Midterm #2 covers material in Modules 4, 5 & 6

For each module:

Successfully accomplish the Learning Objectives. To do this, review:

- *Reading Assignments*
- *In-class activity, Quiz, and Homework*
- *notes from class lectures*

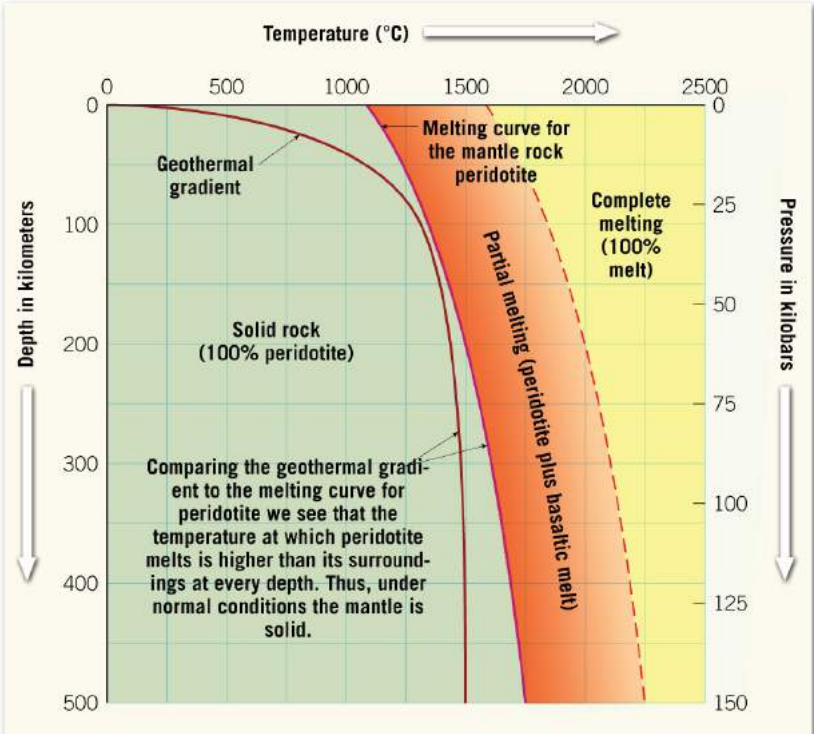
Module 4: Igneous Rocks and Processes

Learning Objectives:

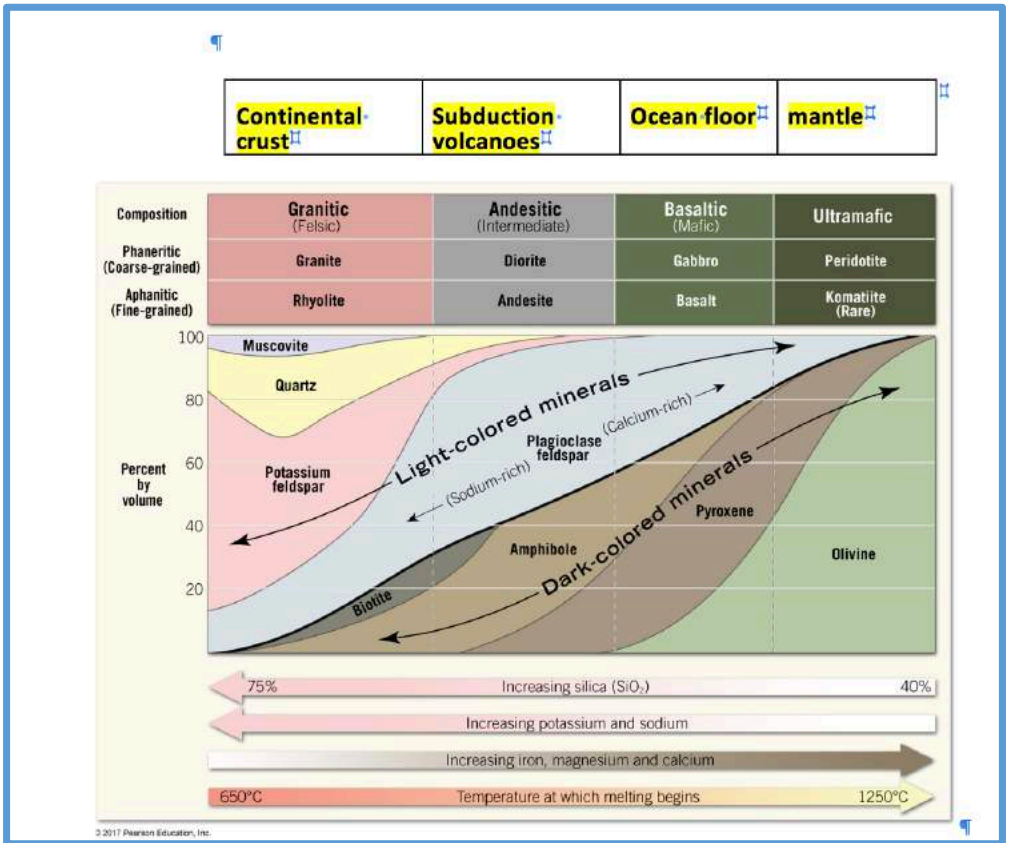
4.1 List and describe three major components of magma
4.2 Compare and contrast the four basic igneous compositions
4.3 Relate igneous rock textures to the presence of the three major components of magma
4.4 Summarize the three major processes that generate magma from solid rock, and which tectonic setting each process is associated with.
4.5 Describe how magmatic differentiation can generate a magma body that has a composition that is different from its parent magma (for Example, the Palisades Sill)
4.6 Describe how partial melting of a mantle rock (peridotite) can generate basalt, and how this relates to sea floor spreading.

