

18. Classification, biodiversity and conservation

Starter Quiz ·

A-Level Biology

Name: _____ Score: _____

1. The biological species concept defines a species as a group whose members:
 - ☐ live in the same place
 - ☐ have the same number of cells
 - ☐ can breed together to produce fertile offspring
 - ☐ simply look alike
2. The smallest, most specific group in the taxonomic hierarchy is the _____.

3. An ecosystem is:
 - ☐ only the non-living environment
 - ☐ all the living things in an area together with their non-living surroundings
 - ☐ a single species
 - ☐ a type of sampling
4. Which is a cause of extinction?
 - ☐ higher biodiversity
 - ☐ a larger gene pool
 - ☐ random sampling
 - ☐ loss and damage of a species' habitat
5. A group whose members can breed together to produce fertile _____ is a biological species.

6. Which level is the smallest, most closely related group?
 - ☐ phylum
 - ☐ class
 - ☐ kingdom
 - ☐ species
7. Biodiversity is measured at three levels: ecosystems/habitats, species/abundance, and:
 - ☐ the soil pH
 - ☐ genetic variation within each species

☐ the number of atoms

☐ the temperature

8. Conserving a species in its natural habitat (e.g. a nature reserve) is called _____ conservation.

9. Archaea and Bacteria are both prokaryotes, while Eukarya have a nucleus.

☐ True ☐ False

10. Two organisms in the same class are more closely related than two in the same genus.

☐ True ☐ False

A-Level Biology

1. can breed together to produce fertile offspring

The biological concept uses interbreeding to produce fertile offspring; other concepts use appearance or ecological role.

2. species

Domain → kingdom → phylum → class → order → family → genus → species.

3. all the living things in an area together with their non-living surroundings

An ecosystem includes the living community and the abiotic surroundings; a niche is a species' role within it.

4. loss and damage of a species' habitat

Habitat loss (plus climate change, competition and hunting) can drive a species extinct.

5. offspring

A mule (horse × donkey) is sterile, so horses and donkeys are different species.

6. species

Species is the most specific level; kingdom is the broadest.

7. genetic variation within each species

The three levels are ecosystem diversity, species diversity (and abundance), and genetic diversity.

8. in situ

In situ = in place (the habitat); ex situ = off-site (zoos, seed banks).

9. True

The split into three domains is based on differences in their cells and genes, especially rRNA.

10. False

False. Genus is lower in the hierarchy than class, so sharing a genus means a closer relationship than sharing only a class.