - a. extrusive igneous
  - b. intrusive igneous
  - c. clastic sedimentary
  - d. chemical sedimentary

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# Packet: Sedimentary Rocks

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Base your answers to questions 15 through 18 on the diagram below, which represents a rock composed of rounded cemented pebbles and sand.



15. This rock should be classified as
- an intrusive igneous rock
  - an extrusive igneous rock
  - a bioclastic sedimentary rock
  - a clastic sedimentary rock
16. What is the name of the rock?
- limestone
  - breccia
  - sandstone
  - conglomerate
17. Which observation about the rock best supports this classification?
- The rock is composed of several minerals.
  - The rock contains fragments of other rocks.
  - The rock has a vesicular texture.
  - The rock shows distorted and stretched pebbles.
18. The beaches along Fire Island consists of particles with diameters from 0.01 cm to 0.1 cm. Identify the sedimentary rock that will form when burial and cementation of these sediments occur.
- siltstone
  - shale
  - sandstone
  - breccia