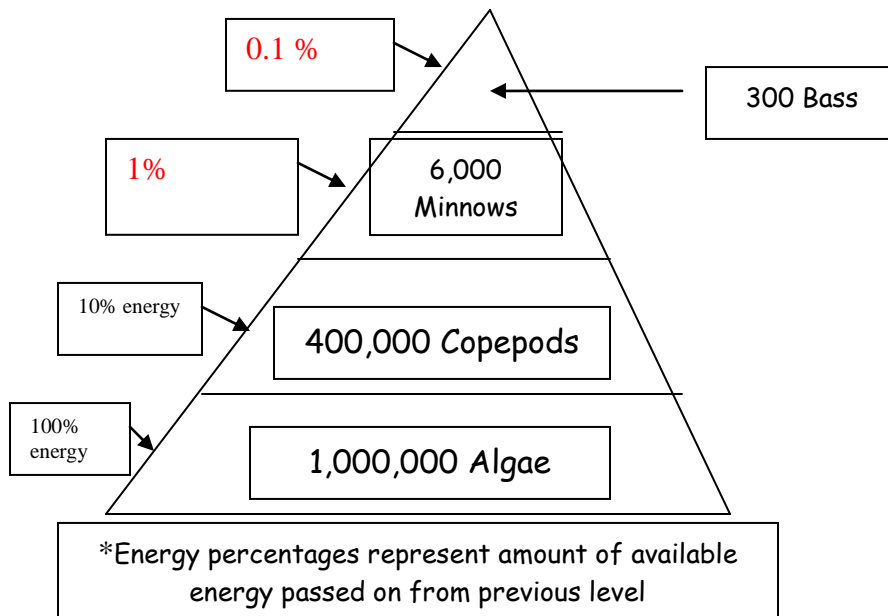


## Pyramid of Energy and Biomass

Directions: Record all responses to the following in the spaces provided. Use the diagram below for assistance.



1. What percentage of available energy is passed on from the algae to the copepods?

10% of available energy is passed on to each level

2. What are the algae classified as? Explain how you know this.

The algae are producers because they are found at the base of the pyramid, have the greatest number of organisms and most available energy

3. Fill in the remaining percentages of available energy for the minnows and the bass in the boxes provided in the diagram above.

See diagram at the top

4. What are two things that occur with the remaining available energy that is not passed on?

The remaining energy is used by that level to stay alive or is lost to the environment as heat.

5. In addition to available energy, this pyramid also illustrates the amount of biomass at each level.

- a. What does the prefix bio- mean?

Bio = living

- b. What is the definition of mass?

Mass = the amount of matter in an object/organism

- c. **BIOMASS = the amount of living material (matter) at a given energy level**

- 6.

- a. Which level in this pyramid has the greatest energy demands?

The bass (top) have the greatest energy demands.

- b. Why?

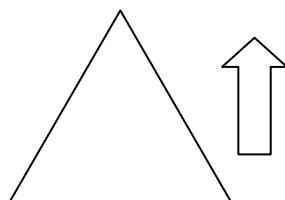
The bass are large, and require a lot of energy just to stay alive.

- c. What is the nutritional term used for this group?

The term tertiary consumer would be used for the bass.

7. Why can't there be as many of these organisms as there are producers? There is not enough food available to support too many tertiary consumers, because they have very large energy demands.

8. Based on this, what happens to biomass with increasing levels of a food chain or web?



Biomass & available energy decrease with increasing levels of a food chain or web