BIRD BEAK ADAPTATION LAB

Names: _____ Period: _____

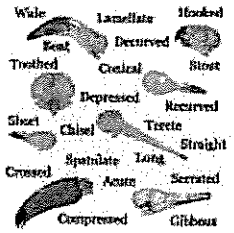
An adaptation is a characteristic that helps a plant or animal survive in its environment. Bird beaks have adapted for many things such as eating, defense, feeding young, gathering nesting materials, building nests, preening, scratching, courting and attacking. The size and shape a beak is specific for the type of food the bird gathers. For example, cardinals have heavy thick bills used to crack seeds, and hummingbirds have thin bills to sip nectar.

RESEARCH QUESTION: Which beak tool will work best for the food source at each station?

PROCEDURE:

Pretend that you are a bird. There are eight different stations that represent different food sources. At each station, there are three different tools that will act as your beak. You will need to determine which beak works best for each type of food.

1. Write down your hypothesis. Which beak do you think will work best for the food source at this station?
2. See how much food (number of pieces or mL of liquid) you can gather in 20 seconds with the first beak. You can collect the food in a cup that represents your bird stomach.
3. Enter the data in the table. Write down how many pieces of food that you gathered. Do this three times and average the three trials.
4. Repeat steps 2 and 3 for the second and third beaks.
5. Rotate through all the stations.



DATA:

HYPOTHESIS #1: I think that _____.

Station # 1 Fish	Beak 1: Tongs	Beak 2: Tweezers	Beak 3: Chopsticks
Trial 1			
Trial 2			
Trial 3			
Average			

GRAPH #1: The average amount of food pieces consumed.

HYPOTHESIS #2: I think that _____.

Station # 2 Nuts/Seeds	Beak 1: Pliers	Beak 2: Tweezers	Beak 3: Clothespin
Trial 1			
Trial 2			
Trial 3			
Average			

GRAPH #2: The average amount of food pieces consumed.

HYPOTHESIS #3: I think that _____.

Station #3 Insects	Beak 1: Pliers	Beak 2: Tweezers	Beak 3: Chopsticks
Trial 1			
Trial 2			
Trial 3			
Average			

GRAPH #3: The average amount of food pieces consumed.

HYPOTHESIS #4: I think that _____.

Station #4 Nectar	Beak 1: Clothes Pin	Beak 2: Dropper	Beak 3: Pipette
Trial 1			
Trial 2			
Trial 3			
Average			

GRAPH #4: The average amount of food pieces consumed.

HYPOTHESIS #5: I think that _____.

Station #5 Worms	Beak 1: Straw	Beak 2: Chopsticks	Beak 3: Clothes Pin
Trial 1			
Trial 2			
Trial 3			
Average			

GRAPH# 5: The average amount of food pieces consumed.

HYPOTHESIS #6: I think that _____.

Station #6 Snails	Beak 1: Tweezers	Beak 2: Clothes Pin	Beak 3: Chopsticks
Trial 1			
Trial 2			
Trial 3			
Average			

GRAPH #6: The average amount of food pieces consumed.

ANALYSIS AND CONCLUSION:

1) Do all birds have the same beak? Why or why not?

2) Which beak worked best for each food source and why?

Nectar:

Fish:

Nuts/Seeds:

Worms:

Insects:

Snails:

3) How do your results for the beak tools compare with your hypotheses? Give possible reasons for the differences.

4) Based on the information you have gathered, describe what a beak that can effectively pick up and crack small seeds might look like.

5) Now that we talked about bird beaks and their adaptations, think about other wild animals. Pick an animal and explain two adaptations that it has for the environment that it lives in.