

Global Biodiversity issues



Learning Outcomes

- ✓ Identify examples of endangered species and current threats to biodiversity
- ✓ State some of the ways Auckland Zoo contributes to the conservation of endangered species e.g. advocacy, breeding programmes, conservation fieldwork and research

Session Outline:

Auckland Zoo's vision is a future where people value wildlife and species are safe from extinction. Working with Zoo educators students will be introduced to examples of endangered species and global patterns and processes that are leading to wildlife being threatened with extinction. Examples will be chosen based on local and global regions that are represented at Auckland Zoo, species we house and conservation work we are involved in.

Teachers can select from one of the following focuses:

- A general introduction to the main reasons animals are under threat of extinction
- A specific biodiversity issue such as palm oil, human-wildlife conflicts or introduced species

Key Competencies: Thinking; Managing Self; Participating and Contributing; Relating to Others

Auckland Zoo Conservation Actions: Live sustainably; Protect what's precious; Choose wisely; Get involved



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CURRICULUM LINKS

Year 9 & 10	Year 11	Year 12	Year 13	International Baccalaureate Diploma Biology
<p>Science – Living World Ecology (L5): investigate the interdependence of living things (including humans) in an ecosystem Ecology (L4): explain how living things respond to environmental changes, both natural and human induced Nature of Science: communicating in science, participating and contributing</p>	<p>Science – Living World Ecology: investigate the impact of natural events and human actions on a New Zealand ecosystem Biology 90926 (1.2) – report on a biological issue Nature of Science: develop an understanding of a socio-scientific issues by gathering relevant scientific information in order to draw evidence-based conclusions and take action where appropriate</p>	<p>Science – Living World: Participating & Contributing: use relevant information to develop a coherent understanding of socio-scientific issues that concern them, to identify possible responses at both personal and societal levels Biology 91154 (2.2) – analyse the biological validity of information presented to the public</p>	<p>Science – Living World Nature of Science: participating & contributing Biology 91602 (3.2) – integrate biological knowledge to develop an informed response to a socio-scientific issue</p>	<p>Core 4 – Ecology Option 3(C) – Ecology and Conservation</p> <ul style="list-style-type: none"> • Species and communities • Entire communities need to be conserved in order to preserve biodiversity • Human activities impact on ecosystem function • An indicator species is an organism used to assess a specific environmental condition • In situ conservation may require active management of nature reserves of national parks • Ex situ conservation is the preservation of species outside their natural habitats
	<p>Geography Understand that natural and cultural environments have particular characteristics and how environments are shaped by processes that create spatial patterns Geography 91013 (1.7) – describe aspects of a geographic topic at a global scale</p>	<p>Social Studies Understand how communities and nations meet their responsibilities and exercise their rights in local, national and global contexts 91283 (2.5) – describe a social action that enables communities and/or nations to meet responsibilities and exercise rights</p>	<p>Social Studies Understand how policy changes are influenced by and impact on the rights, roles and responsibilities of individuals and communities Social Studies 91600 (3.5) – examine a campaign of social action(s) to influence policy change(s)</p>	
<p>EfS concepts Responsibility for action; sustainability; interdependence; biodiversity</p>	<p>EfS concepts Responsibility for action; sustainability; interdependence; biodiversity; equity</p>	<p>Geography Understand how the processes that shape natural and cultural environments change over time, vary in scale and from place to place to create spatial patterns Geography 91246 (2.7) – explain aspects of a geographic topic at a global scale</p>	<p>EfS Evaluate social, economic and technological measures that can be taken to sustain natural resources and improve biodiversity now and for the future 91735 (3.2) – evaluate measures the may be taken to sustain and/or improve a biophysical environment</p>	<p>Biology 9700 Syllabus – Biodiversity and Conservation</p> <ul style="list-style-type: none"> • Define the terms species, ecosystem and niche • Explain that biodiversity is considered at 3 different levels: variation in habitats; number of species and relative abundance and genetic variation within species • Discuss threats to biodiversity • Discuss reasons for the need to maintain biodiversity • Discuss methods of protecting endangered species, including the role of zoos, botanic gardens, conserved areas, “frozen zoos” and seed banks • Use examples to explain the reasons for controlling alien species • Discuss the roles of NGOs and CITES in local and global conservation • Outline how degraded habitats may be restored
	<p>Media Studies Apply understanding of media conventions and technology to craft media Media Studies 90996 (1.8) – write media texts for a specific target audience</p>	<p>Media Studies Apply knowledge of media conventions and technology to create media Media Studies 91255 (2.8) – write developed media text for a specific target audience</p>	<p>Media Studies Apply understanding of media conventions and technology to craft media Media Studies 91497 (3.8) – write a media text to meet the requirements of a brief</p>	



Live sustainably



Protect what's precious



Choose wisely



Get involved