Energy Flow in Ecosystems

Ecological Niche: the function a species serves in its ecosystem

includes: what it eats
what eats it
how it behaves

Learning Goal: to describe energy flow within ecosystems

Energy Flow in Ecosystems

Ecological Niche: the function a species serves in its ecosystem

includes: what it eats
what eats it
how it behaves

e.g. Rabbit:

LG: to describe energy flow within ecosystems

Energy Flow in Ecosystems

Ecological Niche: the function a species serves in its ecosystem

includes:
- what it eats -grass, leaves
- what eats it -foxes, coyotes
- how it behaves -borrows, hides in shade

e.g. Rabbit:

LG: to describe energy flow within ecosystems

Energy Flow in Ecosystems

Types of Consumers:

Herbivore: eats plants

Carnivore: eats other animals

Omnivore: eats both plants and animals

Scavenger: eats the remains of other organisms

Decomposer: eats decaying matter to return its minerals to the soil for producers to use again

LG: to describe energy flow within ecosystems

Energy Flow in Ecosystems

Types of Consumers:

Herbivore: eats plants

Carnivore: eats other animals

Omnivore: eats both plants and animals

Scavenger: eats the remains of other organisms



LG: to describe energy flow within ecosystems

Energy Flow in Ecosystems

Types of Consumers:

Herbivore: eats plants

Carnivore: eats other animals

Omnivore: eats both plants and animals

Scavenger: eats the remains of other organisms

herbivore

carnivore

omnivore

scavenger

LG: to describe energy flow within ecosystems

Energy Flow in Ecosystems

Types of Consumers:

Herbivore: eats plants

Carnivore: eats other animals

Omnivore: eats both plants and animals

Scavenger: eats the remains of other organisms

herbivore

carnivore

omnivore

scavenger

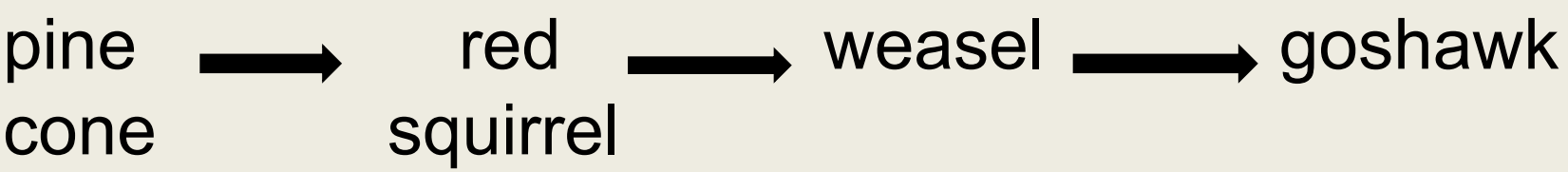
scavenger

LG: to describe energy flow within ecosystems

Energy Flow in Ecosystems

Food Chain: a sequence of organisms, each feeding on the next, showing how energy is transferred from one organism to another

