

The origin of siliciclastic and biochemical sedimentary rocks

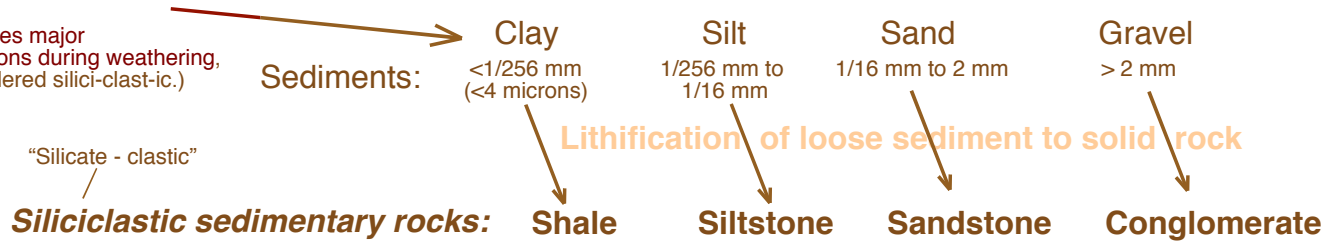
Our story begins with **Weathering** of pre-existing rocks, most of which consist of silicate minerals. Weathering can be divided into two general sets of processes:

This document is a word-rich, flow-chart-like companion to an *SFMG* sketch with the title "The Origin of Sedimentary Rocks".

a. Physical weathering
to produce pieces or *clasts*
of silicate materials of various size.

(The production of clay actually involves major chemical/mineralogical transformations during weathering, but shales are nonetheless considered silici-clast-ic.)

and



b. Chemical weathering
like this



A hypothetical silicate mineral
Carbonic acid, which is abundant in soils
($\text{H}_2\text{O} = \text{CO}_2 \rightarrow \text{H}_2\text{CO}_3$)

Dissolved calcium Dissolved bicarbonate Dissolved silicon

