This is an **eighth grade** unit covering basic science concepts. The idea is from a series of online flashcards. (http://quizlet.com/15995628/scs-5th-grade-science-biomes-ecosystems-test-flash-cards)

**Colorado Academic Standard: (Science):**

**Area:** *Science: PG/EAR2 (E-2)*

**Grade level:** *Eighth grade*

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**Evidence Outcome:** *a. Develop, communicate and justify an evidence-based scientific explanation to account for Earth’s different climates.*

**21st Century & Readiness Skills:** *(Inquiry Questions)*

* How does the climate in one area compare and contrast with another area?

**Objectives**

1. The student (A) will be able to identify the various biomes and their characteristics (B) in 5 minutes (C) with 95% accuracy (D).
2. The student (A) will be able to define vocabulary words (B) that pertain to the biome unit in 5 minutes (C) with 100% accuracy (D).
3. The student (A) will be able to answer specific questions regarding the various biome and ecosystem characteristics (B) in 5 minutes (C) with 90% accuracy (D).

**Propositions**

1. A biome is one of the Earth’s large ecosystems, each with it’s own kind of climate, soil, plants, and animals.
2. A desert is a sandy or rocky biome, with little precipitation and plant life. This biome covers most of the western part of the United States.
3. A tundra is a large, treeless plain in the artic regions where the ground is frozen all year.
4. A taiga is a cool forest biome of conifers in the upper Northern Hemisphere.
5. A tropical rainforest is a hot, humid biome near the equator, with much rainfall and a large variety of life. This biome supports the most animal life.
6. A temperate rain forest is a biome with lots of rain and a cool climate (mild climate and a great deal of rain).
7. A deciduous forest is a biome with many kinds of hardwood trees that lose their leaves each autumn before the cold winter sets in.
8. A grassland is a biome where grasses, not trees are the main plant life.
9. Plankton are organisms that float freely on the water in aquatic ecosystems and are unable to swim.
10. Nekton are organisms that swim through the water in aquatic ecosystems (can be large active swimmers, such as fish and whales, in water ecosystems).
11. Benthos are organisms that live at the bottom of an aquatic ecosystem.
12. The intertidal zone is the shallowest part of the ocean ecosystem, where the ocean floor is covered and uncovered as the tide goes in and out
13. An estuary is the boundary where a fresh water ecosystem meets a saltwater ecosystem.
14. Most animals are endangered because of habitat loss.
15. Compared with a temperate forest a grassland has a lot less rainfall.
16. The main difference between primary and secondary succession is that primary succession begins with bare rock.
17. The nitrogen-fixing bacteria in soil turn nitrogen gas into ammonia.
18. Trees cannot grow in the tundra because the cold temperature and frozen ground prevent the growth of trees in the tundra.
19. The Sun provides the energy that is needed for the water cycle to take place.
20. The Nertic Zone is the ocean zone where coral reefs and kelp forests are located.

**Biomes & Ecosystems Test Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**True/False (Circle correct answer) (2 points each)**

|  |  |
| --- | --- |
| **TRUE / FALSE** | 1. The Nertic Zone is the ocean zone where coral reefs and kelp forests are located. |
| **TRUE / FALSE** | 2. The main difference between primary and secondary succession is that secondary succession begins with bare rock. |
| **TRUE / FALSE** | 3. The nitrogen-fixing bacteria in soil turn nitrogen gas into ammonia. |
| **TRUE / FALSE** | 4. Most animals are endangered because of a lack of food sources. |
| **TRUE / FALSE** | 5. Nekton are organisms that live at the bottom of an aquatic ecosystem. |

**Fill In the Blank (3 points each)**

DESERT TUNDRA TAIGA TROPICAL RAINFOREST TEMPERATE RAINFOREST DECIDUOUS FOREST GRASSLAND

1. A \_\_TEMPERATE RAINFOREST\_\_ is a biome with lots of rain and a cool climate (mild climate and a great deal of rain.)
2. A \_\_\_TUNDRA\_\_\_ is a large, treeless plain in the artic regions where the ground is frozen all year.
3. A \_\_\_DECIDUOUS FOREST\_\_\_ is a biome with many kinds of hardwood trees that lose their leaves each autumn before the cold winter sets in.
4. A \_\_\_TAIGA\_\_\_ is a cool forest biome of conifers in the upper Northern Hemisphere.
5. A \_\_GRASSLAND\_\_ is a biome where grasses, not trees are the main plant life.

**Multiple Choice (2 points each)**

\_**C**\_ 1. The \_\_\_\_\_\_\_\_\_\_ provides the energy that is needed for the water cycle to take place.

1. Grass
2. Air
3. Sun
4. Wind

\_D\_ 2. Trees cannot grow in the tundra because the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ prevent the growth of trees in the tundra.

1. Hard soil and loose gravel
2. Lack of rain and lack of sunshine
3. Cold temperature and harsh conditions
4. Cold temperature and frozen ground

\_B\_ 3. Compared with a temperate forest a grassland has \_\_\_\_\_\_ rainfall.

1. More
2. Less
3. The same amount of
4. None of the above

\_A\_ 4. A(n) \_\_\_\_\_\_\_\_\_ is the boundary where a fresh water ecosystem meets a saltwater ecosystem.

1. Estuary
2. Bayou
3. Channel
4. Midstream

\_A\_ 5. The \_\_\_\_\_\_\_\_\_\_\_\_\_ is the shallowest part of the ocean ecosystem, where the ocean floor is covered and uncovered as the tide goes in and out.

1. Intertidal zone
2. Benthic zone
3. Pelagic zone
4. Continental shelf

**Matching (4 points each)**

|  |  |
| --- | --- |
| \_F\_1. One of the Earth’s large ecosystems, each with its own kind of climate, soil, plants, and animals. | A. Tropical Rainforest |
| \_C\_2. A sandy or rocky biome, with little precipitation and plant life. This biome covers most of the western part of the United States. | B. PlanktonC. Desert |
| \_A\_3. A hot, humid biome near the equator, with much rainfall and a large variety of life. This biome supports the most animal life. | D. Temperate Rainforest |
| \_B\_4. Organisms that float freely on the water in aquatic ecosystems and are unable to swim. | E. Nekton |
| \_E\_5. Organisms that swim through the water in aquatic ecosystems (can be large active swimmers, such as fish and whales, in water ecosystems).  | F. BiomeG. Tundra |