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SPECA

GCSE Combined Science (AQA Trilogy) · Biology

Ecology · Worksheet

This topic has no Higher-tier-only content in the specification, so all students complete the same questions below.

Communities, competition, and adaptation

1) Define a community, and define a stable community. **[2]**

2) Explain why interdependence matters within a community, giving one example of what species may depend on each other for. **[3]**

3) Give three things plants and animals in a habitat might be competing for. **[3]**

4) Define the term extremophile, and give one example. **[2]**

Abiotic/biotic factors, food chains, and sampling

5) Give one example of an abiotic factor and one example of a biotic factor that could affect a woodland community, and explain how each could affect it. **[3]**

6) Describe a food chain, starting with a producer, and explain the role of a producer within it. **[3]**

7) Name two methods ecologists use to sample the distribution and abundance of species in a habitat. **[2]**

8) A student counts the number of daisies in five 1 m² quadrats placed randomly across a field: 4, 6, 5, 9, 6. Calculate the mean number of daisies per quadrat. **[3]**

9) Explain why quadrat sampling gives an estimate of population size, rather than an exact count. **[2]**

Cycles, biodiversity, and human impact

10) Describe the role of the carbon cycle in returning carbon to the atmosphere, and explain the role microorganisms play in this cycle. **[3]**

11) Define biodiversity, and explain why high biodiversity supports ecosystem stability. **[2]**

12) Explain how a growing human population and rising living standards can lead to more pollution, giving one example each of water, air, and land pollution. **[3]**

13) Peat bogs are sometimes destroyed to produce garden compost. Explain two ways this reduces biodiversity or contributes to climate change. **[3]**

14) Give two reasons large-scale tropical deforestation happens, and explain one environmental consequence of it. **[3]**

15) Describe how rising carbon dioxide and methane levels contribute to global warming, and give one biological consequence of global warming. **[3]**

16) Describe four measures used to help protect biodiversity. **[4]**

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