Section 7.3: how rocks are formed

Igneous

-“from fire”

-formed when hot magma (way way under the surface) or lava (on the surface) cools

-crystal size depends on how slow it cooled

-Intrusive igneous rocks formed well below the surface, ‘intruded into the rock’

-**Ex**trusive rocks formed on the Earth’s surface (**ex**ited the Earth)

-reach the surface through cracks in the crust/plates, or through erosion and uplift of layers of rock

-figure 7.13

Sedimentary

-made from sediment that has hardened or undergone chemical change

-sediment is loose material like clay, sand, silt, pebbles, salts, and plant/animal matter

-sediments created by erosion, then moved by wind/water/gravity to areas where they are deposited

-always in ‘layers’ oldest at bottom, (can be uplifted and flipped!)

-over millions of years, the layers are buried, and squeezed together where chemical change occurs….”compaction”, glued together through “cementation”

-see figure 7.16

-can contain fossils; soft parts decay, leave shells, or an imprint that is filled with another layer…

Metamorphic

-“from heat”, pressure, or chemicals cause the rock type to change

-marble (limestone), diamonds (coal), shale (limestone),

-takes millions of years to occur

-always deep in the Earth’s crust where heat and pressures are high

-rock that is turned into a metamorphic rock is the ‘parent rock’

-foliated (page-like) = thin flat layers

textbook p222 #1 (6), #2 (2), #3 (3), #7 (2)

workbook pp 141 - 149