

This is the **Higher Separate** version — includes all Higher Tier content (marked ★) and all Separate Science content.

Ecosystems consist of communities of organisms interacting with each other and their physical environment through feeding relationships and competition.

- Population: one species. Community: all species. Ecosystem: community + abiotic environment
- Abiotic: temperature, light, pH, water. Biotic: food, predators, disease, competition
- Food chains: energy flows from producer → consumers. ~10% transfers per level
- Food webs: interconnected food chains — removing one species affects others
- ★ **HT** Pyramid of biomass: always widest at base. Pyramid of numbers: can be inverted
- ★ **HT** Interdependence: mutualism (both benefit), parasitism (one benefits, other harmed)

### Key Terms

<b>Trophic level</b>	Feeding level in a food chain
<b>Pyramid of biomass</b>	Dry mass at each trophic level — always wider at base
<b>Interdependence</b>	Organisms relying on each other for survival

■ **Exam Tip:** Pyramids of BIOMASS are always pyramid-shaped. Pyramids of NUMBERS can be inverted (e.g. 1 oak tree supports thousands of insects). Know the difference.