

## SEDIMENTARY ROCKS

- 75% OF THE EXPOSED ROCKS ON EARTH ARE SEDIMENTARY ROCKS.
- SEDIMENTS – loose materials that have been moved by wind, water, ice or gravity.
- SEDIMENTARY ROCKS- form when sediments are pressed and cemented together, or when minerals form in solutions.
- STACKED ROCKS-
  - FOUND IN LAYERS
  - OLDEST ON THE BOTTOM
  - FORCES IN THE EARTH MAY OVERTURN LAYERS

## CLASSIFYING SEDIMENTARY ROCKS

- COMPOSITION OF SEDIMENTARY ROCKS DEPENDS UPON THE COMPOSITION OF SEDIMENTS
  - WHICH INCLUDE ROCKS AND REMAINS OF ORGANISMS
- DETRITAL
  - To wear away- broken fragments of other rocks
    - Rocks are weathered- broken down by air, water, ice
    - Sediments are deposited, layer upon, pressure pushes down on the layers
    - COMPACTION- sediments stick together to form a solid rock
    - Pieces are classified by size
      - Sediments are large (sand and pebbles) must be cemented together
      - CEMENTATION- when minerals such as quartz, calcite, and hematite are deposited between pieces of sediments
        - These minerals act like a natural cement
- Rocks have granular texture- rocks are named according to the shape And size of sediments
  - Conglomerate – formed from large round sediments
  - Breccia- formed from large sharp angle sediments
- Sandstone is made from smaller particles
- Siltstone is made of smaller, silt-sized particles
- Shale is made of clay- sized particles

## CHEMICAL SEDIMENTARY ROCKS

- \*form when dissolved minerals come out of solution
- \* Not made from preexisting rocks
- \* CALCIUM CARBONATE comes out of solution as calcite and its many crystals grow together Limestone forms- 50% calcite
- \* Large areas of the central US have limestone bedrocks because seas covered much of the country
- \* Rock Salt- ( halite) formed from evaporated oceans

## ORGANIC SEDIMENTARY ROCKS

- Rocks made of the remains of once-living things
- Fossil Rich Limestone- mostly contains remains of once living ocean organisms
- Shells of ocean animals become calcite
  - Shells accumulate of the oceans floor
  - Shells cement together
  - COQUINA- rocks made completely of shell fragments that you can see
  - Chalk is made of microscopic shells
  - Coal is formed from dead plants that have been chemically changed by microorganisms.