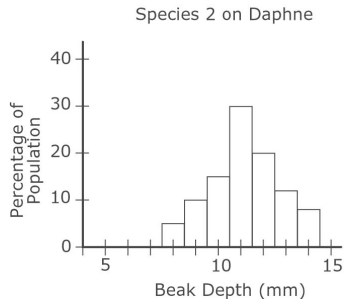
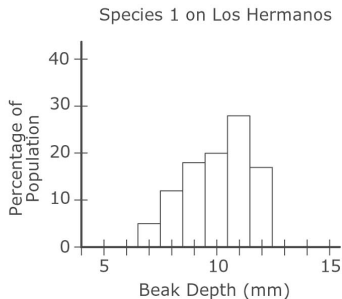


The Galapagos Islands contain a number of different species of finches (birds) that are thought to have developed from one species. Some species of finches eat certain types of seeds depending on their beak depth. The diagram below shows the head of one species of finch and its beak depth.



Some of the islands have only one species living on them, while other islands have more than one species. Species 1 lives on Los Hermanos Island. Species 2 lives on Daphne Island. The two graphs below show the percentage of the population with different beak depths for each of the two species.



S032706_2

- B. A wide variety of seeds exist on the islands, and both Species 1 and Species 2 eat seeds. Based on the beak depths of the two finch species, what would you conclude about the size of seeds that each species eats?

Questions for Galapagos Islands continue.



TIMSS 2003

Content Domain

Life Science

Main Topic

Structure, function and life processes in organisms

Cognitive Domain

Conceptual Understanding

Key

See scoring guide

- B. A wide variety of seeds exist on the islands, and both Species 1 and Species 2 eat seeds. Based on the beak depths of the two finch species, what would you conclude about the size of seeds that each species eats?

S032706_2

Questions for Galapagos Islands continue. 

B: Codes for Types of Seeds Eaten

Note: The response to Part B must be consistent with the comparison of beak sizes given in Part A in order to receive credit. Correct responses can refer explicitly to comparisons of the two “species” (Codes 10 or 11) or more generally to a comparison of “birds” of different sizes within or across species (Code 12). It is possible that a correct conclusion may be drawn based on an incorrect response to Part A.

Code	Response	Item: S032706B
	Correct Response	
10	States that the two species eat the same (similar) types of seeds. [Response to A indicates that the two species have the same or similar size beaks.]	
11	States that Species 2 eats larger seeds than Species 1. [Response to A indicates that Species 2 is larger.]	
12	States only that birds (finches) with larger beaks eat larger seeds (or similar). [No explicit comparison of the two species.]	
19	Other correct	
	Incorrect Response	
70	States that the two species eat the same (similar) types of seeds, but this conclusion is inconsistent with the response given in Part A.	
71	States that one species eats larger seeds than the other, but this conclusion is inconsistent with the response given in Part A.	
79	Other incorrect (including crossed out/erased, stray marks, illegible, or off task)	
	Nonresponse	
99	Blank	