

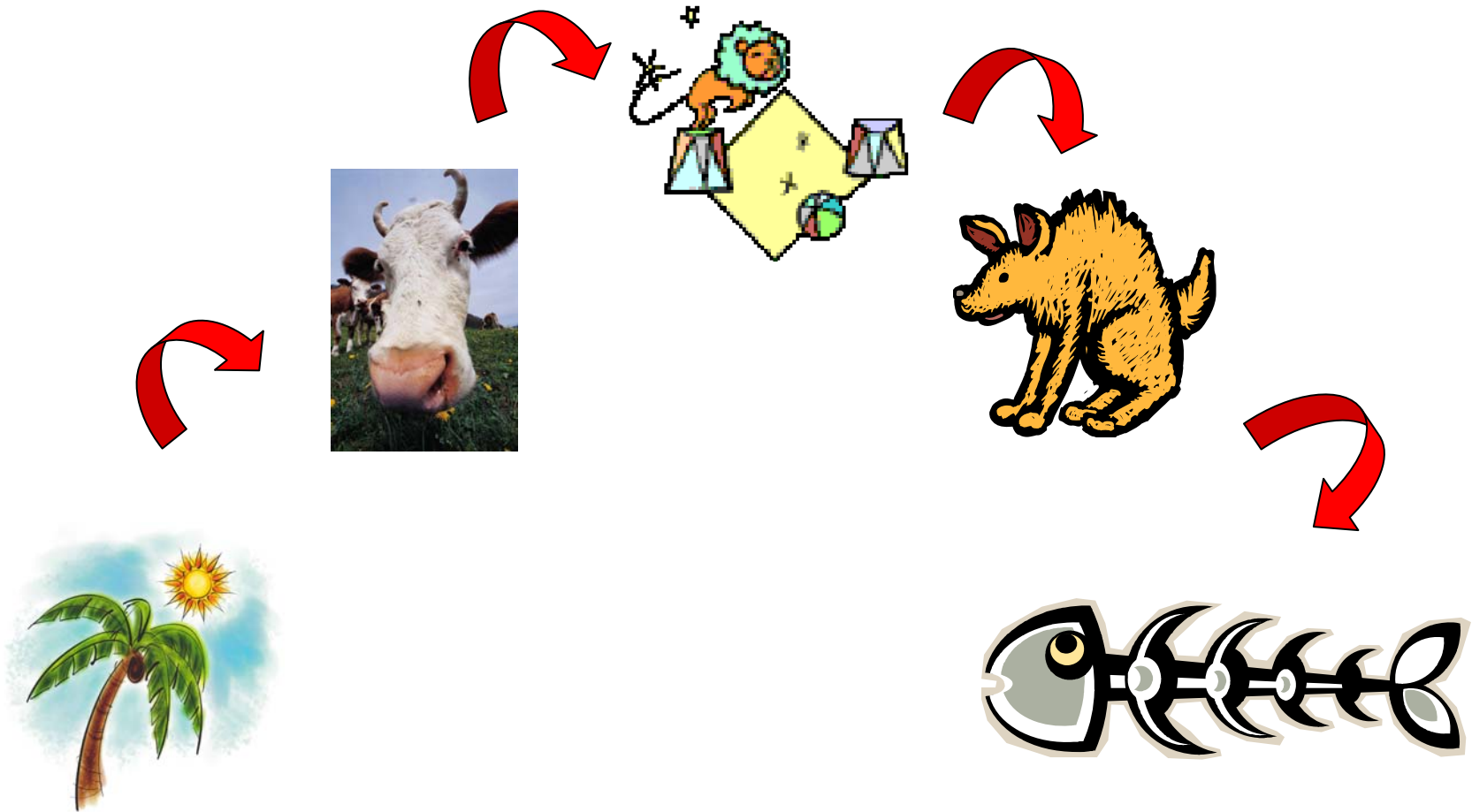
4.2

Ecosystem Structure

What is a food chain?

- ▶ A series of different organisms that transfer food between the trophic levels of an ecosystem.

Order of a Food Chain



What is a food web?

- ▶ Is a network of food chains representing the relationships among the organisms in an ecosystem.
- ▶ Do not show decomposers which feed at all trophic levels.

What happens when one important consumer is removed?

► The entire food web will

change !!!!

Diversity and Stability

- ▶ Some ecologists think that a food web with *more diversity* is *more stable* than one with fewer species.

Why?????????

- ▶ A stable food web can better withstand the loss of one species than a simpler food web can.
- ▶ Able to recover faster from natural or human caused disasters faster.

What do you think will happen to the eagle if the insects were contaminated with a pollution?

DDT (Pesticide) ➡ Sprayed on Crops ➡

To kill Insects ➡ Washed from Farmlands ➡

To Rivers ➡ Small Amounts Eaten by Producers ➡

Eaten by Consumers ➡

Decreased the Eagle Population Sharply!

Why??????

- ▶ The DDT became concentrated in the bodies of the consumers as trophic levels increased.

- ▶ The increasing concentration of a pollutant in organisms at higher trophic levels in a food web.....

Biological Magnification