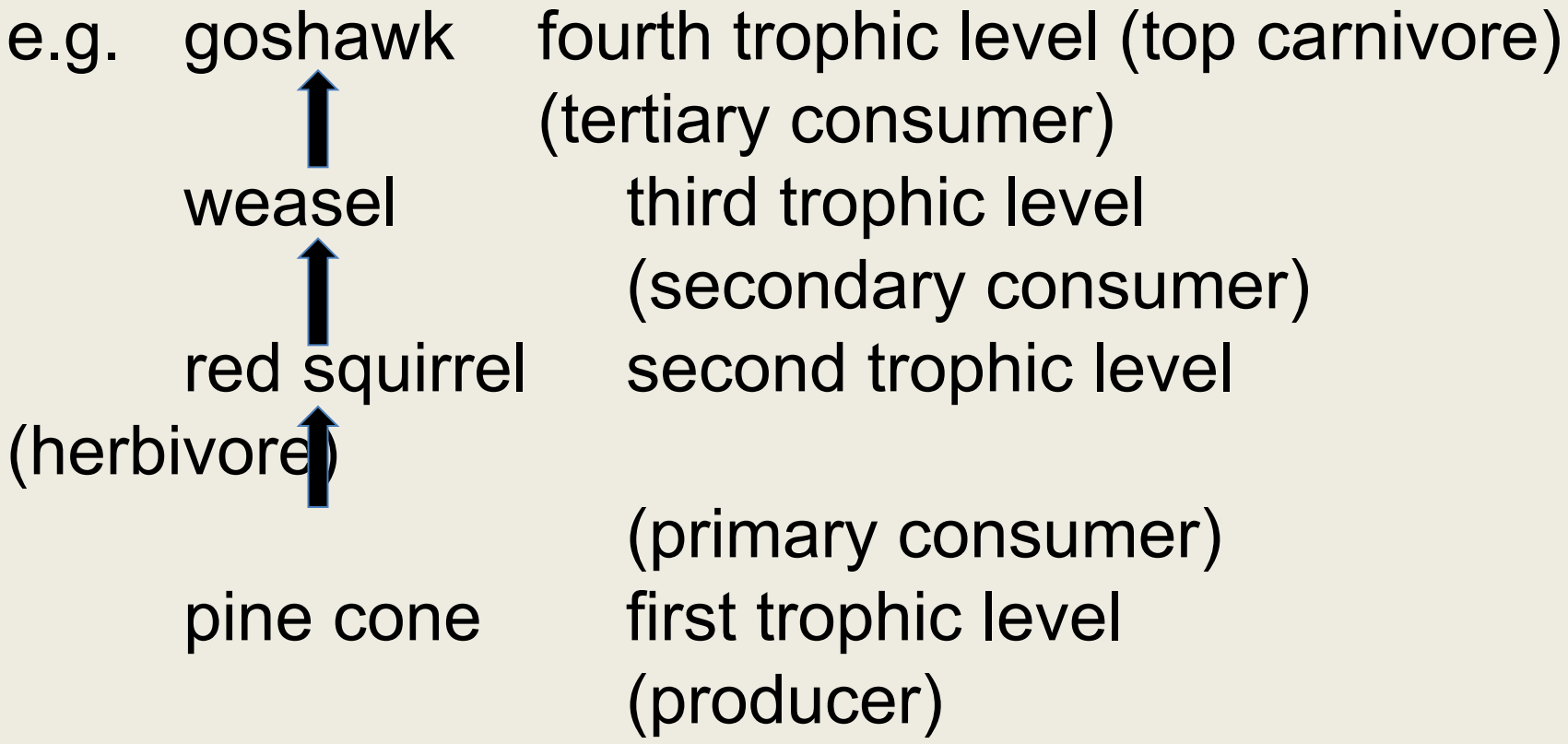
e.g.



LG: to describe energy flow within ecosystems

Energy Flow in Ecosystems

Trophic Level: the level of an organism in an ecosystem depending on its feeding position along a food chain



LG: to describe energy flow within ecosystems

Energy Flow in Ecosystems

Food Web: a representation of the feeding relationships within an ecosystem

e.g.

