

Name: _____

Date: _____ Period: _____

Lab Activity: Sedimentary Rocks

INTRODUCTION:

Sedimentary rocks are formed from an accumulation of sediments. Most of the time a sedimentary rock is formed from the materials that settle in quite waters. More often than not, the individual characteristics of the sediments can be found in the sedimentary rock it self.

Geologist have classified sedimentary rocks into three categories called clastic, crystalline and bioclastic. The clastic rocks are those formed mechanically where sediments are compacted or cemented together. Crystalline rocks form chemically from precipitates and evaporites and bioclastic rocks are composed of former living things.

OBJECTIVE:

Learn how to identify sedimentary rocks based on their properties.

VOCABULARY:

Clastic -

Lithification -

Cementation -

Compaction -

Crystalline -

Bioclastic -

PROCEDURE A:

For each unknown sedimentary rocks, identify the key characteristics. After identifying the characteristics, use your Earth Science Reference Tables and determine the name of the rock based on your observations.

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| Texture | Texture | Observations | Rock Name | |
|--------------------------------------|---|--|---|--|
| <input type="checkbox"/> Clastic | <input type="checkbox"/> Various sizes <input type="checkbox"/> Sand sized: 0.006 - 0.2 cm <input type="checkbox"/> Silt sized: 0.0004 - 0.006 cm <input type="checkbox"/> Clay sized: less than 0.0004 cm | | | |
| <input type="checkbox"/> Crystalline | <input type="checkbox"/> Fine to coarse | | | |
| <input type="checkbox"/> Bioclastic | <input type="checkbox"/> Microscopic to very coarse | | | |
| Method of Lithification: | | <input type="checkbox"/> Burial and Compaction | <input type="checkbox"/> Burial and Cementation | <input type="checkbox"/> Precipitation / Evaporation |

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DISCUSSION QUESTIONS:

1. What is the maximum and minimum size of a cobble?
2. How can you distinguish a clastic rock from that of a bioclastic rock?
3. Describe the sequence of events in the lithification of sandstone?
4. Why are sedimentary rocks only found on or close to Earth's surface?
5. Why does the sedimentary rock limestone react with HCl acid?

CONCLUSION: On what basis are sedimentary rocks classified?