

Ecosystem Ecology Examines Interactions Between the Living and Non-Living World

Ecosystem- A particular location on Earth distinguished by its particular mix of interacting biotic and abiotic components

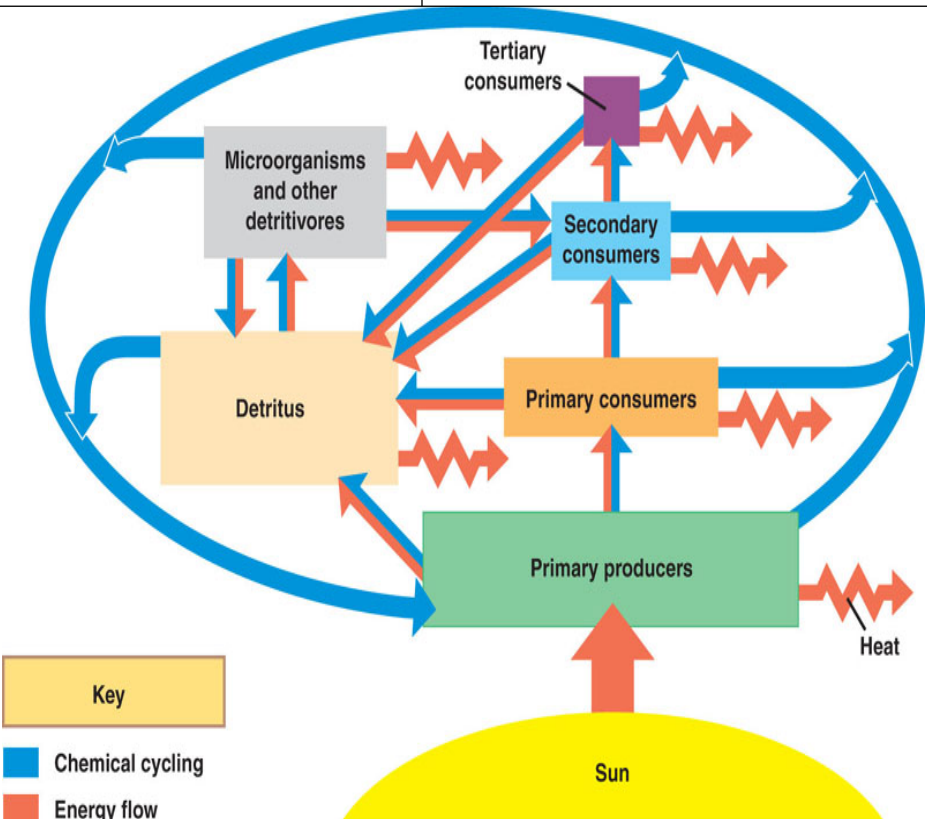
Ecosystem Boundaries

Some ecosystems, such as a caves and lakes have very distinctive boundaries. However, in most ecosystems it is difficult to determine where one ecosystems stops and the next begins.

Ecosystem Processes

Even though it is helpful to distinguish between two different ecosystems, ecosystems interact with other ecosystems

Energy Flow Through a System



Photosynthesis and Cell Respiration

Producers (autotrophs)

are able to use the sun's energy to produce usable energy through the process called photosynthesis

Photosynthesis and Respiration

Cellular respiration is the process by which other organisms gain energy from eating the tissues of producers.

