★ **HIGHER TIER ONLY** content is highlighted in blue. Foundation students — focus on the un-highlighted sections.

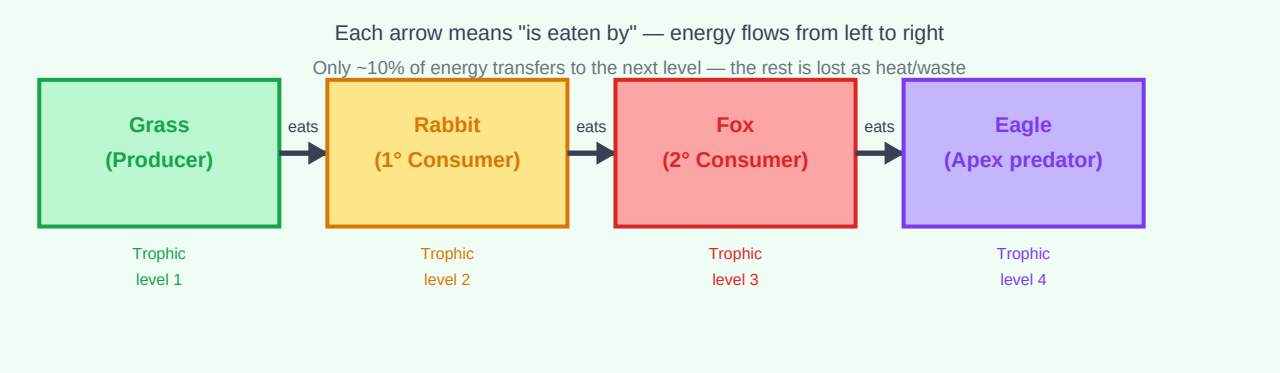

Fig: A simple food chain showing trophic levels

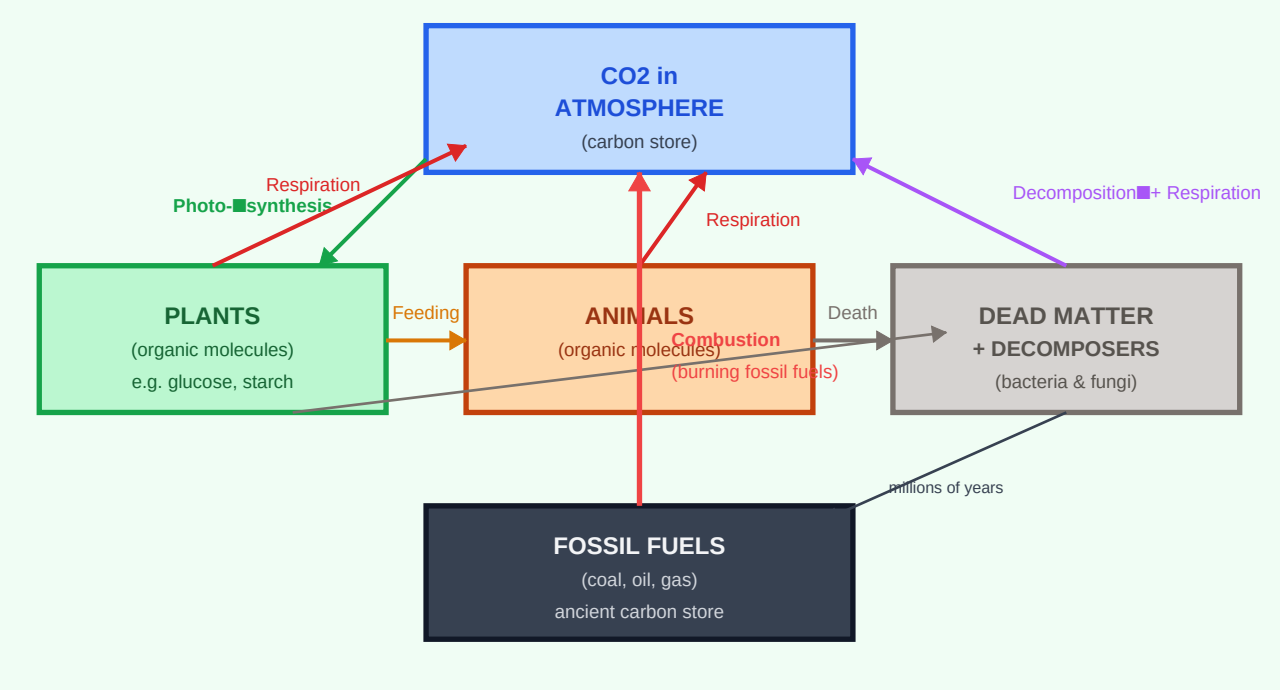

Fig: The Carbon Cycle — carbon continuously cycles through living organisms and the environment

■ **Exam Tip:** Only PHOTOSYNTHESIS removes CO2 from the atmosphere. Respiration, decomposition AND combustion all ADD CO2 back!

Human Threats to Biodiversity

Deforestation	Removes habitats, releases CO2, reduces rainfall, causes species extinction
Global warming	Rising temperatures from CO2/methane — habitat change, ice melt, extinction
Pollution	Toxic chemicals in water/soil destroy habitats and food chains
Overfishing	Removes species from food webs — cascade effects on ecosystem

Conservation Methods

How We Protect Biodiversity

- Nature reserves and national parks — protect habitats from development
- Breeding programmes — captive breeding of endangered species (e.g. giant panda)
- Seed banks — preserve plant genetic material for the future
- Sustainable fishing — fishing quotas prevent overfishing
- Reforestation — planting trees to restore woodland habitats
- International agreements — Paris Agreement (climate), CITES (endangered species trade)

Biodiversity	The number and variety of different species in an area
Ecosystem	A community of organisms plus their non-living environment
Decomposer	Organism (bacteria/fungi) that breaks down dead matter, cycling nutrients