APESreview Ch 7-8: Biomes

Top 15 Terms for This Exam

Coriolis Effect
Hydrothermal Vent
Lake Overturn
Climate
Biome
Aquatic Zonation
ENSO
Primary Productivity
Rain Shadow Effect
Watershed
River System
Greenhouse Effect
Characteristics of Biomes
Feedback Loops
Saturation Point

The Gimme Question for This Exam

The entire land area that delivers freshwater runoff, sediments and dissolved oxygen and nutrients is called the
a. estuary
b. vertical zone
c. drainage basin
d. littoral zone

Video Review Links

Biomes

Biomes

College Board Objectives & Essential Knowledge

ERT-1.B. Describe the global distribution and principal environmental aspects of terrestrial biomes.

ERT-1.B.1. A biome contains characteristic communities of plants and animals that result from, and are adapted to, its climate.

ERT-1.B.2. Major terrestrial biomes include taiga, temperate rainforests, temperate seasonal forests, tropical rainforests, shrubland, temperate grassland, savanna, desert, and tundra.

ERT-1.B.3. The global distribution of nonmineral terrestrial natural resources, such as water and trees for lumber, varies because of some combination of climate, geography, latitude and altitude, nutrient availability, and soil.

ERT-1.B.4. The worldwide distribution of biomes is dynamic; the distribution has changed in the past and may again shift as a result of global climate changes.

ERT-1.C Describe the global distribution and principal environmental aspects of aquatic biomes.

ERT-1.C.1. Freshwater biomes include streams, rivers, ponds, and lakes. These freshwater biomes are a vital resource for drinking water.

ERT-1.C.2. Marine biomes include oceans, coral reefs, marshland, and estuaries. Algae in marine biomes supply a large portion of the Earth's oxygen, and also take in carbon dioxide from the atmosphere.

ERT-1.C.3. The global distribution of nonmineral marine natural resources, such as different types of fish, varies because of some combination of salinity, depth, turbidity, nutrient availability, and temperature.

ERT-1.A.5. Most red light is absorbed in the upper 1m of water, and blue light only penetrates deeper than 100m in the clearest water. This affects photosynthesis in aquatic ecosystems, whose photosynthesizers have adapted mechanisms to address the lack of visible light.

ERT-4.E. Explain how environmental factors can result in atmospheric circulation.

ERT-4.E.1. Global wind patterns primarily result from the most intense solar radiation arriving at the equator, resulting in density differences and the Coriolis effect.

ERT-4.F. Describe the characteristics of a watershed.

ERT-4.F.1. Characteristics of a given watershed include its area, length, slope, soil, vegetation types, and divides with adjoining watersheds.

ENG-2.A. Explain how the sun's energy affects the Earth's surface.

ENG-2.A.1. Incoming solar radiation (insolation) is the Earth's main source of energy and is dependent on season and latitude.

ENG-2.A.2. The angle of the sun's rays determines the intensity of the solar radiation. Due to the shape of the Earth, the latitude that is directly horizontal to the solar radiation receives the most intensity.

ENG-2.A.3. The highest solar radiation per unit area is received at the equator and decreases toward the poles.

ENG-2.A.4. The solar radiation received at a location on the Earth's surface varies seasonally, with the most radiation received during the location's longest summer day and the least on the shortest winter day.

ENG-2.A.5. The tilt of Earth's axis of rotation causes the Earth's seasons and the number of hours of daylight in a particular location on the Earth's surface.

ENG-2.B. Describe how the Earth's geography affects weather and climate.

ENG-2.B.1. Weather and climate are affected not only by the sun's energy but by geologic and geographic factors, such as mountains and ocean temperature.

ENG-2.B.2. A rain shadow is a region of land that has become drier because a higher elevation area blocks precipitation from reaching the land.

ENG-2.C. Describe the environmental changes and effects that result from El Niño or La Niña events (El Niño–Southern Oscillation).

ENG-2.C.1. El Niño and La Niña are phenomena associated with changing ocean surface temperatures in the Pacific Ocean. These phenomena can cause global changes to rainfall, wind, and ocean circulation patterns.

ENG-2.C.2. El Niño and La Niña are influenced by geological and geographic factors and can affect different locations in different ways.

STB-3.B. Describe the impacts of human activities on aquatic ecosystems.

STB-3.B.2. Coral reefs have been suffering damage due to a variety of factors, including increasing ocean temperature, sediment runoff, and destructive fishing practices.

STB-3.E. Describe the impacts of human activity on wetlands and mangroves.

STB-3.E.1. Wetlands are areas where water covers the soil, either part or all of the time.

STB-3.E.2. Wetlands provide a variety of ecological services, including water purification, flood protection, water filtration, and habitat

STB-4.C.3. The greenhouse effect results in the surface temperature necessary for life on Earth to exist.

STB-4.G.3. Ocean warming is causing coral bleaching, which occurs when the loss of algae within corals cause the corals to bleach white. Some corals recover and some die.

STB-4.H.4. Ocean acidification damages coral because acidification makes it difficult for them to form shells, due to the loss of calcium carbonate.

(ENG=Energy Transfer, ERT=Interactions Between Earth Systems, EIN=Interactions Between Species and the Environment, STB=Sustainability)