

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

Ecosystems are complex webs of interactions between organisms and their physical environment.

- Population: all of one species in an area. Community: all species in an area. Ecosystem: community + abiotic environment
- Abiotic factors: temperature, light, pH, water, minerals. Biotic: food, predators, competitors, disease
- Predator-prey cycles: oscillating populations linked by feeding relationship
- Food chain: energy flows from producers → consumers. ~10% transfers at each step
- ★ HT Pyramids of biomass: always widest at base — less biomass at each higher level

### Key Terms

<b>Ecosystem</b>	Community of organisms plus their non-living environment
<b>Abiotic</b>	Non-living physical/chemical factor affecting organisms

■ **Exam Tip:** Know: population vs community vs ecosystem. These are 1-mark definitions often asked in exams.