Review Topics / Questions for Soil and Solid Nonfuel Mineral Resources

The following is a list of some of the “Key Terms” to practice for Soil and Solid Non Fuel Mineral Resources. Practice defining each term, put in your own words what each term means: environmental degradation, renewable, nonrenewable and potentially renewable resources, soil definition, factors involved in soil formation, transported soil, residual soil, soil horizon, soil profile, regolith, humus, crop rotation, The Dust Bowl, environmental degradation, disseminated deposits, ores, black smokers, gangue, vein, REE’s, The Lanthanide Series, The Rock Cycle, secondary enrichment, Bauxite, evaporates, placers.

Define “Nonrenewable Mineral Resource”
Create a chart or list showing Renewable, Nonrenewable and Potentially Renewable Resources. Know several examples of each.

Define Soil.
Which factors determine the type of soil developed and the rate of soil development?
What is a soil Horizon and describe the O and the A Horizon, sometimes called topsoil.
What is the Dustbowl and when did it occur and why?
What are some of the major concerns about soil and why is this happening?
Describe several soil conservation techniques outlined in the slideshow and textbook
Formation of Solid Non Fuel Mineral Resources

Define the rock cycle and briefly describe how it works.

Explain the different ways that internal and external geologic processes concentrate minerals—e.g. magmatic, hydrothermal deposits, metamorphism, sedimentary deposits such as wind, water and placers, evaporates and secondary enrichment.

What are example of minerals and rocks associated with magmatic deposits and what are some common uses?

Which of the three rock groups is associated with hydrothermal activity?

What chemical elements or minerals are typically associated with hydrothermal mineral deposits? What are some common uses? Define terms such as Hydrothermal Activity, veins, gangue, and disseminated deposits.

What are the Rare Earth Elements (REE) and what are they used for? Make a short list. What are some of the environmental concerns of mining / using the REE? How rare are they?

What is Metamorphism and what are two common metamorphic rocks

What are evaporites and how do they form?

What are placers and how do they form?

What is Bauxite chemically and what is it used for?
What is an ore and what are the drawbacks of mining low grade ore compared with high grade ore? In other words, what is the relationship between grade of ore mined and pollution / waste / land disruption / cost?

**LOCATION / MINING / DEPLETION TIME**

How are mineral resources found?
What are some different surface mining techniques?
How can the depletion time for a given mineral be increased? In other words, what human actions can increase the amount of time before 80% of a mineral is used up?