Know how to use this figure to address LO 4.1, 4.2, 4.3

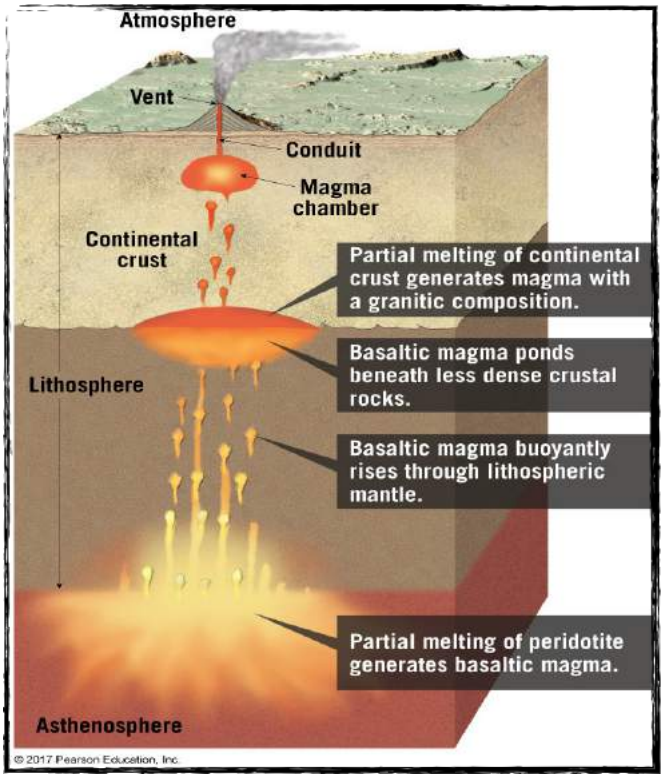
Know how to use this figure to address LO 4.4



Know how to use this figure to address LO 4.2, 4.4, 4.5, 4.6



Know how to use this figure to address LO 4.6



Module 5: Weathering, and Sedimentary Rocks and processes

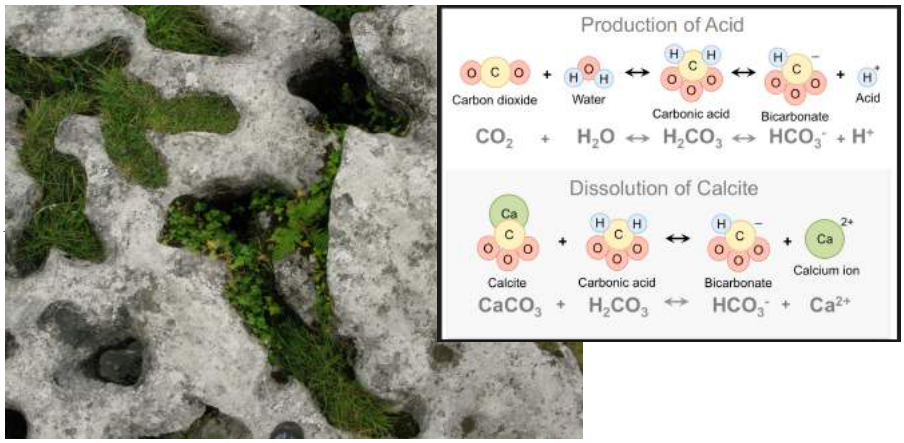
Learning Objectives: **Weathering and soil**

