**Environmental Science Unit 3 Review Sheet**

**Chapters Understanding Populations and Biodiversity**

**Review Questions** (Answer all parts of each question using complete sentences on your own separate paper.)

Chapter: Understanding Populations

*Section: How Populations Change in Size*

1. Describe the three main properties of a population.

2. List and describe 2 ways that population size can be estimated.

3. Describe the 3 types of population dispersal.

4. What is the significance of reproductive potential?

5. Describe exponential growth. Provide one example.

6. Define carrying capacity. Draw a graph that shows carrying capacity.

7. Describe how the reproductive behavior of individuals can affect the growth rate of their population.

8. Explain how population sizes are naturally regulated based on carrying capacity.

9. Contrast and provide examples of density dependent and density independent limitations of populations.

*Section: How Species Interact with Each Other*

10. Contrast niche and habitat.

11. Describe an example of a niche.

12. What is the difference between a predator and a parasite?

13. Describe an example of indirect competition.

14. Describe the types of interactions amongst organisms by completing this table.

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| --- | --- | --- |
| Term | Definition | Example |
| Competition |  |  |
| Predation |  |  |
| Mutualism |  |  |
| Commensalism |  |  |
| Symbiosis |  |  |
| Parasitism |  |  |

Chapter: Biodiversity

*Section: What is Biodiversity?*

15. Define biodiversity.

16. Describe the diversity of species types on Earth. In your response, relate the difference between unknown numbers and estimated numbers of species.

17. Describe the three levels of biodiversity (species, ecosystem, and genetic).

18. Explain at least four ways in which biodiversity is important to ecosystems and humans.

19. Analyze the importance of a keystone species.

20. Analyze the potential value of a single species (population survival, medical, agricultural, recreational uses, etc.).

21. Provide at least one example from number 19.

*Section: Biodiversity at Risk*

22. Compare the terms endangered, threatened and extinct.

23. Define and give three examples of endangered and threatened species.

24. List and describe several ways that species are being threatened with extinction globally.

25. Define poaching. Give an example.

26. Define critical biodiversity hotspot.

27. List areas of the world that have high levels of biodiversity and many threats to species.

28. Infer two reasons these locations (from number 27) fit this description.

29. Compare the amount of biodiversity in the United States to that of the rest of the world.

*Section: The Future of Biodiversity*

30. Why is it important to preserve biodiversity?

31. List and describe four efforts to save individual species.

32. Explain why it is an advantage to protect entire ecosystems rather than individual species.

33. Describe the main provisions of the Endangered Species Act.

34. Discuss two ways in which efforts to protect endangered species can lead to controversy.

35. Describe three examples of world-wide cooperative efforts to prevent extinctions.