Assessment Schedule – 2006

Biology: Describe diversity in the structure and function of animals (90462)

Evidence Statement

Question	Achievement	Achievement with Merit	Achievement with Excellence
1	A description of "what the structure is and how (function) it works" to show diversity in relation to a process in THREE named animal groups. A1, A2, A3. *Evidence may come from either parts (1) OR (2).* *Describe* requires the candidate to define, name, draw annotated diagrams, give characteristics of, or an account of. **Transport:** What the structure is and how it works, eg: • open circulatory system • closed single system • closed double system. (Description of function, eg valves to prevent backward flow.) **Gas Exchange:** What the structure is and how it works, eg: • tracheal system, • gills • lung system. counter current vascular system	Explanation gives reasons for adaptations in relation to a process of TWO named animal groups. *Evidence may come from either parts (1) OR (2).* *Explain* requires the candidate to provide a reason as to how or why something occurs. **Transport:** Reasons for adaptation eg: • activity / energy requirements • pressure / gravity • size of animal / blood volume. **Gas Exchange:** Reasons for adaptation, eg: • surface area • moist exchange surfaces • pressure • efficiency of extraction • Insects, gas exchange system separate to transport. maintaining a concentration gradient	A discussion of the **REASONS FOR DIVERSITY,** in relation to a process, to enable animal groups to **live and survive in their environment**. Diversity in TWO animal groups. *Evidence may come from either parts (1) OR (2).* *Discuss* requires the candidate to show understanding by linking biological ideas in relation to the animal groups. **Transport:** Eg relates the efficiency of closed double circulatory system and diversity of size to more restricted size of an animal with open circulatory system. **Gas Exchange:** Eg raw materials available from different mediums, oxygen from air or water. Animal groups show diversity to solve requirements for metabolism and size, include medium.

	Nutrition: What the structure is and how it works, eg: • carnivore • herbivore – foregut • herbivore – hindgut • beaks / teeth / insect mouthpart omivore	**Nutrition:** Reasons for adaptation eg: • Energy requirements • Food types • Beaks / no teeth / weight / crop instead. Teeth, types match diet	**Nutrition:** Eg diversity related to types of food / body shape or size / energy requirements, the way the nutrients are obtained and absorbed.
	Excretion: What the structure is and how it works, eg: • an invertebrate system • an aquatic system • a terrestrial system • products.	**Excretion:** Reasons for adaptation, eg: • excretory products • energy efficiency. Method to maintain water balance.	**Excretion:** Eg, diversity shown is related to the excretion product / energy cost of in the environment, maintaining water balance
	Support and movement: What the structure is and how it works, eg: • hydrostatic system • exoskeleton • endoskeleton • flight • swimming.	**Support and movement:** Reasons for adaptation eg skeleton type adapted for environment.	**Support and movement:** Eg diversity of structure and function related to living in the environment Eg endoskeletons; bones, wings adapted for flight, limitation of size for terrestrial animals with exoskeletons.
	Sensitivity and co-ordination: What the structure is and how it works, eg: • correlation to body symmetry, eg echinoderm, insect, squid • vertebrate central NS.	**Sensitivity and co-ordination:** Reasons for adaptation, eg: • vertebrate NS highly centralised and encephalised – animals able to grow larger • invertebrate NS related to body symmetry.	**Sensitivity and co-ordination:** Eg, diversity related to survival in environment and interaction with endocrine system to maintain homeostasis.
	Reproduction: What the structure is and how it works, eg: • asexual – parthenogenesis • sexual – fertilization – internal - external • complex reproductive systems, eg insects.	**Reproduction:** Reasons for adaptation Eg, egg laying : live young.	**Reproduction:** Eg, diversity related to number of offspring produced and survival in environment.

Judgement Statement

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Achievement	Achievement with Merit	Achievement with Excellence
Structure and function of THREE named animal groups described. Minimum of A1 + A2 + A3	Structure and function of THREE named animal groups described, and reasons for adaptations linked to structure and function for TWO animals. Minimum of 2 × M *plus* A1 + A2 + A3	Structure and function of THREE named animal groups described, reasons for adaptations linked to structure and function for TWO animals, *and* discussion of diversity to survive in environments. Minimum of 1 × E *plus* 2 × M *plus* A1 + A2 + A3