Assessment Schedule – 2005

Science: Describe the factors and processes involved in the evolution of New Zealand's plants and animals (90772)

Evidence Statement

Q	Achievement	Achievement with Merit	Achievement with Excellence
1	A, F, E, C, D. (Three or more correct.)		
2(a)	Break up of Gondwanaland / formation of Tasman Sea / spreading plate boundary.		
2(b)	New Zealand got subset of life from Gondwana at that time **OR** Founder effect.	New Zealand got a subset of plants **OR** founder effect of animals at that time period **AND** these plants / animals isolated **OR** evolved differently. (ONE link required.)	New Zealand got a subset of vegetation and animals at that time period **AND** these plants / animals isolated **AND** evolved differently. (BOTH links required.)
2(c)	Isolated populations / bottlenecks / genetic drift / adaptive radiation / founder effect.	Isolated populations / bottlenecks / genetic drift etc **AND** link to different evolving populations.	
3(a)	Biological factor.		
3(b)	Dull colours / pollen ready at dusk / strong scent / small flowers. (ONE required.)		
3(c)		Relationship of 3(b) to nocturnal / olfactory behaviour of moths.	
4(a)	Only arrived 13 ma.	Only arrived 13 ma **AND** NZ broke from Gondwanaland 85 ma.	
4(b)	Founder populations.	A Founder population settled into NZ **AND / OR** was subjected to different selection pressures **AND / OR** climate changes (ice ages) **OR** mountain building (Kaikoura Orogeny) formed different environments for fern to move into. (ONE link required.)	A Founder population settled into NZ **AND** was subjected to different selection pressures **AND** climate changes (ice ages) **OR** mountain building (Kaikoura Orogeny) formed different environments for fern to move into. (TWO links required.)
5(a)	Any Gondwana species eg kiwi, tuatara, weta, etc (not a flight bird or bat).		
5(b)	Endemic mammals not found in New Zealand **OR** Not enough time to evolve.	Mammals not found **AND** therefore evolution never selected for survival features related to mammalian competition **OR** time factor.	

Q	Achievement	Achievement with Merit	Achievement with Excellence
6	One species will change to become the new species while **OR** the common ancestor staying in the same environment, will stay essentially the same.	One species will change to become the new species while the common ancestor, staying in the same environment, will stay essentially the same **AND** Species evolve from a common ancestor to fill a new niche that the environment creates **OR** over time the species will change due to different selection pressures **OR** due to different random mutations they will become genetically different.	One species will change to become the new species while the common ancestor, staying in the same environment, will stay essentially the same **AND** Species evolve from a common ancestor to fill a new niche that the environment creates **AND** over time the species will change due to different selection pressures **AND** due to different random mutations they will become genetically different.

Judgement Statement

Achievement	Achievement with Merit	Achievement with Excellence
SIX opportunities answered at Achievement level or higher. 6 × A	SEVEN opportunities answered with at least FOUR at Merit level or higher. 4 × M *plus* 3 × A	EIGHT opportunities answered with TWO at Excellence level and at least THREE at Merit level or higher. 2 × E *plus* 3 × M *plus* 3 × A