great horned owl lynx

goshawk

weasel

snowshoe hare

red squirrel

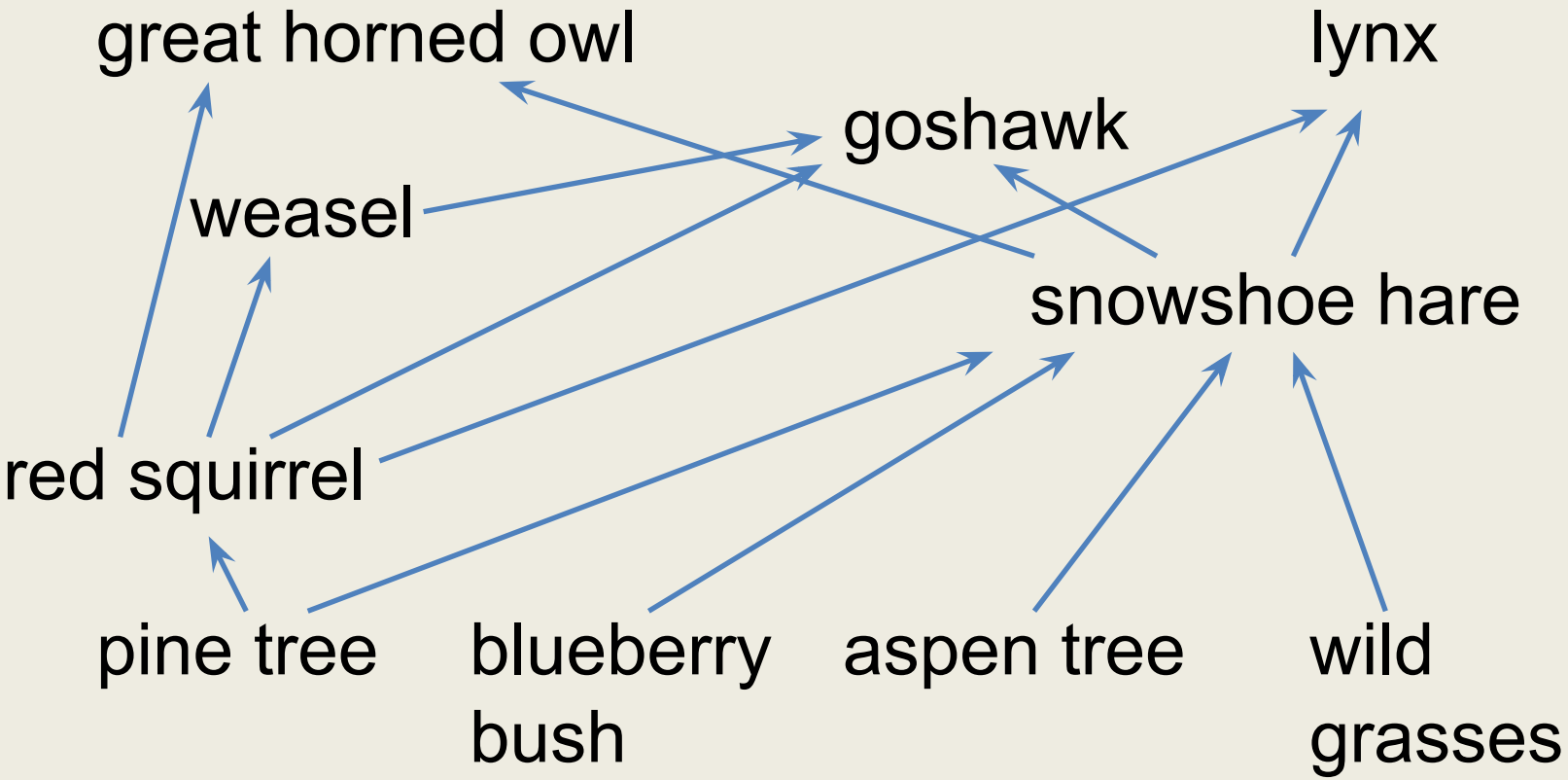
pine tree blueberry bush aspen tree wild grasses

LG: to describe energy flow within ecosystems

Energy Flow in Ecosystems

Food Web: a representation of the feeding relationships within an ecosystem

e.g.