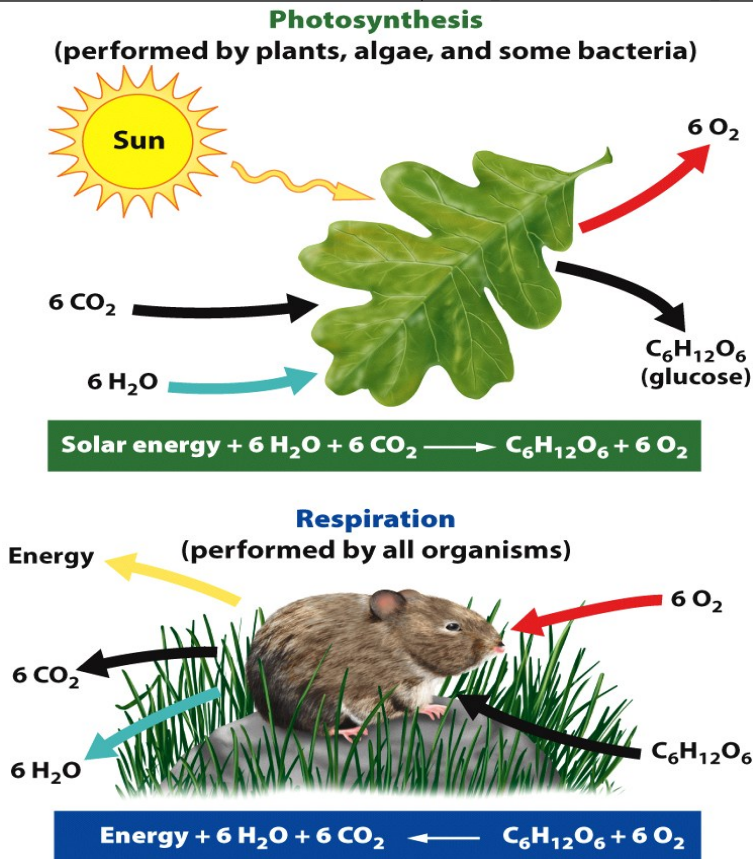


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Trophic Levels, Food Chains and Food Webs

Consumers (heterotrophs)- obtain energy by consuming other organisms.

Primary Consumers (herbivores)- consume producers.

Secondary Consumers (carnivores)- obtain their energy by eating primary consumers.

Tertiary Consumers (carnivores)- eat secondary consumers.

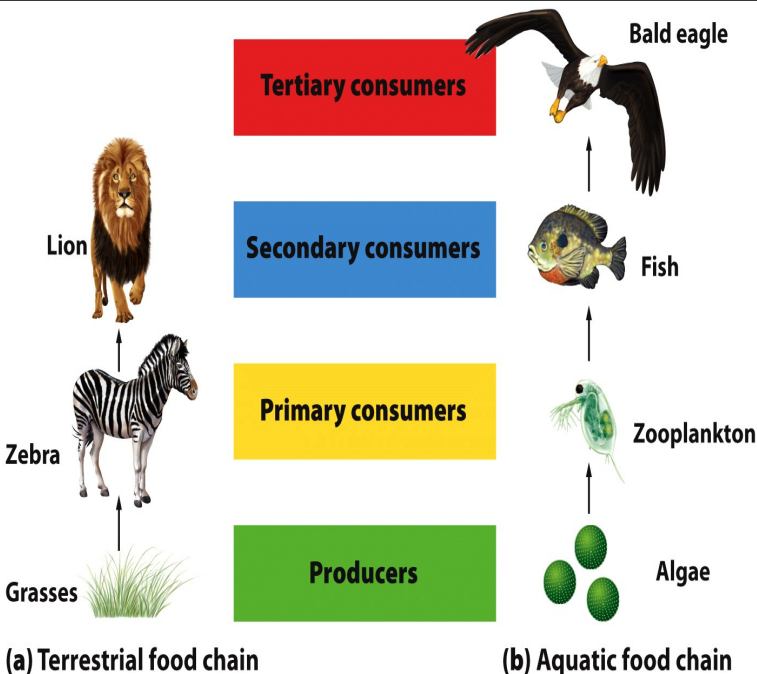


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Food Chain and Food Web

Food Chain- The sequence of consumption from producers through tertiary consumers.

Vs.

