ESTIMATING EVOLUTIONARY CHANGE
ZOOLOGY LAB

PURPOSE: To investigate environmental forces leading to evolutionary change.

HYPOTHESIS:

MATERIALS:

1- Eight photos of birds.
2- Metric ruler
3- Paper and writing utensil

PROCEDURE:

1- Measure the length and width of each bird’s beak and record on a data chart.
2- Based on visual examination and measurements, hypothesize food preferences for each bird and record preferences on the data chart.
3- Using experience and educated guesses, try to correctly match each bird to it’s name and record on the chart.

Raven, Parrot, Eagle, American avocet, Flamingo, Pelican, Cardinal, Pelican

ANALYSIS:

1- Based on beak characteristics, which birds would you place in close groups? Give a reason for your choice.
2- What food eating group did you place the flamingo, avocet and anhinga in? What characteristic did you use? What reasoning could you give for the explanation?
3- What similarities in beak structure do the parrot and eagle have? Do they have the same food requirements? What part of the birds not seen may explain the differences and why?
4- Give a general statement which may explain how food preferences helped to direct evolutionary trends in terms of birds’ beaks. Use this statement to suggest a hypothesis statement that may be testable with live birds.
5- Prepare a line graph showing the relationships between the length and width of the birds beaks.