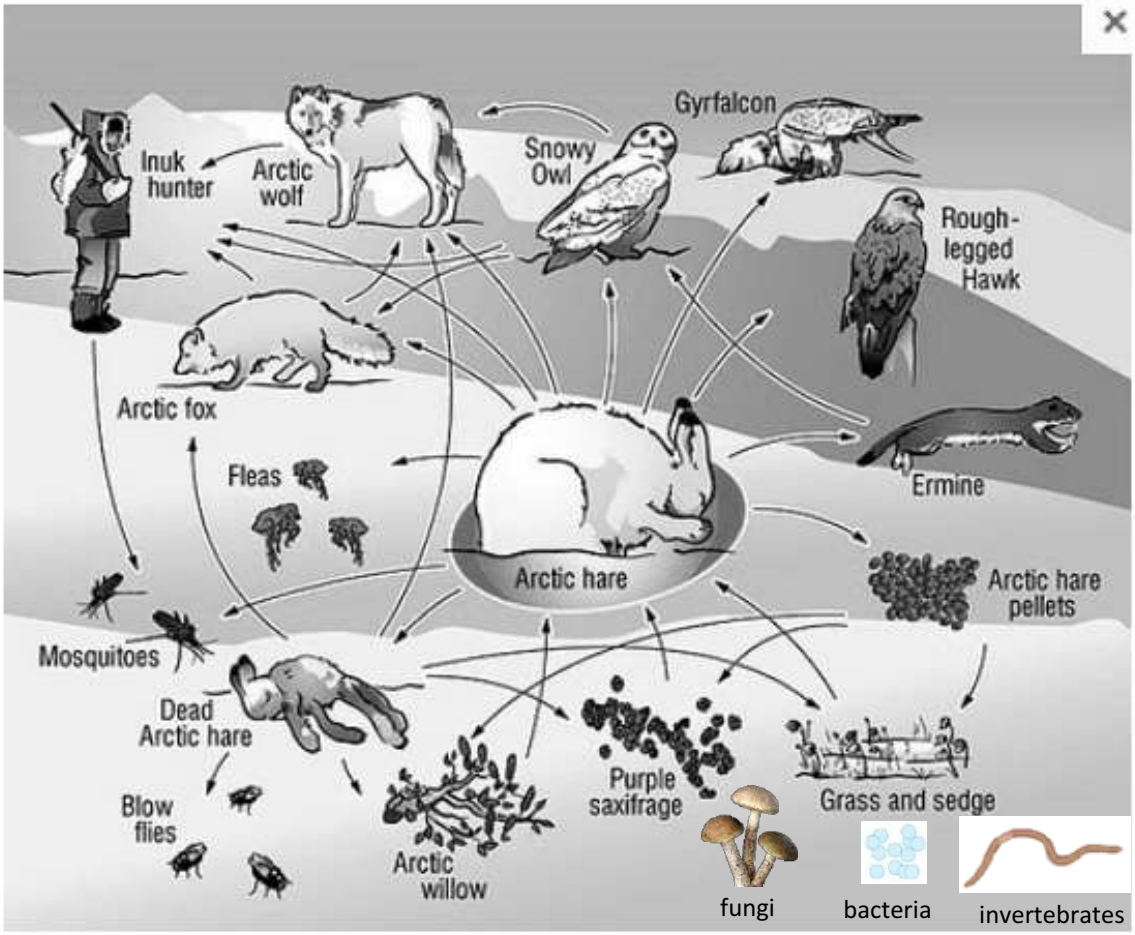
Food Web Study Guide **Name:** _____ **Date:** _____

_____ **LT 1: I can use a food web to show the flow of resources between organisms within an ecosystem.**
_____ **LT 2: I can identify and explain the key interdependent relationships in an ecosystem.**

ARCTIC TUNDRA ECOSYSTEM



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1. On the food web above, color all **Producers green**, **Consumers red**, and **Decomposers brown**.

2. Name two different predator/prey relationships on the food web. Tell which is predator and prey.
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3. Which organisms would be in direct competition for food? List the organisms and the food item they compete for._____

4. Give an example of a scavenger in this ecosystem. _____

5. In this ecosystem, what other resources would you expect organisms to compete for?

6. Give at least one specific example of symbiosis in this food web. Explain.

7. Most people don't think of plants as "competitors." Below is a list of adaptations different plants have. After each adaptation, list what resource you think this adaptation helps plants compete for.
   - Large leaves =
   - Deep roots =
   - Bright colored flowers =
   - Growing faster and taller than other plants =
8. What is the difference between a producer and a consumer? Be specific and scientific.

9. What is the job of a decomposer? How is it different from a scavenger? Be specific and scientific.

SYMBIOSIS PRACTICE

Identify each of the following examples of symbiosis as either **commensalism (C), mutualism (M), or parasitism (P)** and give your reason why (which organism is benefiting, being harmed, or unaffected).

1. Barnacles attach to the side of a humpback whale, obtaining a free ride and access to rich food sources._____ Why? _____
2. Fire ants live with aphids. The fire ants eat a substance the aphids secrete and the aphids are protected from predators? _____ Why? _____
3. Small wasps lay their eggs on the tomato hornworm caterpillar. When the young wasps are born they eat their way into the caterpillar. _____ Why? _____
4. Fleas drink blood from your cat (poor Fluffy). _____ Why? _____
5. Green algae find a home on the hair of a sloth. The sloth in turn appears more greenish in its rainforest habitat. ____ Why? _____
6. Tapeworms latch onto the intestines of their host and steal nutrients. ____ Why? _____
   _____
7. The honeyguide (bird) makes a special call and attracts the attention of the honey badger when it spots a honeybee nest. The honey badger will then tear open the honeybee nest and both organisms feed. _____ Why? _____
8. The Yucca plant can only be pollinated by the Yucca moth. The Yucca moth can only lay its eggs inside the Yucca plant's flowers. ____ Why? _____
9. The cactus wren (bird) builds its nest in a large cactus. It is protected by the sharp spines of the cactus. ____ Why? _____
10. The dog tries to steal some of the cat's food and gets swiped across the nose. Why is this not symbiosis?

11. The mama dog nurses the puppies. Why is this not symbiosis?