

Unit 6A Ecology Study Guide

Test 3/22/2018

Terms to know – Define and give examples

Producers- Organism that can make (PRODUCE) its own food using energy from the sun (photosynthesis) – EX: plants

Consumers- Organism that has to CONSUME other organisms for food (EX: rabbits, coyotes)

Decomposer- Breaks down dead plant and animal matter (bacteria in soil)

Herbivore – Organisms that eat plants (rabbits, deer)

Omnivore – Organisms that eats plants and animals EX: humans

Carnivore- Organisms that eat animals (meat) CARNE in Spanish means MEAT

Food web- A diagram that shows feeding relationships between organisms in an ecosystem

Energy pyramid- A triangular diagram that shows the loss of energy in the food chain (bottom is producer with the most energy, top is a 2nd or 3rd order consumer with the least amount of energy)

Symbiosis- A relationship in which two organisms live in close association with each other

Mutualism- A symbiotic relationship where both organisms benefit. EX: bacteria in human intestines – bacteria help digest food, in return they get nutrients

Commensalism- A symbiotic relation where one organisms benefits and the other is unaffected. EX: Shark and remora – When the shark eats food, the remora that attached itself to the shark gets the leftovers

Parasitism- A symbiotic relation where the parasite benefits and the host is harmed EX: tapeworm, hornworm and wasps, ticks

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Abiotic – non-living EX: temperature, climate, soil, precipitation, rocks

Biotic – living EX: grass, trees, giraffes, wolves, bacteria, protists, archaeaacteria, etc

Levels of Organization (starting with cell, ending with biosphere)

Cell- tissue- organ- organ system- organism- population- community- ecosystem- biome- biosphere

1. List the characteristics (climate, organisms, location, and any relevant facts) of each terrestrial biome. Use your chart!

- A. Taiga/Coniferous forest – Use chart/textbook, Coniferous trees, Canada/Russia
- B. Tundra- Use chart/textbook – cold desert, permafrost, shallow rooted plants like lichen and mosses, Arctic Circle
- C. Temperate deciduous forest- Use chart/textbook – Deciduous trees where they lose their leaves in the fall, four seasons, Eastern US (Georgia!) and Europe
- D. Grassland/ savanna- Use chart/textbook – Grassland is temperate and Savanna is tropical, large plains of grass and very few trees, herds of herbivores
- E. Temperate Rainforest- Use chart/textbook – daily rain, 4 seasons, Oregon/Washington State/Pacific Northwest, bears, owls, cougars, snakes
- F. Tropical Rainforest- Use chart/textbook – daily rain, warm, tall canopy of trees, diverse species
- G. Desert- Use chart/textbook – dry, usually warm but can be cold at night, cactus – plants grow far apart, rabbits lizards, snakes

2. List the abiotic and biotic factors, as well as relevant facts, about the aquatic ecosystems. Use your chart!

- A. Oceans- Use chart/textbook – Abiotic factors are temperature, water depth, amount of sunlight, currents, Biotic are photo/zoo plankton, fish, whales, sharks, etc. Photoplankton are the producers of the ocean

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- B. Estuaries- Use chart/textbook – Where rivers meet the ocean, fresh and salt water mix, nursery for baby fish
- C. Coral Reef- Use chart/textbook – The tropical rainforest of the ocean, found in warm shallow waters with diverse species
- D. Wetlands- Use chart/textbook – between land and water, helps with flood control
- E. Lakes/Ponds- Use chart/textbook – still water, grasses around the edge, turtles, fish, snakes, etc
- F. Rivers/Streams- Use chart/textbook – abiotic factor is moving water, organisms must adapt to the speed of the river/stream or be washed away

3. What is the difference between the three types of symbiosis?

Mutualism (benefits both, EX: bacteria in intestines help digest food) ->

Commensalism (benefits one, the other unaffected, EX. Shark and remora) ->

Parasitism (benefits one and harms the other, EX: tapeworm)

4. What is the ultimate source of all energy?

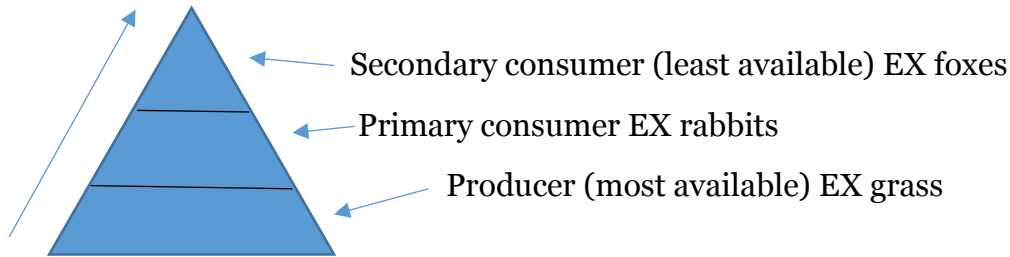
Sunlight energy

5. What is the difference between marshes and swamps?

Swamps have trees, marshes do not

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6. Draw an energy pyramid with a producer, consumer, and secondary consumer, then draw arrows to demonstrate the flow of energy. Label which one will have the most energy available, and the least.



7. What aspect of estuaries allows them to support a large amount of plant life?

The mix of saltwater and freshwater brings a lot of nutrient rich water which supports plankton

8. If we are using a food chain of grass -> caribou -> wolves, what would happen if we were to remove one of the organisms from the food chain?

If we were to remove the grass, the caribou would starve, then the wolves would starve.

If we were to remove the caribou, the wolves would starve and the grass would overpopulate and compete for space and sunlight, then some would die

If we were to remove the wolves, the caribou would overpopulate, competing then destroying the food source, then the caribou would die off

9. What is the difference between a food chain and a food web?

Food web is more complex, food chain is a direct flow of energy

10. In a food web/chain, what does the arrow represent?

The flow of energy