Food Web- A more realistic type of food chain that takes into account the complexity of nature

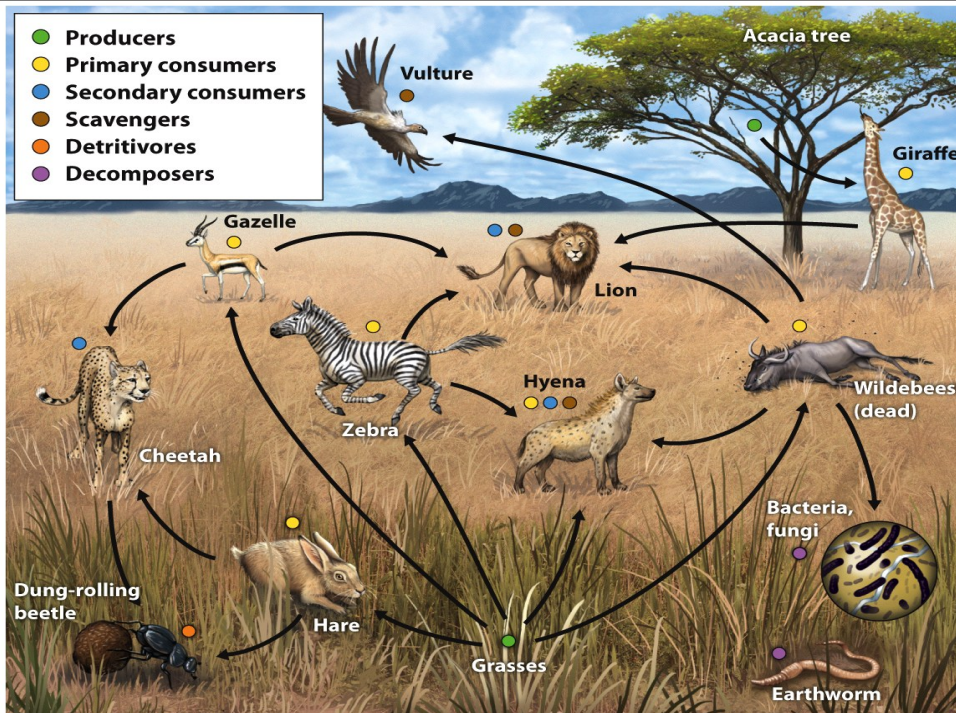
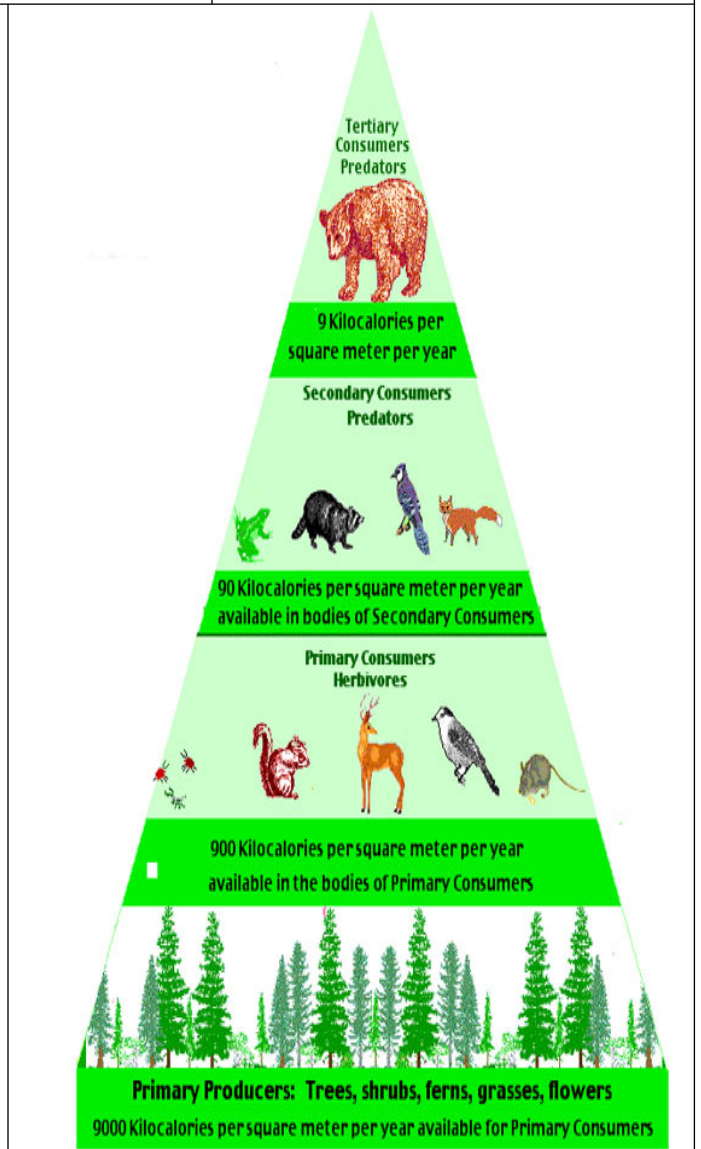
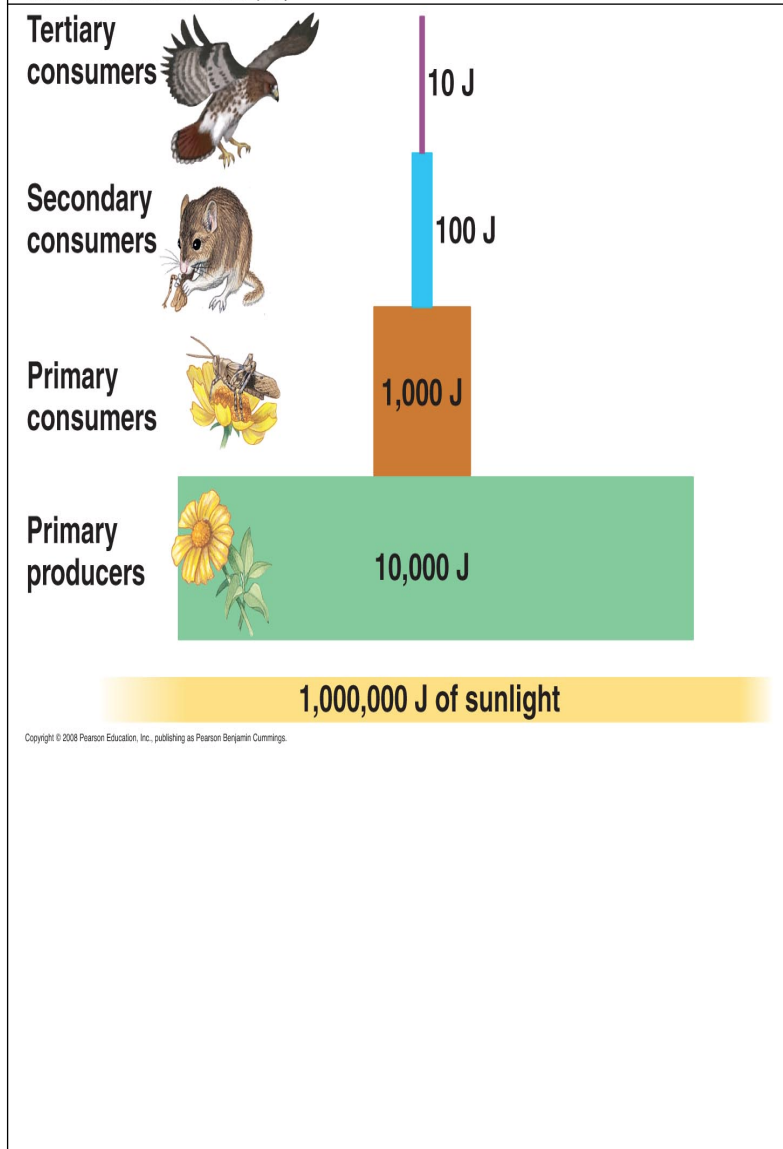
