Biology 20

Unit A: Energy and matter in the biosphere

Food chains and food webs

Aspen leaves end up as lynx muscle

- A snowshoe hare spends the evening clipping aspen twigs in parkland snow.
- A lynx later takes that hare, and leaf litter still feeds fungi under the snow.



Links and trophic levels

- A food chain is one path, written so each arrow aims at the receiver.
- A trophic level is the feeding position counted from the producer.
- A food web joins chains where one animal feeds in more than one place.

Key terms

food chain

A single path of energy from a producer through a sequence of consumers.

food web

Linked food chains that show one organism feeding at more than one point.

trophic level

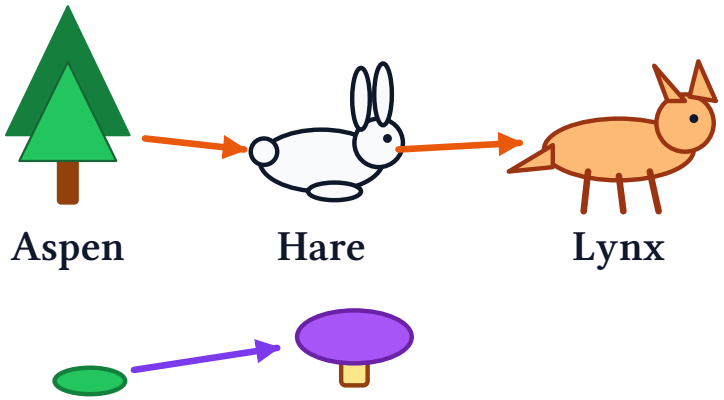
The feeding position of an organism, counted from the producers upward.

decomposer

An organism that releases energy from dead matter and wastes as heat.

Arrows carry energy to the eater

- Producers occupy the first trophic level because they build the organic store.
- Each consumer sits one level above the organism it eats in that path.
- Decomposers take energy from dead matter at every level of the chain.



Arrowheads sit on the eater

Parkland food chain sketch

- Four boxes and three arrows are enough for the first annotated chain.
- Each label names the organism and its trophic level in words.

From chains to a web

- A second producer or a second prey animal forces a branch in the drawing.
- The web still uses arrows that point toward the receiver of energy.

Path and web

- State where the arrow points and how trophic levels are counted.
- Explain when a drawing has become a food web.

Pyramids will count these levels

- The next lesson stacks this chain as pyramids of numbers, biomass, and energy.
- Bring a labelled chain so the stack has organisms to count.

Image credits

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