

# Ecology

## Adaptations and interdependence

### Levels of organisation

Organism   Population   Community   Ecosystem

### Competition

Plants: light, space, water, ions

Animals: food, mates, territory

### Interdependence

Stable community

### Abiotic factors

Light   Temperature   Moisture   Soil pH and minerals

### Biotic factors

Food   New predators   New pathogens   Outcompeted

### Adaptations

Structural   Behavioural   Functional   Extremophiles

## Organisation of an ecosystem

### Food chains

Producer   Primary consumer   Predator and prey

### Sampling

Quadrats   Transects   Mean, mode, median

### Predator-prey cycles

Prey peaks first

### Carbon cycle

Photosynthesis   Respiration   Decay

### Water cycle

Evaporation   Precipitation

### Microorganisms

Return carbon dioxide   Return mineral ions

## Biodiversity and humans

### Biodiversity

Variety of species   Stability

### Waste and pollution

Water   Air   Land

### Land use

Building   Quarrying   Farming   Peat bogs

### Deforestation

Cattle and rice   Biofuels

### Global warming

Carbon dioxide   Methane   Habitat loss

### Maintaining biodiversity

Breeding programmes   Protect habitats   Hedgerows  
Recycling