5.1 Define weathering and distinguish between the two main types of weathering
5.2 List and describe examples mechanical and chemical weathering
5.3 Define soil and explain why soil is referred to as an *interface*
5.4 Explain the detrimental impact of human activities on soil, and list several ways to combat soil erosion

Learning Objectives: **Sedimentary Rocks**

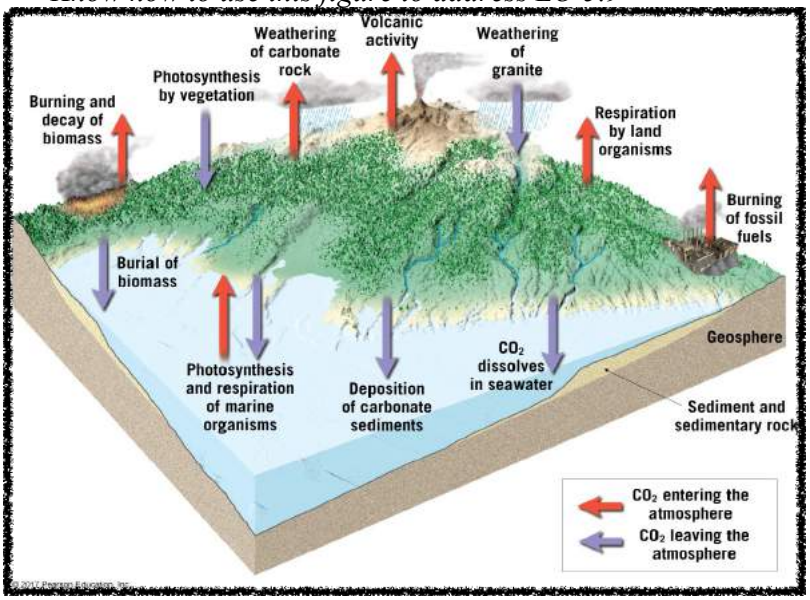
5.5 Summarize the part of the rock cycle that pertains to sedimentary rocks
5 6 Discuss basics for distinguishing detrital rocks and how they form
5.7 Explain the process of chemical sedimentary rock formation
5.8 Describe the processes that convert sediment into sedimentary rock
5.9 Relate weathering processes and sedimentary rocks to the carbon cycle

Know how to use this figure to address LO 5.2



Know how to use this figure to address LO 5.2

Know how to use this figure to address LO 5.9



Module 6: Energy

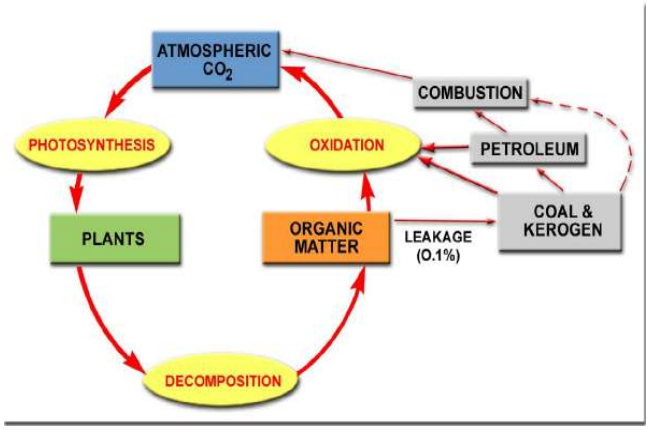
Learning Objectives: **Energy**

6.1 Summarize the current trends in population growth and individual energy consumption, and how these factors can affect future climate

6.2 Distinguish between renewable and nonrenewable resources

6.3 Compare and contrast fossil fuel types (including formation, size of molecules, etc.) and describe how each satisfies U.S. Energy consumption

Know how to use this figure to address LO 6.2 as it applies to fossil fuels (are fossil fuels renewable? Why or why not)



Know how to use this figure to address LO 6.3 as it applies to the recent and future trends in fossil fuel usage (i.e., coal usage, availability of fossil fuels)