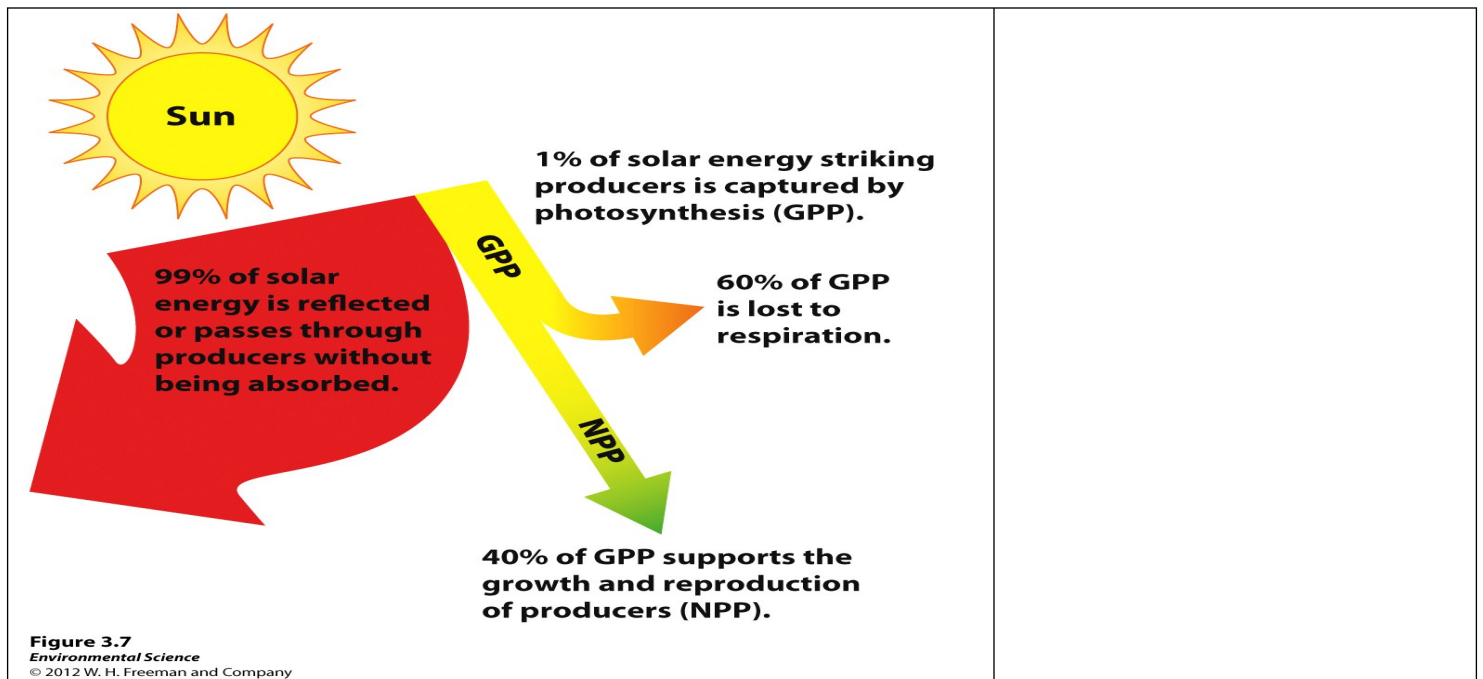


Figure 3.6
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Ecosystem Productivity

Gross primary productivity (GPP)- The total amount of solar energy that the producers in an ecosystem capture via photosynthesis over a given amount of time.

Net primary productivity (NPP)- The energy captured (GPP) minus the energy respired by producers.



Summary, Reflection, Analysis
