**Section 1: Terrestrial Biomes**

1. What is a biome?
2. What three adaptations do plants have that allow them to survive in a biome?
3. Provide two examples of plants and where they grow from the paragraph.
4. Define Climate
5. List the two most important factors that determine a regions climate.
6. What are most organisms adapted to? What could happen to them?
7. What affects plant growth?
8. What happens when an organism become larger?
9. What type of plant life will be found in a biome that does not receive enough rainfall?

Latitude & Altitude

*Biomes and vegetation vary with latitude and altitude.*

1. Define latitude.
2. Define altitude.
3. What happens to the climate as latitude and altitude increase?
4. What type of biome is located near the equator?
5. What type of biome is located near the poles?
6. Where is most of the food grown in the world?

**Section 2: Aquatic Ecosystems**

1. The types of organisms in aquatic ecosystems are determined by what factor? Define the term.
2. What is a wetland?
3. What are four factors that determine which organisms live in certain areas of water? Provide example
4. Classify the four types of organisms living in aquatic ecosystems
5. What are the five types of freshwater ecosystems?
6. Describe the two zones in a lake. Provide four examples of organisms for each zone.
7. What is eutrophication?
8. What organisms lower oxygen levels in a eutrophic lake?
9. What factor accelerates eutrophication?
10. What is the difference between a marsh and a swamp?
11. What are six functions of freshwater wetlands?
12. Why do we seek to preserve wetlands after years of draining them? List three reasons.
13. How does a river change with the climate and the land? Describe ALL the changes.
14. What are some ways that rivers are changing in populated areas?
15. What are coastal wetlands?
16. What roles do coastal wetlands play?
17. What bodies of water mix in an estuary?
18. Why are estuaries productive ecosystems?
19. Why do estuaries support many types of marine organisms?
20. Describe the typical food chain/web in this ecosystem.
21. Why are major ports built on estuaries?
22. What are some major threats to estuaries?
23. What is a salt marsh?
24. What does a salt marsh act as? Where do they migrate to?
25. What is a mangrove swamp? What do they help do?
26. What is a barrier island and what does it do?
27. What are coral reefs?
28. Where are coral reefs found in the ocean?
29. Why does coral bleaching occur?
30. Where is most ocean life concentrated?
31. What is the food source for the open ocean?
32. What are the main sources of ocean pollution?
33. What do the Arctic and Antarctic food webs have in common?

**Section 3: Biodiversity**

1. How does biodiversity affect ecosystems and the human population?
2. What can we, as humans, gain from a vast diversity of plant life?
3. What does it mean for a species to be extinct?
4. Define biodiversity.
5. How many species are known to exist? Most of them are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
6. What is the estimated number of Earth’s species?
7. What determines if a species is known?
8. List the three levels of biodiversity and define each level:
9. What is a gene?
10. What happens to a food web when one species is removed from it?
11. Define ***keystone species*** and provide an example.
12. How many of our drugs are derived from plants?
13. Where are most of our antibiotics derived from?
14. Why are undiscovered and poorly studied species important?
15. Where do most of our crops originate from?
16. What is a *hybrid* crop?
17. When does a species become an endangered species?
18. When does a species become a threatened species?
19. For each of the following factors, write at least two sentences describing the effects on biodiversity.
    1. Habitat destruction and Fragmentation
    2. Invasive Exotic Species
    3. Harvesting, Hunting, and Poaching
    4. Pollution
20. What has happened to the Florida panther in the last two hundred years? Why?
21. What is the total population size as of 2018?
22. What is an endemic species?
23. About what percent of total species live in the rainforest? How much of the world’s land do rainforests cover?
24. What percent of earth’s coral reefs are endangered from human activities? Give examples of the activities.
25. What is a biodiversity hotspot?
26. Where are most of the hotspots in America?
27. Why is it important to protect hotspots?
28. Why are captive breeding programs important?
29. Explain Germ Plasm.
30. What is the most effective way to save species?
31. Discuss 2 examples of conservation strategies.
32. What is the endangered species act?
33. What is a habitat conservation plan?
34. What is the Red List?
35. What is the Biodiversity Treaty? Why is it important and necessary? What are its main goals?