

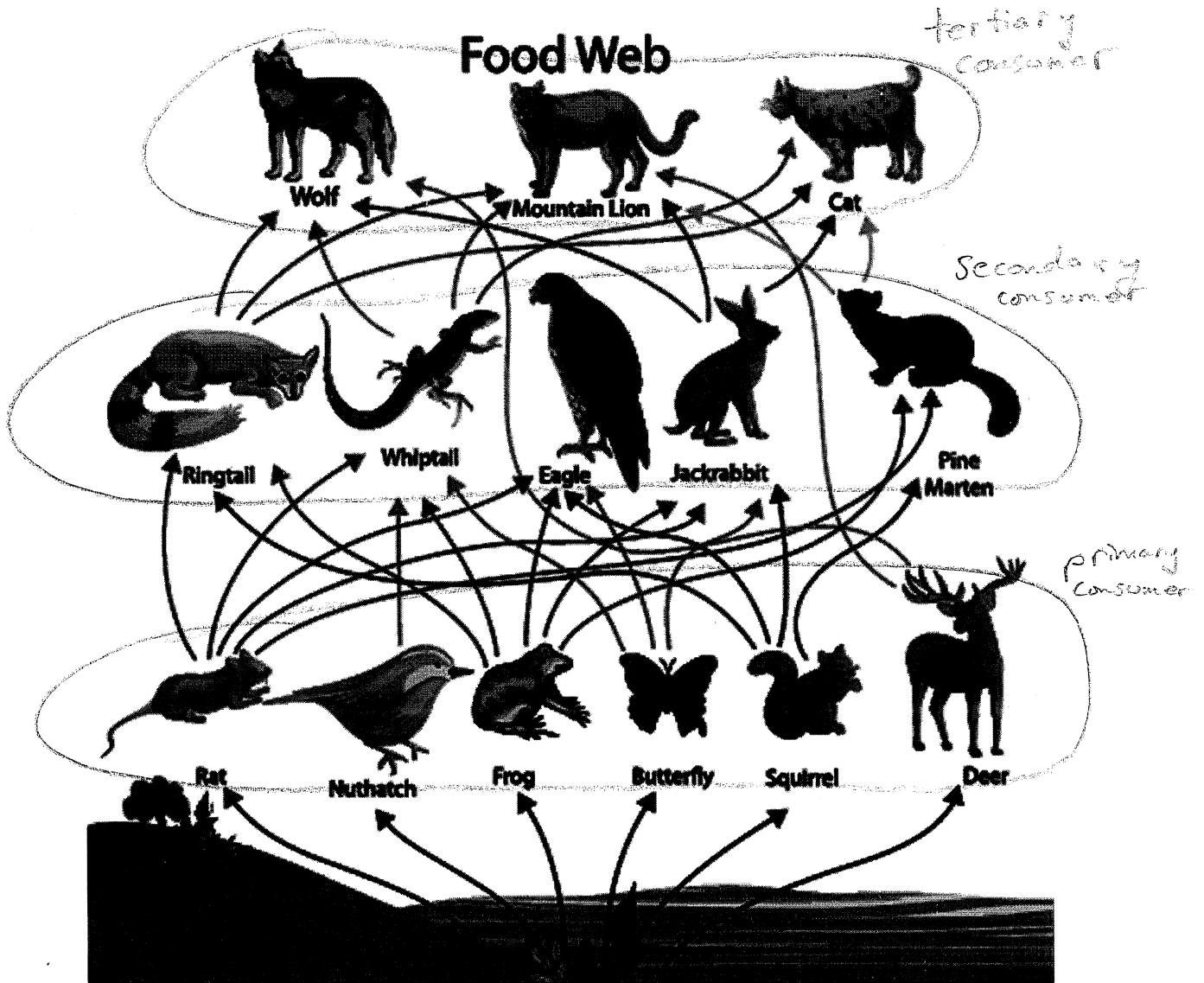
**Ecosystems Review #1**  
(Food Webs, Energy Pyramids, Carbon Cycle, Nitrogen Cycle)

**Part A – Multiple Choice Questions**

1. B
2. C
3. B
4. A
5. D
6. B
7. D
8. C
9. C
10. A
11. B
12. A

**Part B – Free Response Questions**

1. An ecosystem contains only the animals shown in the following foodweb.



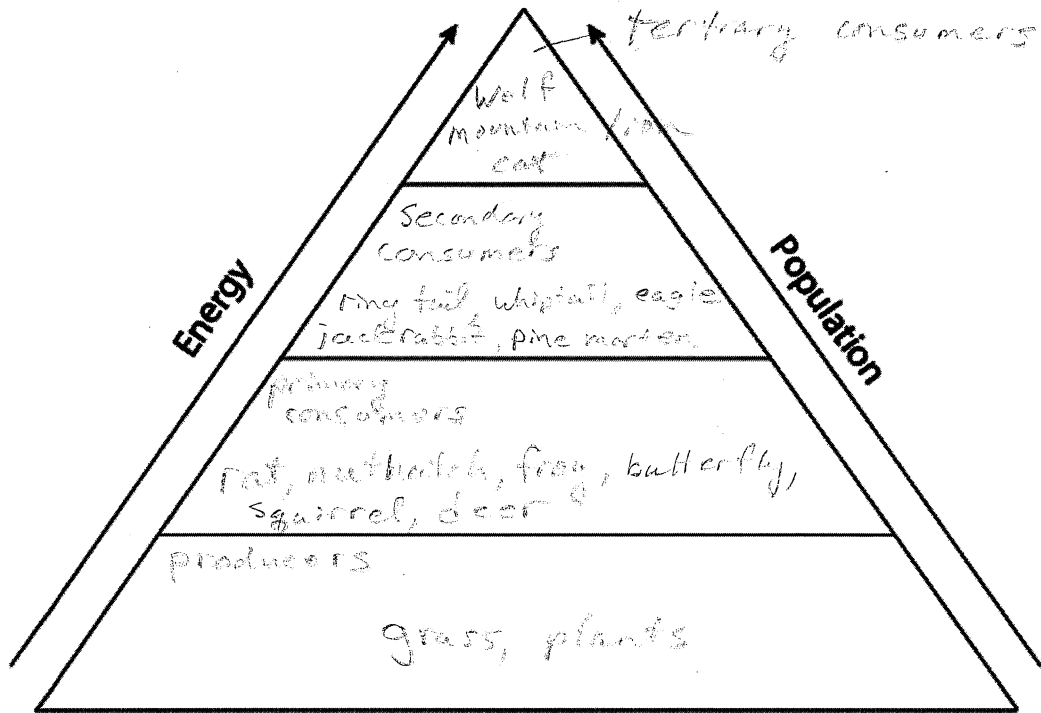
Credit: vecton (Adobe Stock)

- (a) Label the primary, secondary, and tertiary consumers.
- (b) The producers are not labelled on the diagram. Provide an example of a possible producer for this ecosystem.

*answers will vary*

*Some possible answers: grass, plants*

(c) Complete the following energy pyramid using the organisms from the food web.



(d) If the producers store 1 000 000 J of energy, how much energy would be stored by the tertiary consumers?

1000 J

(e) Briefly explain what could happen to the eagles and the rats if all the trees in the ecosystem were cut down.

answers will vary

answer should explain that the eagle population will decrease due to loss of habitat and the the rat population may increase as there are fewer predators.

2. Explain how the excess nitrogen from someone over fertilizing their lawn could travel to the ocean.

answers will vary

The answer should include the idea that run-off from rain will flow to rivers and eventually to the ocean.