

## 2.D-E Exam Expectations

DEFINE homeotic genes, segmentation genes, egg polarity genes  
DEFINE pheromone  
DEFINE biomagnification  
STATE the temperature at which water is the most dense  
IDENTIFY an example of the competitive exclusion principle  
IDENTIFY different mechanisms of thermoregulation in terrestrial mammals  
IDENTIFY digestive processes that benefit from increased surface area  
LIST functions of the mammalian kidney  
LIST the steps of the inflammatory response  
LIST the steps in the activation of cytotoxic T cells  
LIST detrimental effects of deforestation and industrialized agriculture  
OUTLINE endotherms and ectotherms  
OUTLINE natural life histories  
OUTLINE gross and net primary production  
OUTLINE the characteristics of molecules that easily pass through plasma membranes  
OUTLINE the competitive exclusion principle  
OUTLINE global and geographical patterns for species richness  
OUTLINE the direction of blood flow in arteries and veins  
OUTLINE eutrophication  
OUTLINE cellular differentiation and its role in development  
DESCRIBE Jenner's discovery and production of the small pox vaccine  
DESCRIBE the vaporization of water  
DESCRIBE the roles of disturbances in an ecological community  
COMPARE gross and net primary production  
COMPARE the different types of symbioses found in a ecological community  
COMPARE keystone and dominant species  
COMPARE trade-offs between gastrovascular cavities and complete digestive cavities  
SUGGEST how nature might select for different life histories  
DISCUSS behaviors that are learned and those that are genetically based  
DISCUSS how nature could select for certain behaviors like it does for physical traits  
EXPLAIN why the pyramids of biomass, numbers and energy have broad bases  
EXPLAIN density dependent inhibition  
EXPLAIN water's high specific heat  
EXPLAIN the clonal selection theory  
EXPLAIN how cows can live off grass alone  
EXPLAIN how the counter current mechanism of blood flow can regulate body temp.  
DEDUCE the biomass of a certain trophic level when given the biomass of another trophic level  
DEDUCE the relative extinction rate of an island compared to others based on its size and distance from the mainland  
DEDUCE the relationships between predators & prey using the logistic growth equation  
PREDICT the effect on lowering ecosystem diversity on biodiversity  
EVALUATE statements about global warming as facts or assumptions  
DETERMINE the type of symbiotic relationship described in a written passage  
DETERMINE the dominant and keystone species from a written passage  
ANALYZE the logistic growth equation to DEDUCE relationships among the different

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variables in the equation

ANALYZE a molecular model of a solute particle to DEDUCE its charge

ANALYZE a graph of antigen exposure to DEDUCE antibody production