**APES Study Guide**

**Unit 7: AQUATIC BIODIVERSITY**

*The seventh unit of APES focuses on the resource that makes up 75% of our planet, WATER. In this unit we will study aquatic biodiversity and sustainability.* *We will examine issues relating to water supply, use, management and pollution.*

**Textbook Reference:**

Chapter 8 – Aquatic Biodiversity

Chapter 11 – Sustaining Aquatic Biodiversity

**Vocabulary:**

*Directions: Review key vocabulary, words may appear in quizzes and/or tests. You are not required to write the definitions but are encouraged to review them online*

Chapter 8

aquatic life zones

benthos

coastal wetland

coastal zone

cultural eutrophication

decomposers

drainage basin

eutrophic lake

freshwater

inland wetlands

intertidal zone

lakes

marine

mesotrophic lake

nekton

oligotrophic lakes

open sea

plankton

runoff

saltwater

surface water

turbidity

watershed

Chapter 11

fishery

fishprint

**Study Guide Questions (SGQ):**

*Directions:**Answer in complete sentences in your composition books. (must be handwritten)*

Chapter 8

1. Distinguish between a saltwater (marine) life zone and a freshwater life zone and give two examples of each.
2. List five factors that determine the types and numbers of organisms found in the three layers of aquatic life zones?
3. What is turbidity, and how does it occur? Describe one of its harmful impacts.
4. What major ecological and economic services are provided by marine systems?
5. What are the three major life zones in an ocean?
6. Explain the importance of sea grass beds.
7. What is a mangrove forest and what is its ecological and economic importance?
8. Describe the three major zones in the open sea.
9. What human activities pose major threats to marine systems and to coral reefs?
10. What major ecological and economic services do fresh-water systems provide?
11. Describe the three zones that a stream passes through as it flows from mountains to the sea.
12. Give three examples of inland wetlands and explain the ecological and economic importance of such wetlands.
13. What are four ways in which human activities are disrupting and degrading freshwater systems?

Chapter 11

1. Describe how human activities have threatened whale populations (Core Case Study).
2. What is the International Whaling Commission and what has it done to protect whales?
3. What are three general patterns of marine biodiversity?
4. Describe the threat to marine biodiversity from bottom trawling.
5. How have coral reefs been threatened?
6. Give two examples of threats to aquatic systems from invasive species and two of the same for freshwater systems.
7. Why is marine biodiversity higher ( a) near coasts than in the open sea and ( b) on the ocean’s bottom than at its surface?
8. What are two harmful effects on aquatic systems resulting from the increase in the human population in coastal areas?
9. What are three ways in which projected climate change could threaten aquatic biodiversity?
10. What are three major harmful effects of overfishing?
11. Describe the effects of trawler fishing, purse- seine fishing, longlining, and drift- net fishing.
12. How have laws and treaties been used to help sustain aquatic species?
13. What is the main problem that interferes with enforcing international agreements?
14. Describe the use of marine protected areas and marine reserves to help sustain aquatic biodiversity and ecosystem services.
15. How can the precautionary principle help in managing fisheries and large marine systems?
16. Describe how consumers can help to sustain fisheries and aquatic biodiversity and ecosystem services.
17. What are major ecological services provided by wetlands?
18. Describe efforts to restore the Florida Everglades.
19. Describe the major threats to the world’s rivers and other freshwater systems.
20. Describe invasions of the U. S. Great Lakes by nonnative species.

**Case Studies:**

*Directions: For each of the following summarize the case study in three sentences; include the author’s main idea.*

Chapter 8

1. Why Should We Care About Coral Reefs – page 168
2. The Chesapeake Bay – pages 179-180
3. Dams, Deltas, Wetlands, Hurricanes & New Orleans – page 184

Chapter 11

1. Protecting Whales: A Success Story.. So Far – page 250
2. Industrial Fish Harvesting Methods – page 259
3. The International Whaling Commission Moratorium on Commercial Whaling – page 261
4. Can We Restore the Florida Everglades – pages 268-269