

UNIT 2: Earth Materials

LAB 2-4: SEDIMENTARY ROCK IDENTIFICATION

INTRODUCTION: Sedimentary rocks are formed from accumulated sediments. Most sedimentary rocks are formed from materials that have been deposited in calm water. Often some of the characteristics of the sediments are retained in sedimentary rocks. Geologists classify sedimentary rocks into two groups: **clastic** (those formed mechanically) and **nonclastic** (those formed chemically and/or organically).

OBJECTIVE: You will investigate the properties by which different types of sedimentary rocks can be identified.

VOCABULARY:

clastic:

lithification:

veneer:

cementation:

compaction:

precipitation (from solution):

organic:

fossiliferous:

PROCEDURE:

1. Obtain the sedimentary rock samples from your instructor.
2. Arrange your samples in the order demonstrated by your instructor.
3. Complete the Report Sheet using your samples, the sedimentary rock chart in the Appendix and reference materials supplied by your instructor.

**If you perform the acid test you
MUST WEAR GOGGLES.**

4. Observe the large sedimentary rock samples provided.

REPORT SHEET

#	Clastic, Chemical or Organic	Composition	Method of Lithification	Rock Name
1				
2				
3				
4				
5				
6				
7				

If you perform the acid test you
MUST WEAR GOGGLES.

4. Check this into laboratory log book provided.

DISCUSSION QUESTIONS: (*Answer in Complete Sentences*)

1. What are the maximum and minimum dimensions (the size range) for the following particle sizes?
 - a) cobble:
 - b) pebble:
 - c) sand:
2. On separate paper draw a picture of a pebble of maximum size.
3. How can you distinguish a clastic (fragmental) sedimentary rock from a chemically formed sedimentary rock?
4. Describe the sequence of events in the formation of an evaporite.
5. Describe the sequence of events in the lithification of a sandstone.
6. Explain why sedimentary rocks are found as a veneer covering large areas of the continental igneous rocks.

CONCLUSION: On what basis can sedimentary rocks be identified?