

Biology 4.6 Ecology

Content	RAG
Describe classification and taxonomic ranks (KPCOFGS). Describe the work of Linnaeus and Woese.	
Understand and use the terms ecosystem, community, competition, habitat, interdependence, stable community	
Describe factors that affect the survival of organisms in their habitat.	
Describe competition in plants and animals.	
Name biotic and abiotic factors and explain how they might affect a community	
Describe how to carry out random sampling of organisms using a quadrat and transect.	
Calculate mean, median, mode and range.	
Describe how adaptations help organisms to survive.	
Define the term extremophile and give examples.	
Explain what a food chain shows, know key terms and identify trophic levels.	
Interpret and explain population curves.	
Explain why plants only transfer about 1% of incident light for photosynthesis.	
Construct pyramids of biomass from data and calculate efficiency within a food chain/pyramid.	
Explain the water cycle, carbon cycle and decay cycle.	
Describe the factors which affect the rate of decay.	
Explain the difference between aerobic and anaerobic decay & define the term biogas.	
Define the term biodiversity & describe how humans have an effect. Describe programmes introduced to maintain biodiversity.	
Describe the impact of humans on the environment with regards to: waste management, air pollution, land pollution, water pollution, land use, deforestation and destruction of peat bogs.	
Explain the terms greenhouse effect and global warming.	
Explain how factors affect food production and food security locally and globally, including farming, fishing and biotechnology.	