NATURE®

NAME: _____

DATE: _____

Living Environment Regents Exam Questions - Answer Key

From August 2006 Living Environment Regents exam:

68 Allow 1 credit for identifying *one* bird that would most likely compete for food with the large tree finch and supporting the answer. Acceptable responses include, but are not limited to:

— Woodpecker finch: they use the same food resources
— Small tree finch: both eat mainly animal food

69 Allow a maximum of 2 credits, 1 credit for identifying *one* trait, other than beak characteristics, that would contribute to the survival of a finch species and 1 credit for stating *one* way this trait contributes to the success of this species.

Examples of 2-credit responses:

— Faster *or* more aggressive birds get to seeds faster.
— Larger *or* stronger birds compete successfully.
— Coordination helps an individual avoid predators.

From January 2007 Living Environment Regents Exam:

72 Allow 1 credit for describing *one* change in beak characteristics that would most likely occur in the medium ground finch population after many generations when an environmental change results in a permanent shortage of small seeds. Acceptable responses include, but are not limited to:

— Beaks would be thicker.
— Birds with larger, thicker beaks would become more common in the population than those with the original beak characteristics.

73 Allow a maximum of 3 credits for explaining the long-term change in beak characteristics, allocated as follows:

• Allow 1 credit for including the concept of competition.
• Allow 1 credit for including the concept of survival of the fittest.
• Allow 1 credit for including the concept of inheritance.

Example of a 3-credit response:

Competition for food would increase as small seeds became scarce. Birds with larger, thicker beaks would have a better chance of surviving when the seeds were larger and tougher to crack. Birds with normal thickness beaks would be less likely to survive. Reproduction of the surviving birds, many with the larger, thicker beaks, would produce more offspring inheriting the better adapted beak type. Over time, this would lead to a large proportion of the population having the thicker beaks.