

(1) Biology 2—Enzymes

Enzymes

Polymer	Enzyme	Monomer	Use of monomer
Carbohydrates	Carbohydrase	Glucose	Energy
Proteins	Protease	Amino Acids	Growth and Repair
Lipids (fats)	Lipase	Glycerol and Fatty Acid	Long term energy and insulation

Digestive System

Stomach	Where ingested food is stored and broken
Small intestine	Where food molecules are absorbed into the
Large intestine	Where water molecules are absorbed into the

(2) Biology 2 — Key Vocabulary

Monomer—A small molecule that can join to form a polymer (a single unit). *Mono = one*

Polymer—A long chain of repeating units called monomers. *Poly = many.*

Enzymes—Biological catalysts that break down polymers into monomers.



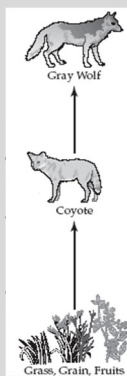
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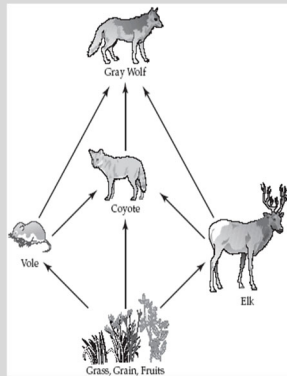
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(3) Biology 3 — Food Chains & Webs

Food Chain



Food Web



The arrows show the direction of **energy transfer**.

Food Chain—Shows the transfer of energy through different trophic levels.

Food webs— Shows the interaction of different food chains in an ecosystem.

Trophic Level—A level in a food chain

Producer—An organism that produces its own food (plant.)

Primary consumer—An organism that eats a producer.

Secondary consumer—An organism that eats a primary consumer.

Tertiary consumer—An organism that eats a secondary consumer.

(4) Biology 3 —Key Vocabulary

Carnivore—An organism that only eats animals.

Herbivore—An organism that only eats plants.

Omnivore—An organism that eats both plants and animals.

Predator—An animal that hunts, kills and eats other animals for food.

Prey—Organisms that predators kill for food.

Interdependence—When one organism depends on another organism for survival.

Ecosystem Where organisms interact with their physical surroundings.

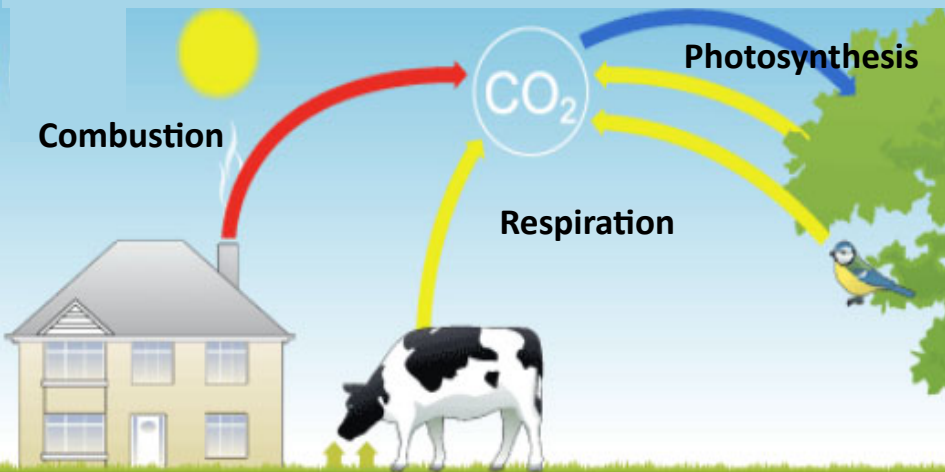
Habitat—Where an organism lives.

Population—The number of one species of organism.

Community—All of the different species in an area.

(5) Chemistry 2— The Carbon Cycle

The atmosphere contains: **Nitrogen 78%, Oxygen 21%, Carbon dioxide 0.035% and other gases < 1 %**



(6) Chemistry 3—Reactivity Series & Metal Reactions

- Metals **less reactive** than carbon can be extracted from their **ores** by **heating them with carbon**.
- Metal extraction from an ore can be very expensive, sometimes this means it's not done.

potassium	most reactive	K
sodium		Na
calcium		Ca
magnesium		Mg
aluminium		Al
carbon		C
zinc		Zn
iron		Fe
tin		Sn
lead		Pb
hydrogen		H
copper		Cu
silver		Ag
gold		Au
platinum	least reactive	Pt

Metal Extraction

Metal Oxide + Carbon → Carbon dioxide + Metal

Copper Oxide + Carbon → Carbon dioxide + Copper

Metal and Acid Reactions

Metal + Acid → Salt + Hydrogen

Copper + Hydrochloric Acid → Copper Chloride + Hydrogen