

EXERCISE 5B: ROCK IDENTIFICATION

PURPOSE: To learn the SYSTEMATIC PROCEDURE for rock identification.

To learn to recognize the TEXTURE and COMPOSITION rocks.

To use the texture and mineral composition to interpret the GEOLOGIC HISTORY of their formation.

INTRODUCTION: Rocks are defined as “an aggregate of minerals”. They are one or more minerals that have either crystallized together or been cemented or compacted together. Therefore, rocks are classified by looking at the minerals they contain (MINERAL COMPOSITION.) and size, shape and arrangement of the minerals (TEXTURE)

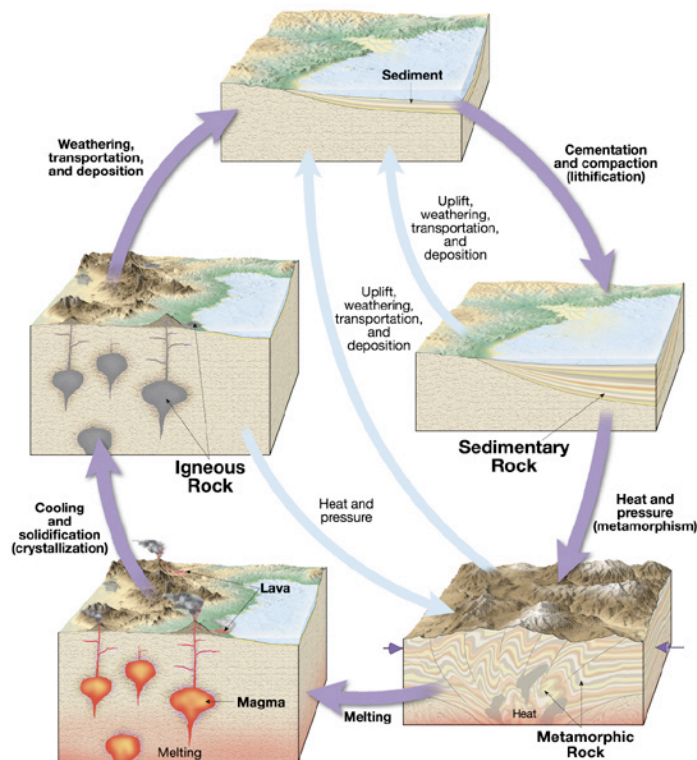
There are three types of rocks:

IGNEOUS – form from molten rock that solidified

SEDIMENTARY – form from pieces of weathered rocks and mineral cemented back together or from ions in water that bonded or from the remains of living things.

METAMORPHIC – form from pre-existing rocks that were changed by either heat (while solid) or directed pressure

We know today that Hutton’s theory a “Cyclical Earth” is valid. The earth is constantly creating and destroying rocks. The rock cycle below shows these relationships:



For this lab we will identify each rock type separately. See Labs 5c, 5d and 5e for background and procedures for each rock type.