



# Sedimentary Rocks

Read Pages 69-75

## Topic 9 “Kinds of Sediments” (page 69)

Most of the Earth’s *crust* (lithosphere) is igneous but...

Most of the Earth’s *surface* is sedimentary.

### 3 Kinds of Sedimentary Rocks

1. **clastic** – formed from fragments of other rocks/minerals  
examples: conglomerate, sandstone, shale
2. **chemical** – formed from mineral grains that precipitate (fall out) of solutions that evaporate  
examples: rock salt, compact limestone, rock gypsum
3. **organic** – formed from the remains of plants and animals  
examples: coal, shell limestone

## Topic 10 “How Clastic Rocks Form” (page 69)

1. Compaction – sediments are squeezed by pressure of overlying layers
2. Cementation – sediments are cemented together
  - \*silica ( $\text{SiO}_2$ ) quartz, light color, very hard
  - \*calcite ( $\text{CaCO}_3$ ) fizzes in acid
  - \*iron oxide ( $\text{FeO}$ ) dark, reddish color

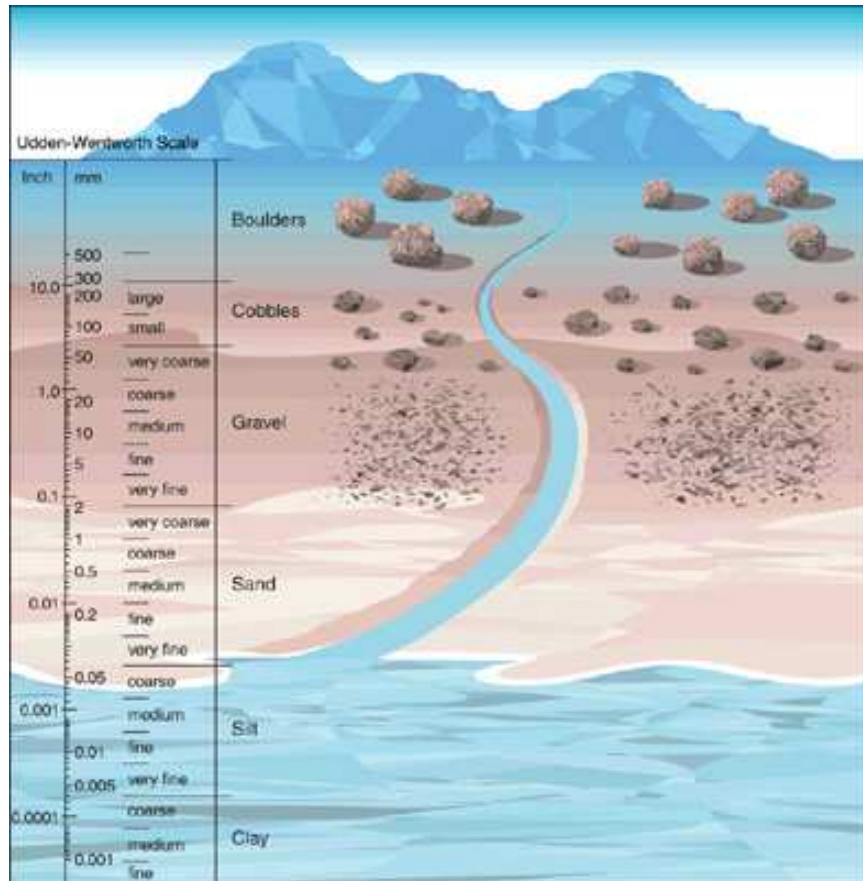
## Topic 11 & 12 “Sorting of Clastic Sediments” (page 70)

Sediments are sorted naturally by water

\*large pebbles and rocks settle first (in rough waters)  
**conglomerate** - coarse clastic rock, pebbles, sand, quartz

\*smaller grains settle next (in slower water)  
**sandstone** – mostly grains of quartz, gritty, hardness of 7  
“porous” – filled with holes, sandstone is 30% air  
“permeable” water passes through

\*silts and clays settle last (in calm water)  
**shale** – tiny flakes of minerals, smooth, soft, easily broken



### Topic 13 “Chemical Origin of Sedimentary Rocks” (page 71)

\*water contains dissolved minerals

\*evaporation or chemical reactions cause minerals to precipitate

***compact limestone*** – tiny grains of calcite, gray, tan, fizzes in acid

***rock salt*** – NaCl (contains mineral halite) salty taste

***rock gypsum*** – layers with veins of pure gypsum, soft, clear

### Topic 14 “Organic Origin of Sedimentary Rocks” (pages 71-72)

\*remains of plant and animal materials

\*calcite in animal shells build up “lime”

***shell limestone*** – bits of shell and fossils, calcite, fizzes in acid

\*plants decompose leaving carbon

***coal*** – made from decomposed plant remains

### Topics 15-18 “Vocabulary To Know” (pages 72-75)

\*stratification \*fossils \*ripple marks \*mud cracks \*cross bedding

\*nodules \*concretions \*geodes \*flint \*chert