Chapter 1 Notes: Environmental Problems, Their Causes and Sustainability

Core Case Study
Sustainability is the capacity of the earth's natural systems and human cultural systems to do which three things?

1-1 Principles of Sustainability
--The environment includes what two things? (and describe)
--What are 3 things we are dependent upon?
--The latest version of our species has been around for _____ years.
--How long has life has existed on the earth?
--What are the three scientific principles of sustainability?
--Describe natural capital. What two things is it composed of?
--What does it mean to degrade natural capital?
--What are the three social science principles of sustainability?
--Why is solar energy an *in*exhaustible resource?
--Define renewable resource. What is the time frame?
--Why can't we reuse or recycle nonrenewable energy resources?
--Distinguish between developed and less developed countries. Population? Income?

1-2 Ecological Footprints
--How are humans living unsustainably? Explain 3 problems around the world.
-- How much of the earth's natural or ecosystem services have been degraded or overused by human activities according to the *Millennium Ecosystem Assessment?*
--Definition of Pollution. Give examples of point source and non-point source pollution.
--What are two ways of dealing with pollution?
--Explain the *Tragedy of the Commons.*
--What are the two major ways to deal with the Tragedy?
-- Define Ecological Footprint. What does it measure?
--What does IPAT stand for? How is it different from an Ecological Footprint?
-- Describe how technology can have a positive or negative affect on IPAT
--What are the three major cultural changes in human history? When did they occur?
--What do some scientists see as the fourth major cultural change?

1-3 Why...Environmental Problems
--What are the 5 potential major causes of environmental problems?
--What is exponential growth?
--Unfortunately, the United States is responsible for almost _____ of the global ecological footprint. We consume _____ times that of the average Indian and _____ times as much as the average person in the world's poorest countries.
--On the other hand, we are more concerned about _____ quality. This has resulted in what achievements:

--What is a condition in which people are unable to fulfill their basic needs for adequate food, water, shelter and other things?
--Define poverty. How much of the world's population lives in poverty?
--What are some environmental problems related to poverty?
--Malnutrition is one of the three major problems associated with poverty. What are the other two?
--What is one example of not including harmful environmental costs in the prices of goods and services?
--What is a subsidy?
--What is Nature Deficit Disorder?
--Your worldview is your set of assumptions and values reflecting how you think the world works and what you think your role in the world should be. Describe the three worldviews.

. --Write a reaction to the Big ideas as they relate to what you already know about environmental science: