

Name: Key

Period: _____

Food Chain Laser Disc Video Notes

- 1. The main energy source for life on this Earth is: Sunlight
- 2. Chemical energy is stored in the bonds of sugars through the process of photosynthesis.
- 3. Food chains show how energy flows from organism to organism through a sequence of eating relationships.
- 4. Describe how Food webs differ from food chains.
Food webs are interconnected food chains
- 5. Energy is not transferred from one organism to the next for the following reasons:
 - Transferred to heat as it is used
 - Still trapped in waste.
- 6. Herbivores feed on:
 - Autotrophs
- 7. Examples of producers include: Plants, some bacteria, protists (phytoplankton & algae)
- 8. Can energy be recycled in the ecosystem? Explain.

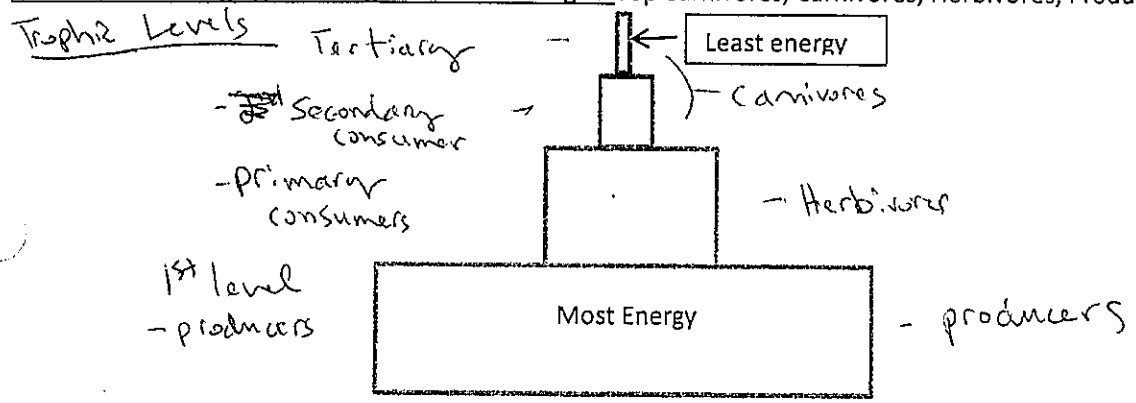
No. Once it is in the form of heat it can not be ~~used~~ used in the food chain.

- 9. Trophic levels describe relationships between what an organism eats and what eats it.
- 10. Detritus: Dead organic matter.
- 11. Keystone species is: Have an important ecological role & their numbers are important.

Describe the example in the video: Sea otters were killed for their fur. Sea urchins increased in #'s since their main predator was gone. Kelp forests were eaten in excess by sea urchins.

Label the following trophic levels to the left of the energy diagram below: 1st level, Primary Consumers, Secondary Consumers, Tertiary consumers.

Label the following types of organisms to the right: Top Carnivores, Carnivores, Herbivores, Producers



Review

1. Why is it more ecologically energy conservative to be a vegetarian versus a meat eater?

There is much more energy available at the bottom of the food chain. Energy transfers out of the food chain as you go up (only 10% transfers at each level)

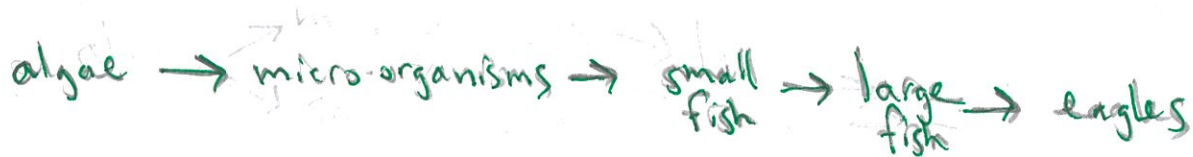
2. Define biomass: All the mass of a specific trophic level (ex: producers)

3. Explain why there is a pyramid effect of biomass as you move up trophic levels from producers to consumers.

Less energy is available to sustain them.

- Energy is transferred to heat when used or still trapped in waste.

4. Draw a food chain (using arrows) of the following organisms: algae, large fish (salmon), smaller fish (minnows), micro-organisms (zooplankton), eagles.



5. What do the arrows represent?

Flow of energy

6. Draw a food web using the following ~~lake~~ organisms: humans, algae, large fish (salmon), Orca whales, smaller fish (minnows), micro-organisms (zooplankton), eagles

