**AP Environmental Science**

**Chapter 8/9: Population Ecology and the Human Impact**

Underline = Core Ideas *Italics* ***=*** *on-your-own* **Bold = Key objective**

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| Date Due  Pages | Self-Assessment Rating Symbols: Use at times given below  https://docs.google.com/drawings/d/s5Acn_eOSSg2GvnOhj-WeHw/image?w=22&h=21&rev=1&ac=1= After initial reading  https://docs.google.com/drawings/d/sF4UUUbtswW0SdmMrGVjH9A/image?w=22&h=21&rev=1&ac=1 = After reading quiz  https://docs.google.com/drawings/d/sNkBxRjX5XWVruRYiCJPdow/image?w=22&h=24&rev=1&ac=1 = Before test | I’m not there yet | I am on my way | I got it |
| Monday(11.28)  Due by end of class. | * 1. Describe the potential limits to human population growth.      1. *Using the graph of human population growth over time (fig 7.1), identify major events in the timeline that had an impact on the growth rate*      2. *Explain Thomas Malthus’ ideas about human population growth and resources to support the growth.  Compare his ideas to those of other scientists and what evidence there is to support each theory.* | 0      1     0      1  0      1 | 2   3    4  2   3    4  2   3    4 | 5  5  5 |
| W  Wednesday (11.30) | * 1. Describe important aspects of global and national population growth using demographic terminology and tools.   *i. Differentiate between immigration and emigration and inputs and outputs for population size*  *ii. Define Crude Birth Rate (CBR) and Crude Death Rate (CDR)*  *iii. Define doubling time*  *iv. Solve the doubling time equation given certain variables*  **V. Identify the current size of the human population and the projected range of the future size and stabilization range.**  **vi. Define Total Fertility Rate (TFR)**  **vii. Define replacement-level fertility and identify the reasons behind why it changes depending upon the population**  **viii. Explain how life expectancy and infant mortality can be used to determine the affluence and what other characteristics can be determined**  **ix. Create an age structure diagram given data and correctly read a age structure diagram** | 0      1     0      1  0      1     0      1  0      1    0      1    0      1    0      1    0      1    0      1 | 2   3    4  2   3    4  2   3    4  2   3    4  2   3    4  2   3    4  2   3    4  2   3    4  2   3    4  2   3    4 | 5  5  5  5  5  5  5  5  5  5 |
| **Friday (12.2)** | * 1. Evaluate the social, economic, and environmental factors that have contributed to decreasing growth rates in many countries.   *i. Define the Theory of Demographic Transition*   * + 1. **Explain what is occurring at each phase of the Demographic Transition graph and the reasons behind the changes that are occurring (especially in relation to birth rates, death rates, and TFR)**        1. Slow        2. Rapid        3. Stable        4. Declining     2. Identify countries that fall into each phase     3. **Identify the role education, social status, and age can have how many children women have during their lifetime**     4. **Explain the different strategies taken by countries to lower their TFR.  You should be most familiar with the following countries**        1. China        2. India        3. Kenya | 0      1       0      1     0      1     0      1    0      1 | 2   3    4  2   3    4  2   3    4  2   3    4  2   3    4 | 5  5  5  5  5 |
| **Tuesday (12.6)** | * 1. Analyze relationships among changes in population size, economic development, and resource consumption at global and local scales.      1. Identify the top 5 most populous countries (in order)      2. **Describe what is occurring with the growth rate in developed countries versus developing countries**      3. **Compare and contrast the affluence found in developing versus developed countries and the effect this has on the per capita ecological footprint of these countries**      4. *Identify the four components in the I=PAT equation and the effect each component has on the environmental impact of a population*      5. **Identify the trend in the percentage of individuals living in urban areas and the benefits and drawbacks of this trend**      6. **Identify the correlation between GDP and affluence and how it all connects to pollution and environmental impact levels (aka Kuznet’s Curve)** | 0      1     0      1  0      1       0      1     0      1     0      1    0 1 | 2   3    4  2   3    4  2   3    4  2   3    4  2   3    4  2   3    4    2   3    4 | 5  5  5  5  5  5  5 |
| **ON YOUR**  **OWN**  **expect to**  **see one**  **question**  **on exam**  **Dec.15/16** | * 1. Explain how people have attempted to harmonize economic development with sustainable development.      1. *Identify the goal of the Millennium Ecosystem Assessment Project*      2. *Summarize what the conclusions drawn by the Millennium Ecosystem Assessment Project mean for the current human population and future populations* | 0      1  0      1 | 2   3    4  2   3    4 | 5  5 |
|  | * 1. **Connect topics in this unit to current events discussed in class**      1. Summarize and connect the topics of stories assigned in this chapter to concepts in the book | 0      1 | 2   3    4 | 5 |
|  | * 1. **Perform math calculations that are necessary for topics in this unit** | 0      1 | 2   3    4 | 5 |