#### **KEY CONCEPT**

Food chains and food webs model the flow of energy in an ecosystem.



- A food chain is a model that shows a sequence of feeding relationships.
  - A food chain links species by their feeding relationships.
  - A food chain follows the connection between one producer and a single chain of consumers within an ecosystem.



DESERT COTTONTAIL



HARRIS'S HAWK



- Consumers are not all alike.
  - Herbivores eat only plants.
  - Carnivores eat only animals.
  - Omnivores eat both plants and animals.
  - Detritivores eat dead organic matter.
  - Decomposers are detritivores that break down organic matter into simpler compounds.





decomposer

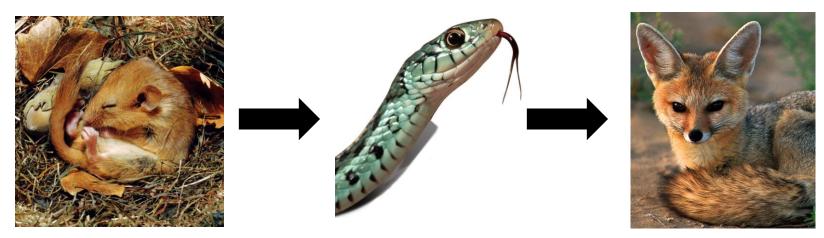
carnivore

• Specialists are consumers that primarily eat one specific organism or a very small number of organisms.



• Generalists are consumers that have a varying diet.

- Trophic levels are the nourishment levels in a food chain.
  - Primary consumers are herbivores that eat producers.
  - Secondary consumers are carnivores that eat herbivores.
  - Tertiary consumers are carnivores that eat secondary consumers.
  - Omnivores, such as humans that eat both plants and animals, may be listed at different trophic levels in different food chains.



# A food web shows a complex network of feeding relationships.

- An organism may have multiple feeding relationships in an ecosystem.
- A food web emphasizes complicated feeding relationships and energy flow in an ecosystem.