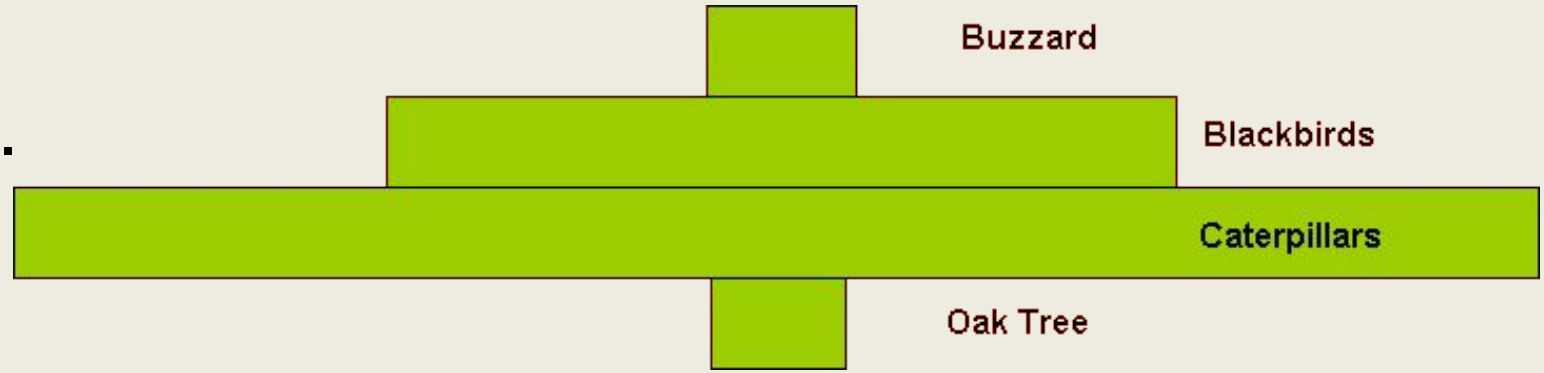
LG: to describe energy flow within ecosystems

Energy Flow in Ecosystems

Ecological Pyramid: a representation of energy, numbers, or biomass relationships in ecosystems

Pyramid of Numbers: total number of individuals at each trophic level

e.g.



-in pyramids of numbers, it often does not look like a normal pyramid shape.

LG: to describe energy flow within ecosystems

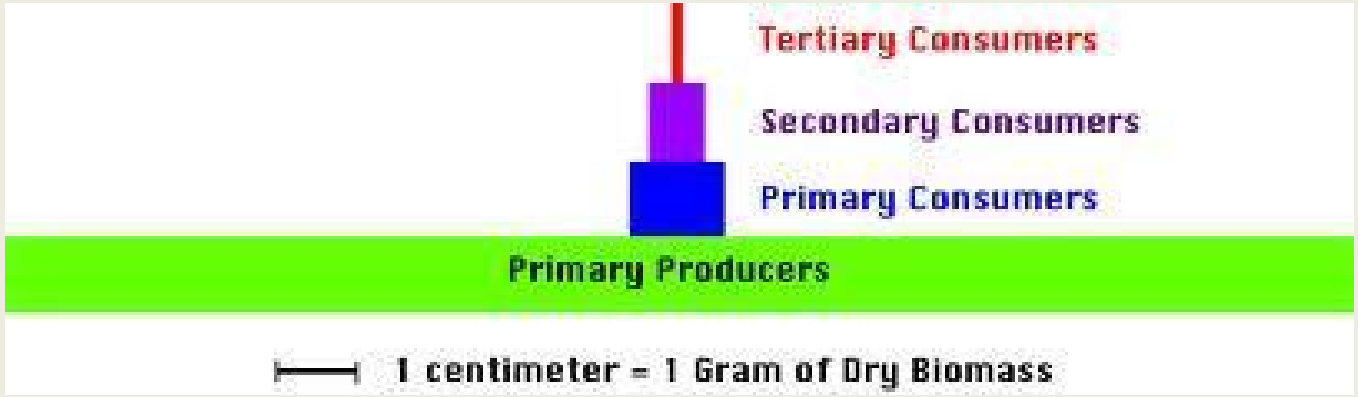
Energy Flow in Ecosystems

Ecological Pyramid: a representation of energy, numbers, or biomass relationships in ecosystems

Pyramid of Numbers: total number of individuals at each trophic level

Pyramid of Biomass: the dry mass of living things in each trophic level

e.g.

