

Energy flows through ecosystems

Lesson 1.3

Energy flows through ecosystems

1. Living things capture and release energy.
2. Models help explain feeding relationships.
3. Available energy decreases as it moves through an ecosystem.

Energy & Matter

- Energy and matter can move through an ecosystem as food.



Producers

- Capture energy from sunlight or, in a few cases, from chemicals in the deep sea.



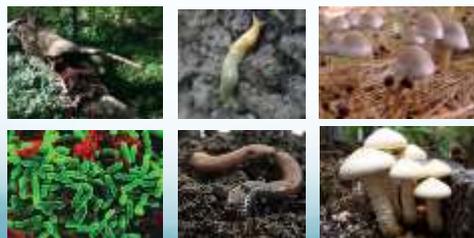
Consumers

- Obtain food by eating producers or other consumers.



Decomposers

- Break down dead plant and animal matter into simpler compounds.



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Energy & matter movement

- Food chains and food webs are models that show how energy and matter move through the organisms of an ecosystem.



Food Chain

- A **food chain** shows one path of energy movement through an ecosystem...



Producer

- From a producer like grass...



Primary Consumer

- To a herbivore or primary consumer like a grasshopper...



Secondary Consumer

- To a secondary consumer like a robin...



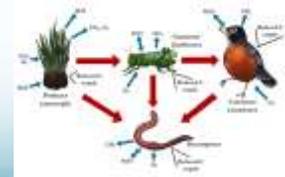
Tertiary Consumer

- To a tertiary consumer like a hawk...



Food Web

- A **food web** shows many paths of energy movement through an ecosystem.
- It indicates that each organism eats and is eaten by several organisms.



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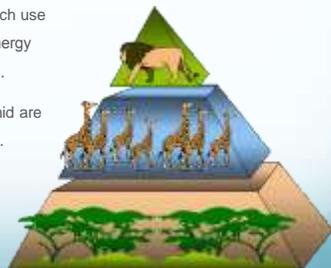
Energy Pyramid

- An **energy pyramid** models the amount of energy available to producers and consumers in an ecosystem.



Energy Pyramid

- At the bottom of the pyramid are the producers, which use the Sun's abundant energy to manufacture sugars.
- At the top of the pyramid are the tertiary consumers.



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Skill Check

1. _____ break down dead plant and animal matter into simpler compounds.
 - a) producers
 - b) consumers
 - c) decomposers

Skill Check

2. A _____ shows one path of energy movement through an ecosystem...
 - a) energy pyramid
 - b) food chain
 - c) food web

Skill Check

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