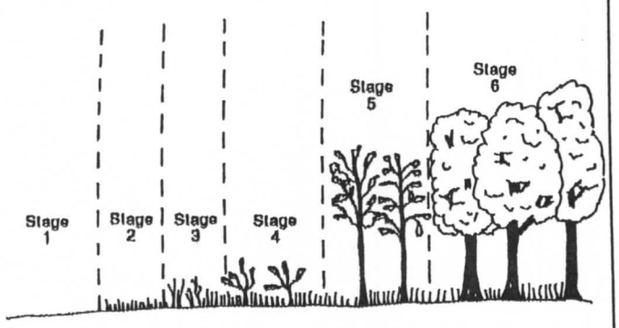
Name: _____ Class/Period: _____ Date: _____

1. Which statement about the diagram of primary plant succession below is true?



1) Stage 1 represents the climax stage.
2) Stage 6 will replace stage 5.
3) Stage 2 will replace stage 3.
4) Stage 4 represents a major New York State biome.

2. A fire burns an oak forest down to bare ground. Over the next 150 years, if the climate remains constant, this area will most likely
1) remain bare ground
2) return to an oak forest
3) become a rain forest
4) become a wetland

3. In a pond, which change would most likely lead to terrestrial succession?
1) a decrease in the number of suspended particles in the pond water
2) an increase in current velocity of the pond water
3) a decrease in the number of diverse organisms in the shallow water of the pond
4) an increase in sediment, fallen leaves, and tree limbs accumulating on the bottom of the pond

4. In December 2004, a tsunami (giant wave) destroyed many of the marine organisms along the coast of the Indian Ocean. What can be expected to happen to the ecosystem that was most severely hit by the tsunami?
1) The ecosystem will change until a new stable community is established.
2) Succession will continue in the ecosystem until one species of marine organism is established.
3) Ecological succession will no longer occur in this marine ecosystem.
4) The organisms in the ecosystem will become extinct.

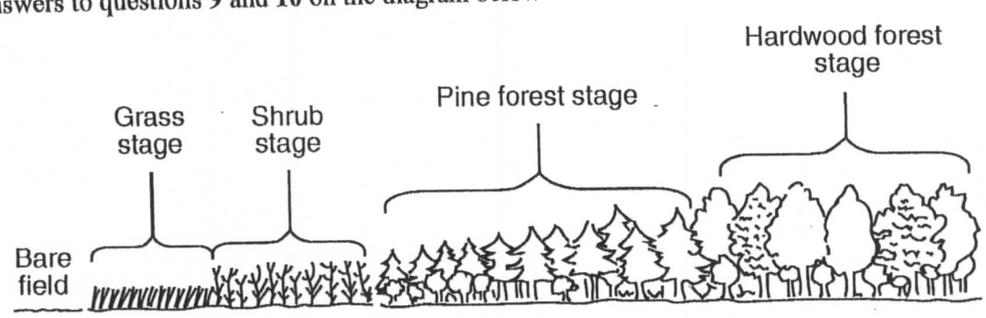
5. Years after the lava from an erupting volcano destroyed an area, grasses started to grow in that area. The grasses were gradually replaced by shrubs, evergreen trees, and finally, by a forest that remained for several hundred years. This entire process is an example of
1) feedback
2) ecological succession
3) plant preservation
4) deforestation

6. Mangrove trees grow in the water on the edge of a subtropical island. In time, glass-like plants will grow on the same spot. Still later, palm trees will grow there. Given enough time (and no natural disasters), all these plants will be gone, and a stable pine forest will stand where the mangroves once grew. These changes best describe steps involved in
1) the heterotroph hypothesis
2) ecological succession
3) energy cycles
4) the water cycle

7. Which is a characteristic of a stable climax community?
1) The number of pioneer organisms is increasing.
2) Shrubs are replacing climax trees.
3) Populations have reached equilibrium.
4) Lichens are usually the dominant form of life.

8. The first living things to grow successfully on a newly formed sand dune are known as
1) saprophytes
2) pioneer organisms
3) carnivorous plants
4) heterotrophs

Base your answers to questions **9** and **10** on the diagram below



9. Which of the stages in the diagram below consists of plant species that modify the environment, eventually making it more suitable for another community?
1) grass stage, only
2) grass, shrub, and pine forest stages
3) shrub, pine forest, and hardwood forest stages
4) hardwood forest stage, only

10. The diagram below represents a biological process taking place in an area of New York State unaffected by natural disasters.

Which statement correctly describes a stage in this process?
1) The grass stage is the most stable stage and exists for thousands of years.
2) The shrub stage modifies the ecosystem, making it more suitable for the pine forest.
3) The pine forest stage has no biodiversity and the least competition.
4) The hardwood forest stage will be replaced by a pine forest.