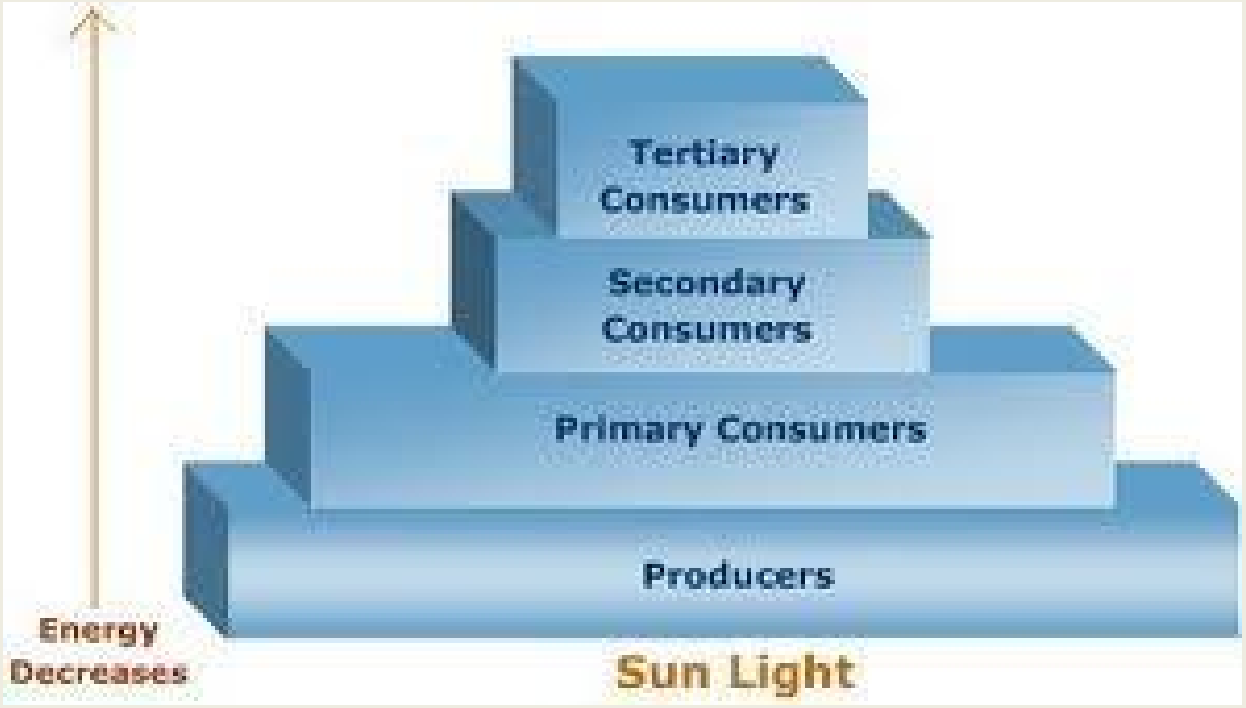


LG: to describe energy flow within ecosystems

Energy Flow in Ecosystems

Pyramid of Energy: the total energy passed from one trophic level to the next

e.g.



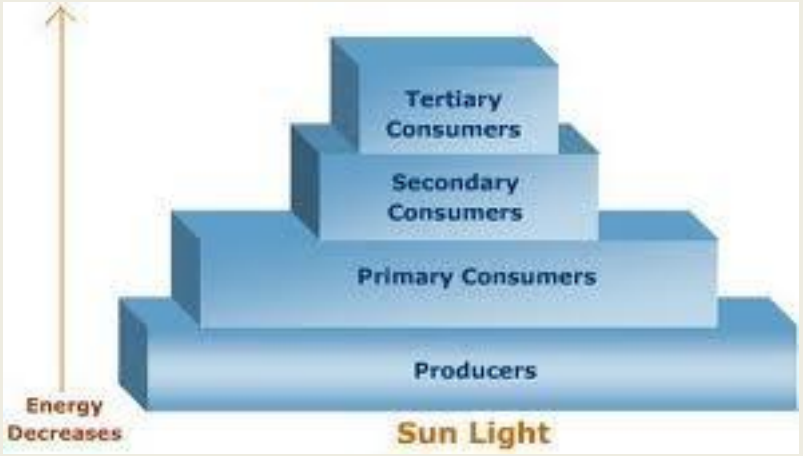
Energy Flow in Ecosystems

Pyramid of Energy: only 10% of the energy gets passed up to the next trophic level

the rest is:

i. used up carrying on day to day activities

ii. contained in tissues unusable by a predator (e.g. fur, bones, hooves)



LG: to describe energy flow within ecosystems

ENERGY FLOWS ONE WAY!!