Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Period: \_\_\_\_\_ Alpha #: \_\_\_\_\_  
**Food Chains/Webs and Pyramids Review**

**Matching:**

1. J. Ultimate source of energy for all ecosystems   
    A. Metabolism and Heat
2. G. Amount of energy that is transferred to each B. Biomass  
    trophic level in a food chain C. Heterotroph  
    D. Photosynthesis
3. H. Amount of energy that is lost at every trophic E. Autotroph

level of a food chain F. Cellular Respiration  
 G. 10%

1. B. The physical body of an organism – its weight H. 90%  
    I. Assimilation
2. D. Process that converts solar energy to chemical J. Sun

energy (glucose)

1. I. How the energy in biomass travels up the   
    food chain
2. F. Process that breaks down biomass for energy
3. A. How the energy in biomass is used at each   
    trophic level
4. E. Organisms that produce their own energy
5. C. Organisms that eat other organisms for energy

**Create a food web using the information given:**

1. In a mountain meadow, bighorn sheep graze on grass. Mice nibble on the grass and eat the seed pods from the cushion pinks (a type of flower). Snakes prey on the mice and small birds when they can get them. Hawks swoop down to catch the mice, birds and rabbits. The rabbits eat the grass and seed pods of the cushion pinks too. Weasels munch on the seed pods of the cushion pinks, eat an occasional mouse, and keep on the lookout for hawks that find them tasty.

Weasel

Rabbit

Hawk

Bird

Snake

Mice

BH Sheep

Grass

C. Pink

1. Draw two food chains from the food web you just created with at least four trophic levels. Label the feeding (trophic levels), the producer(s) and the consumer(s). Then identify the consumers as herbivores, omnivores, or carnivores.   
     
   Grass -> Mice -> Weasel -> Hawk

C. Pink -> Mice -> Weasel -> Hawk

producer 1o 2o 3o

Consumer Consumer Consumer

Herbivore Carnivore Carnivore

**Given the food chain**:

100,000 grass plants 5,000 mice 100 snakes 1 hawk.

1

Hawk

1. Create a pyramid of numbers:

100 000

5000

100

Plants

Mice

Snake

1. If the biomass of the grass is 5000lbs, create a pyramid of biomass for this food chain:  
     
     
   5  
   50  
   500  
   5000
2. If there are 300,000 calories in the biomass of the 100 snakes create a pyramid of biomass for this food chain:  
     
   30 000  
   300 000  
   3 000 000  
   30 000 000
3. If a mouse weighs 2 lbs, how many mice are needed to feed the 100 snakes in this food chain?  
     
   So 20 lbs mice feeds 1 snake

Therefore 2 000 lbs mice feed 100 snakes

1. If the 20 lb hawk could eat only mice how many lbs of mice would it need?

200lbs