

Exercise walk-through

20.4

Conservation

IGCSE Biology

Conservation

sustainable use

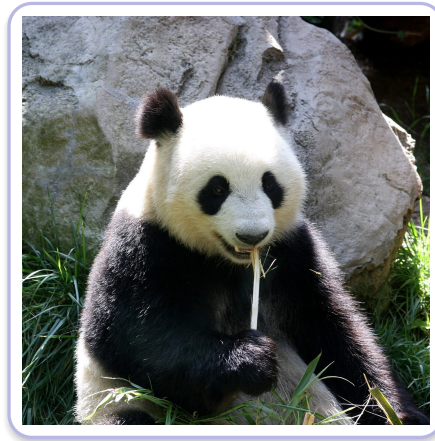
quotas , closed
seasons ,
mesh sizes, replanting

saving species

protected areas, cap-
tive breeding ,
seed banks

A very small population loses **genetic variation** , making it harder to survive change.

Saving endangered species



Protected habitats and **captive breeding** in zoos brought the giant panda back. **(Supplement)** Breeding programmes may use **artificial insemination** or **in vitro fertilisation** ; **seed banks** do the same job for plants.

Why species are lost, and why we conserve them

Why they are lost

Numbers fall through climate change, habitat destruction, **hunting**, **overharvesting**, pollution and **introduced species**.

What conservation keeps

Biodiversity, fewer extinctions, working ecosystems – and the functions they carry out: recycling nutrients, and providing food, **drugs**, fuel and useful **genes**.

How

Protected habitats, captive breeding and seed banks, controlled harvesting, and education.

The strongest exam answer names a *use* we would lose – a crop gene, a medicine – alongside the ethical case.

Habitat destruction, continued



Clearing forest destroys habitats and reduces biodiversity.

Pollution



Plastic pollution is a major human impact on ecosystems.

Exercises 2.1·2.2

2.1 State what a sustainable resource is.

[1]

2.2 State one method used to conserve fish stocks.

[1]

Exercises 2.1·2.2

2.1 State what a sustainable resource is.

[1]

2.1

- a sustainable resource is produced **as fast as it is used up**, so it never runs out

2.2 State one method used to conserve fish stocks.

[1]

2.2

- any **one** of: closed seasons / quotas / mesh size / protected areas / monitoring

Exercise 3.1

3.1 A method used to conserve an endangered animal species is:

[1]

☐

A deforestation

B captive breeding

C overharvesting

D pollution

Exercise 3.1

3.1 A method used to conserve an endangered animal species is:

[1]

☐

- A deforestation
- B captive breeding
- C overharvesting
- D pollution

3.1 B

- **captive breeding** conserves an endangered animal species
- A, C and D harm species

Exercise 3.2 (a)

3.2 Conservation helps maintain biodiversity.

(a) State two reasons why we conserve species.

[2]

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(a) State two reasons why we conserve species.

[2]

(a)

- any **two** of: keep up biodiversity / reduce extinction / protect ecosystems / food, drugs or genes

Exercise 3.2 (b)

3.2 Conservation helps maintain biodiversity.

(b) Explain why a very small population is at greater risk of extinction.

[2]

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3.2 Conservation helps maintain biodiversity.

(b) Explain why a very small population is at greater risk of extinction.

[2]

(b)

- a small population has **less genetic variation**
- so it is harder to survive future **change or disease**