

Role of a modern zoo

Key Stage 4 and 5

Learning objectives

To explain how the 4 main roles of a zoo help in the conservation of animal and their habitats.

To select the most appropriate animal for breeding using a variety of information sources and be able to give reasons for their answer.

To recall some of the issues surrounding the reintroduction of animals into the wild.

Session content

This hour long session looks into the role of modern zoos using Whipsnade Zoo and the charity that owns it, ZSL, as examples. The session starts by looking at ZSL's mission and how the 4 main roles of a zoo (education, research, conservation and recreation) all help to achieve the ZSL's goals.

During the session students will find out more about conservation breeding and have the opportunity to work in small groups to complete a matchmaking activity. The session also includes a brief look into our conservation work around the world including reintroduction programmes and the issues surrounding releases.

Learning outcomes

At the end of this session...

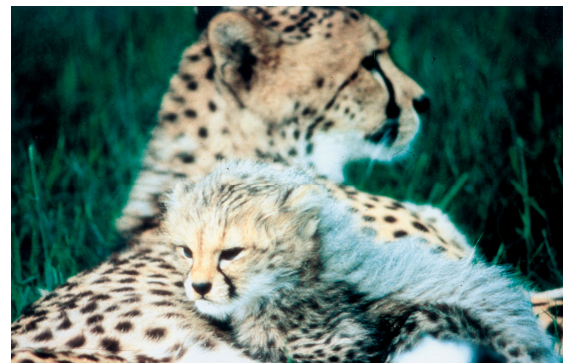
- Most students will be able to describe the 4 main roles of a zoo with examples and suggest 2 factors that would need to be taken into consideration when matching animals for breeding. They will also be able to give 1 reason why reintroduction programmes can be difficult to set up.
- Some students may have progressed further and will be able to describe the 4 main roles of a zoo using a number of examples. They will be able to describe 3 factors that would need to be taken into consideration when matching animals for breeding including why related animals should not be allowed to breed. Students should also be able to recall 3 reasons why reintroduction programmes can be difficult to set up.
- Some students may not have progressed as far and will be able to recall the 4 main roles of a zoo and be able to list two pieces of information zoos need about an animal in any breeding programme.

GCSE Specification links

- **AQA Environmental Science Theme 3** - Reasons for conservation and the methods used including captive breeding and reintroduction programmes
- **OCR Gateway Science B and Biology B: B2** - How endangered species can be helped by education programmes and captive breeding programmes

A-level specification links

- **AQA Environmental Science 3.1.2 Wildlife conservation** - The rationale for wildlife conservation and conservation methods used e.g. captive breeding and release programmes.
- **Edexcel Biology Topic 4: Biodiversity and natural resources (section 17)** - Discuss and evaluate the methods used by zoos and seedbanks in the conservation of endangered species and their genetic diversity (e.g. scientific research, captive



- breeding programmes, reintroduction programmes and education)
- **OCR Biology AS Unit 2: Molecules, biodiversity, food and health** – Describe the conservation of endangered plant and animal species, both *in situ* and *ex situ*, with reference to the advantaged and disadvantages of these two approaches.

Other links: BTECs in Animal care and Animal Management

Assessment opportunities

Students' understanding can be assessed through questioning, listening to group discussions during the activities and from the outcome of the matchmaking activity.

Session suitability

This talk is supported with text and images projected onto a screen. It is possible to provide individual materials for any partially sighted students. During the session students are asked to work small in mixed ability groups using printed resources and are asked to present some of their findings to the rest of the class.

Additional information

Sessions can be tailor to particular specifications so please let the education department before your visit so that we can deliver the most appropriate variation of the session to your group.

We would like to know in advance if any members of your class have learning, physical or sensory difficulties, allergies or illness which might affect their enjoyment of the session. It is usually possible to tailor the session should your group have any special requirements. Please call 01582 871330 at least 2 weeks in advance of your visit to discuss the best way to do this.

Suggested activities:

Before the visit

- Students should be familiar with the reasons why species are threatened in the wild. They should also know of the IUCN Red List and the categories that are used to classify threatened species. www.iucnredlist.org
- Question the students on their opinions about zoos. What do they believe zoos do? Do they think zoos are good or bad? Students could make notes on these questions before the visit and compare their opinions.

During the visit

- Visit the enclosures for the following animals to find out more about why these species are endangered and what ZSL is doing to conserve them.
 - Chimpanzees
 - White rhino
 - Greater one-horned rhino
 - Lions

After the visit

- Please complete a feedback sheet (available at the session or from our website) to help improve the education provision at Whipsnade Zoo.
- Students could debate the pro and cons of zoos using information they gathered while at Whipsnade and any additional information they have gathered at school or during private study. There is a very useful document on the BIAZA (British and Irish Association of Zoos and Aquaria) website which discusses the misconceptions of zoos, see link below.

www.biaza.org.uk/resources/library/images/biologist.pdf This document is excellent preparation for any debate on the role zoos play in conservation.

- Students could discuss the advantages and disadvantages of *in situ* and *ex situ* conservation techniques.

Useful websites

ZSL Whipsnade Zoo conservation programmes – www.zsl.org/conservation

BIAZA - www.biaza.org.uk

Arkive – www.arkive.org/species

CITES website – www.cites.org

IUCN Red List of Threatened Species - www.iucnredlist.org

Reintroduction of Arabian oryx - www.oryxoman.com

21st Century Tiger - www.21stcenturytiger.org