 Energy Pyramid Model

Directions: Get a full piece of copy paper and create an Energy Pyramid Model. Note: each tier of the energy pyramid is a ***trophic level***.

1. Shade the first (bottom) level of each pyramid **green**.

2. Shade the second level (from the bottom) of each pyramid **yellow**.

3. Shade the third level (from the bottom) of each pyramid **blue**.

4. Shade the fourth (top) level of each pyramid **red**.

5. Label each level of the first pyramid side with the following terms as you move up the

pyramid: *producer, primary (1o) consumer, secondary (2o) consumer, tertiary (3o) consumer*.

6. Label each level of the second pyramid side with the following terms as you move up the

pyramid: *plants, herbivores, carnivores, top carnivores*.

7. Label each level of the third pyramid side with the following terms as your move up the

pyramid: *autotroph, 1st order heterotroph, 2nd order heterotroph, 3rd order heterotroph*.

8. Draw a picture of what might belong in each level (use species in your researched biome):

1st: *flowers, trees, grass, algae (pick one or something from biome)*

2nd: *caterpillars, cows, grasshoppers, beetles (pick one or something from biome)*

3rd: *humans, birds, frogs (pick one or something from biome)*

4th: *lions, dogs, snakes (pick one or something from biome)*

Along with an organism for each trophic level, put the relative amount of energy available. On average, about \_\_\_\_\_\_\_\_\_\_\_% of the energy available within one trophic level is transferred to the next trophic level.

1st : *100%*

2nd : *10%*

3rd : *1%*

4th : *0.1%*

9. Glue your pyramid into your notebook.

10. With your table partner discuss the answers to the questions below?

a. What are three terms used to describe organisms such as trees?

b. What are three terms used to describe organisms such as cows?

c. What are three terms used to describe organisms such as humans?

d. What are three terms used to describe organisms such as lions?

e. If only 10% of the energy available within one trophic level is transferred to the next trophic level, what happens to the rest? (See p. 77 of your text)

f. Why are there usually fewer organisms in the top levels of an energy pyramid?