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AP Biology

Chapter 43-Global Ecology and Conservation Biology

***43.1 Human activities threaten Earth’s biodiversity***

1. Ecologists organize biodiversity on three levels. In the table below, explain the impact of decreasing diversity in each division. Begin reading at 43.1 in your text until the topic changes to threats to biodiversity before answering this question.

|  |  |
| --- | --- |
| **Level of Biodiversity** | **Impact** |
| Genetic diversity |  |
| Species diversity |  |
| Ecosystem diversity |  |

***43.2 Population conservation focuses on population size, genetic diversity, and critical habitat***

6. Explain what an *extinction vortex* is.

***43.3 Landscape and regional conservation help sustain biodiversity***

11. Describe how the increase in cowbirds is related to forest fragmentation.

12. What are potential positive and negative effects of *movement corridors*?

13. Explain what a biodiversity hotspot is.

***43.4 Earth is changing rapidly as a result of human activities***

29. How has agriculture affected nitrogen cycling? What are some negative consequences of nutrient enrichment?

30. In what ways have human activities contributed to acid precipitation? What are some negative consequences of acid precipitation?

31. Explain the process of biological magnification. Discuss at least one example.

32. What is meant by the *greenhouse effect*? What would life on Earth be like without this effect?

33. What is contributing to the great increase in atmospheric carbon dioxide? What are potential effects of this increase?

34. How is atmospheric ozone depleted? What are projected effects of this depletion?

***43.5 The human population is no longer growing exponentially but is still increasing rapidly***

34. You should be able to look at *age-structure graphs* and make predictions about the future growth of the population. Using Figure 10.4 on page 285 in your Review Book, describe the key features for the three age- structure graphs and predict how the population of each country will grow.

|  |  |  |
| --- | --- | --- |
| **Country** | **Key Features** | **Predicted Future Growth** |
| Afghanistan |  |  |
| United States |  |  |
| Italy |  |  |

30) Can the world’s population sustain an *ecological footprint* that is currently the average American footprint? Explain.