

## 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.



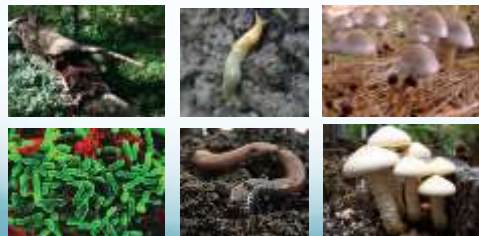
## Consumers

- Obtain food by eating producers or other consumers.



## Decomposers

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

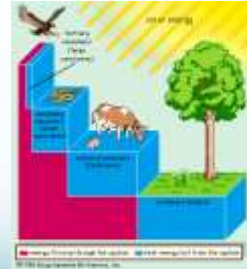


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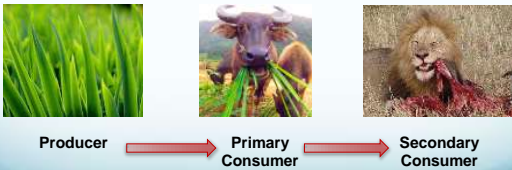
## Energy & matter movement

- 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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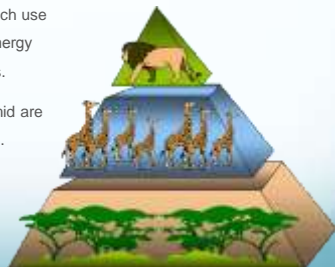
## Energy Pyramid

- 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

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