

Year 7 Ecosystems – Interdependence

Name of unit	
Expected Outcomes • Students will understand that all living organisms in an ecosystem depend on each other for survival. • Students will describe food chains and food webs, including the roles of producers, consumers, and decomposers. • Students will explain how changes in a population or environment affect other species. • Students will understand the concept of competition for resources. • Students will explore examples of human impact on ecosystems.	
Developmental Focus Opportunities • Systems thinking: Exploring complex interconnections between organisms. • Data interpretation: Analysing population graphs or food web diagrams. • Environmental awareness: Linking science learning to real-world ecological issues. • Communication skills: Using diagrams and models to explain scientific ideas.	
• Key Learning Points	Powerful Knowledge
• Organisms rely on each other and their environment to survive. • Food chains and webs show how energy is transferred in ecosystems. • Disruptions (natural or human-made) can impact the whole system. • Competition influences the distribution and success of species.	• Recognising the fragility and complexity of natural systems. • Understanding the long-term effects of biodiversity loss. • Applying ecological knowledge to sustainability and conservation debates. • Building a base for more advanced topics like bioaccumulation and energy flow.
Subject-Specific Vocabulary	Reading Opportunities
• Ecosystem • Producer • Consumer • Decomposer • Food chain • Food web • Interdependence • Competition • Habitat	• News stories or case studies about endangered species and conservation efforts. • Diagrams and summaries of different ecosystems (e.g., rainforest, desert). • Articles linking science to environmental activism or policy.

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• Biodiversity	
Possible Misconceptions	Cross-Curricular Links
• Thinking food chains always begin with animals. • Believing all organisms compete with each other. • Assuming humans are not part of ecosystems. • Misunderstanding the roles of decomposers in recycling nutrients.	• Geography: Biomes, climate, and human impact on environments. • PSHE: Responsibility for the environment and ethical issues in conservation. • English: Writing persuasive texts on environmental issues.