

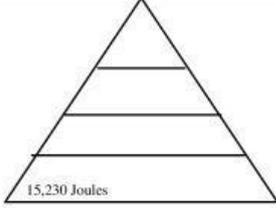
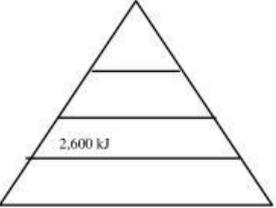
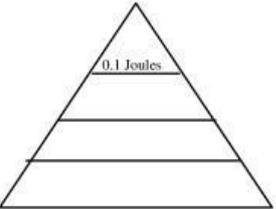
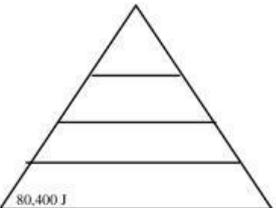
Explore: Food Chains and Energy Pyramids

Instructions: Create four different food chains and food pyramids.

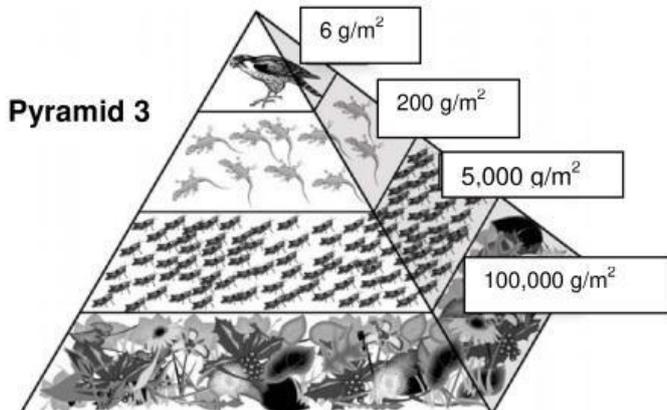
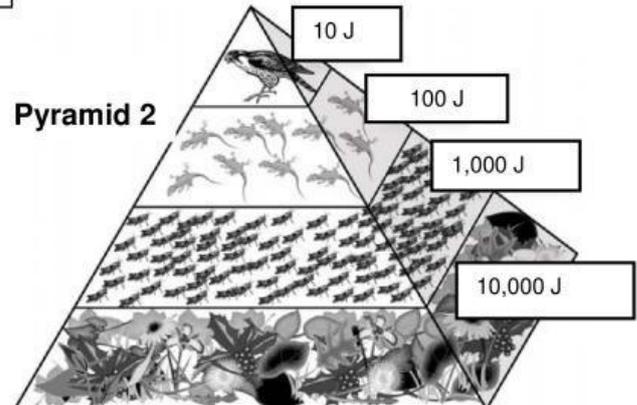
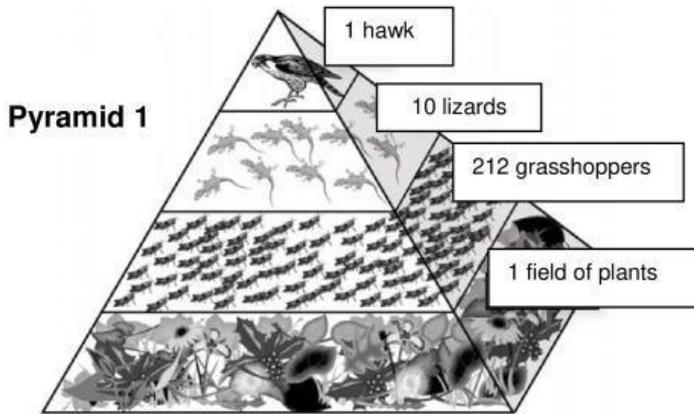
Procedure:

1. Using the 4 food webs provided, write down one food chain within each food web.
2. After each food chain is created, use the food chain and make an energy pyramid.
3. Label ALL trophic levels on ALL pyramids.
4. Show the energy flow with arrows in ALL pyramids.
5. Label the amount of energy at each trophic level using the amount energy provided in one of the trophic levels.
6. Draw a sun and an arrow to show the flow of energy in each pyramid.

Data Table 1

Food Chain 1	Energy Pyramid 1
Biome: Savannah	
Food Chain 2	Energy Pyramid 2
Biome: Aquatic	
Food Chain 3	Energy Pyramid 3
Biome: Desert	
Food Chain 4	Energy Pyramid 4
Biome: Tundra	

Explain Part 2: Ecological Pyramids



Questions

1. Which pyramid shows the relative numbers of organisms at each trophic level in an ecosystem?
2. Which pyramid shows the relative amount of living matter available in each trophic level in an ecosystem?
3. Which pyramid shows the relative amount of energy available at each trophic level in an ecosystem?

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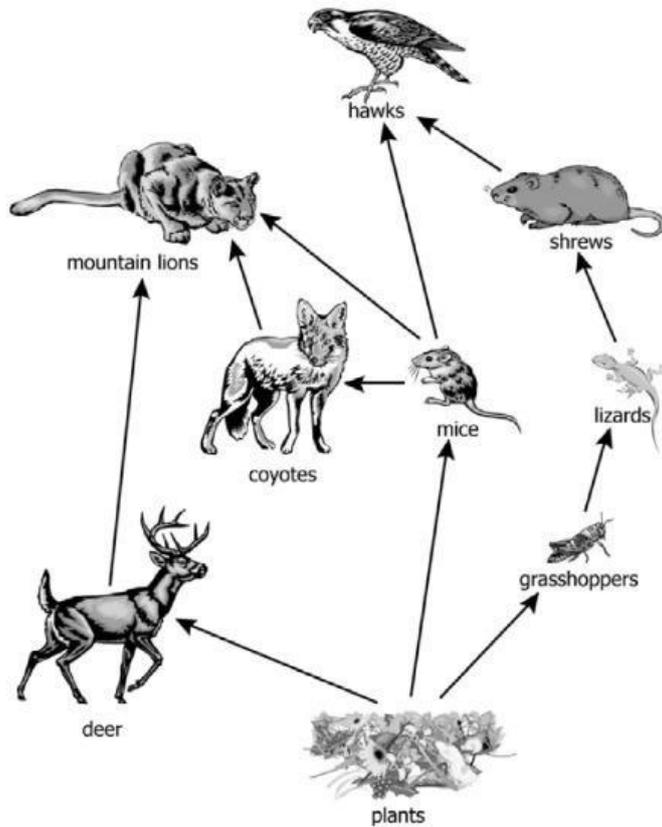
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Evaluate: The Flow of Matter and Energy

- 1 Which statement below best describes the flow of matter and energy through trophic levels?
- A Energy is transferred between organisms, and matter is released as heat.
 - B Matter decreases by 10% as organisms consume one another.
 - C Energy and matter are recycled by decomposers.
 - D Energy flows from one direction, and matter cycles.
- 2 Matter flows through the trophic levels of food webs when carbon dioxide in the atmosphere is converted into a chemical compound through which process?
- F Decomposition
 - G Photosynthesis
 - H Cellular respiration
 - J Nitrogen fixation
- 3 Which ecological pyramid best illustrates the flow of matter through an ecosystem?
- A Pyramid of numbers
 - B Biomass pyramid
 - C Energy pyramid
 - D Food pyramid

Lesson 8
Biology

- 4 In energy pyramids, the amount of energy at each trophic level —
- F decreases when energy is transformed to heat
 - G increases when organisms consume other organisms
 - H decreases when matter is stored in organisms
 - J increases when decomposers return nutrients to the soil



5. Describe the different trophic levels in an ecosystem. Discuss the flow of energy through the ecosystem.