Science Review- CBA #1- Life Science
Test: Wednesday, October 16, 2019

Interactions within an Ecosystem:

- Organisms perform a variety of roles in an ecosystem.
- Populations of organisms can be categorized by how they acquire energy.
- Food Webs can be used to identify the relationships among producers, consumers and decomposers in an ecosystem.
- All living things require energy.
- Food Webs show the transfer of energy in an ecosystem.

Students should be able to illustrate and follow a food chain and a food web correctly, using arrows to show the flow of energy through the chain or web. REMEMBER that the arrows in a food chain or web show the FLOW OF ENERGY.

Example.

Sun ⇨ seeds ⇨ chipmunk ⇨ owl

All of the processes that take place within organisms require energy:

- For ecosystems, **the major source of energy is sunlight.**
- Energy entering ecosystems as sunlight is transferred and transformed by producers into energy that organisms use through the process of photosynthesis. The energy then passes from organisms to organisms illustrated in food webs.

In most ecosystems, energy derived from the sun is transferred and transformed into energy that organisms use by the process of photosynthesis in plants.

Interactions and relationships in an ecosystem:
Organisms have a symbiotic relationship in which individuals of one species are dependent upon individuals of another species for survival. Symbiotic relationships can be categorized as mutualism where both species benefit, commensalism where one species benefits and the other is unaffected, and parasitism where one species benefits and the other is harmed.

- All organisms need each other in order to survive. No organism is completely isolated from interaction of another species.
- Be able to identify and explain different examples of symbiotic relationships (mutualism, commensalism, and parasitism).

CBA # 1 Vocabulary Words

Ecosystem- All of the living and non-living things in the environment.

Habitat- The physical place where an organism lives and hunts for food.

Organism- Any living thing that can carry out a life of its own.

Predator- An animal that lives by capturing prey as a means of maintaining life.

Prey- An animal that is taken by a predator as food.

Producer- Makes its own food using energy from the sun (a plant)

Consumer- Must eat something to get energy.

Herbivore- plant eater

Carnivore- meat eater

Omnivore- eats both plants and animals.

Decomposer- breaks down dead matter and adds nutrients back to soil.

Photosynthesis- The process that allows for producers to make their own energy. During photosynthesis, carbon dioxide, water and sunlight go into the plant while oxygen and sugar (glucose) come out of the plant.

Symbiosis- a relationship between two or more organisms that lasts over time

Commensalism- a relationship that benefits one of the organisms involved, but **neither harms nor benefits the other organism**.

Mutualism- a relationship that **benefits** both organisms

Parasitism- a relationship in which one organism (the parasite) infects and eats off of the other organism (the host). Parasites are usually smaller and occur in great numbers.

CBA #1 Practice Questions

Name:_____

Use your study guide as well as notes, classwork and homework to answer the questions to the best of your ability. You must answer all question!

1. Mrs. Fullen finds her son pulling worms out of the dirt in her garden. He seems proud of himself, but Mrs. Fullen tells him to stop immediately. Why would Mrs. Fullen want her son to leave the worms in the garden?
    A. Worms will attract decomposers to her garden.
    B. Worms are decomposers and will help return nutrients to the soil.
    C. Worms will help spread the seed of the plants.
    D. Mrs. Fullen should let her son get rid of as many worms as possible.

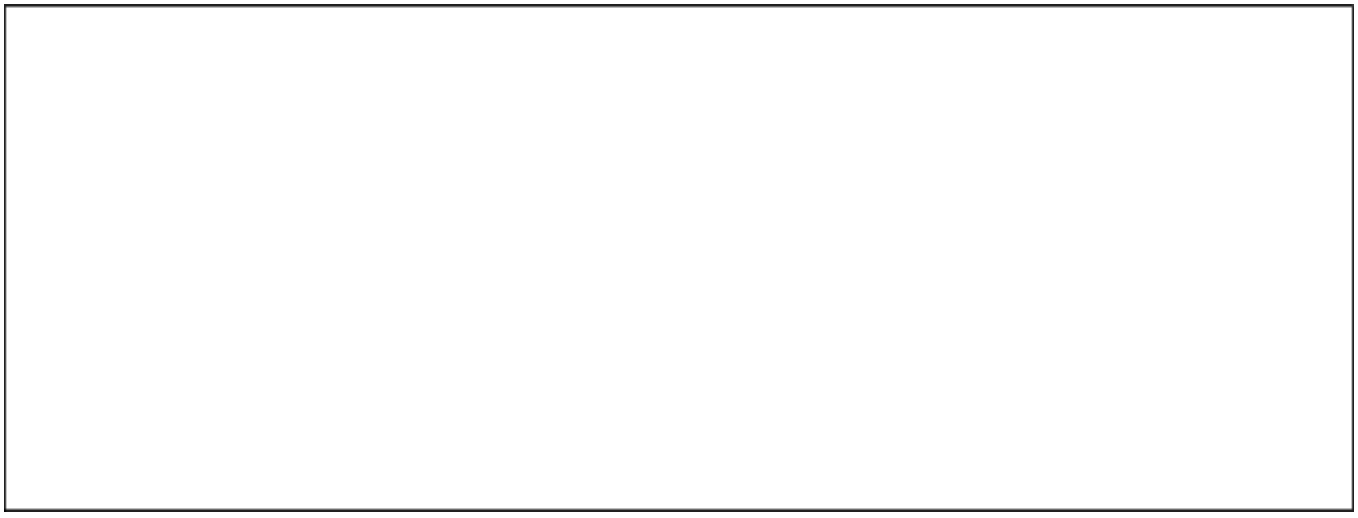
2. Why is it necessary to have decomposers in an ecosystem?
    A. Decomposers break down dead plants and animals and return nutrients to the soil.
    B. Decomposers eat herbivores so that plants can survive.
    C. Decomposers are poisonous.
    D. Decomposers provide shelter for many consumers.

3. What do all Food Chains end with?
    A. Producers
    B. Herbivores
    C. Scavengers
    D. Decomposers

4. All living things require…..
    A. Oxygen
    B. Carbon Dioxide
    C. Soil and dirt
    D. Energy

5. Using at least four of the following organisms, illustrate a food web that correctly shows the flow of energy. (4 points)

    Owl, Seed, chipmunk, acorn, squirrel, hawk, buckeye



6. Communicate the function of a producer in an ecosystem (1 points)

7. All animals are considered consumers. Explain why that is. Then name all three types of consumers and describe what makes them unique. (4 points)

8. Describe the differences between the three different types of symbiotic relationships. (3 points)

9. Where does all energy on earth come from?

10. Give an example of any type of symbiotic relationship. Explain in detail that relationship. (4 points)