Name: _____ Date: _____ Block: ____

Sheet 2.1

Energy Flow through Ecosystems

Read pages 54 - 64 of BC Science 10 and complete the following.
*Starred questions are thinking questions… the answers are not found directly in the textbook.

PART A. INTRODUCTION TO ENERGY FLOW (p.54 - 57)

1. What are krill?

2. Why are krill so important?

3. Why is the daily movement of krill from deep water to the ocean's surface important to marine ecosystems?

4. Leaf litter (dead leaves) contains cellulose, which cannot be digested by most animals. What types of organisms are able to break down leaves?

5. What do fungi convert celllulose back into?

6. What is biomass?

7. What is another definition of biomass?

PART B: HOW ENERGY FLOW. (P.58 – 59)

1. Within its niche, every organism _____ food energy from the ecosystem, and the organism _____ energy to the ecosystem.

2. What is energy flow?

3. Why are plants called producers?

4. What is a consumer?

5. What is decomposition?

6. What is biodegradation?

7. Give two examples of decomposers.

8. What do decomposers do?

PART C: FOOD CHAINS AND FOOD WEBS (p.60 – 62)

1. What are food chains?

2. What is each step in a food chain called?

3. What do trophic levels show?

4. What are two examples of primary producers?

5. What are two examples of primary consumers?

6. What trophic level do secondary consumers feed on?

7. What are two examples of secondary consumers?

8. What trophic level do tertiary consumers feed on?

9. What are two examples of tertiary consumers?

10. What are consumers that eat small dead animals, dead plant matter, and animal waste called?

11. What are two examples of detrivores?

12. What is another word for primary consumers (that eat plants)?

13. Give three examples of herbivores. (see text and also fig.2.9)

14. What are carnivores?

15. Give three examples of carnivores. (see text and also fig.2.10)

16. What are consumers that eat both animals and plants called?

17. What are food webs?

PART D: FOOD PYRAMIDS (p.63 – 64)

1. When an _____ eats leaves, the _____ stored in the leaves is transferred to the insect. When a _____ eats the insect, the _____ stored in the insect is transferred to the bird.

2. Does ALL of the energy get stored when this happens? _____

3. Food energy is used up when living things _____ to obtain and digest food, move, etc. Food energy is also lost when some food remains undigested and is excreted as _____.

4. What percent of the energy taken in is "lost"? _____

5. What does a food pyramid show?

6. Because of energy loss, an ecosystem supports _____ organisms at the higher trophic levels.

7. Food pyramids illustrate that most of the Sun's energy that is trapped by _____ flows out of an ecosystem.

8. Food pyramids also show how important _____ life is for making energy available to ecosystems.