Name: _____ Date: _____ Grade: _____

BIRD ADAPTATIONS

falcon

WHAT YOU SHOULD KNOW!

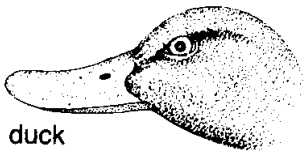
An **adaptation** is a characteristic that helps a plant or animal survive in its environment. Bird beaks have adapted for many things such as eating, defense, feeding young, gathering nesting materials, building nests, preening (cleaning), scratching, and attacking.

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 humming-birds have thin bills to sip nectar.

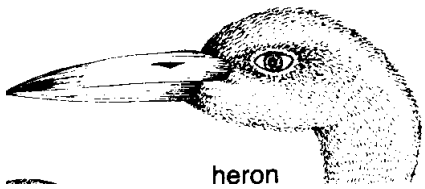
Pretend that you are a bird. There are five different stations that represent different food sources. At each station there are three different tools that will act as your beak. You will need to determine which beak works best for each type of food.

MATERIALS:

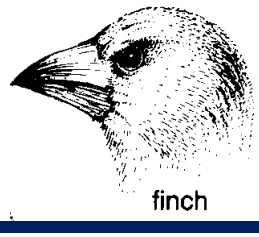
- Tweezers
- Spoons
- Straws
- Timers
- Seeds/beans
- Water
- Food coloring
- Cups
- Grad. Cylinder
- Paper clips
- String
- Popsicle sticks



duck



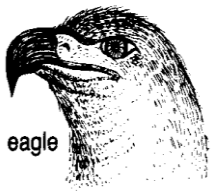
heron



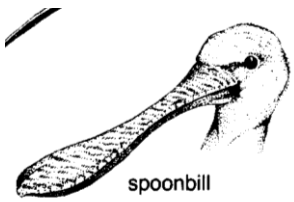
finch

PROCEDURES:

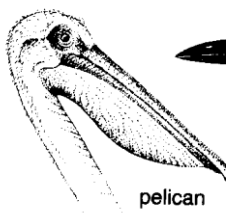
1. Write down your hypothesis for each station (you will have a total of 5)!
2. Using 3 different types of beaks at each station, see how much food you can gather in 15 seconds. Collect your food in a cup, which represents your bird stomach.
3. There will be 3 trials for each beak.
4. Enter your results into the data table and average the 3 trials in you data table.
5. Repeat Steps 2 -4 for the remaining stations.
6. Create a bar graph that shows the average amount of food gathered by the three different types of beaks.
7. Write your conclusion.



eagle



spoonbill



pelican

Hypotheses:

Name: _____

1. The beak that will be most successful at gathering seeds will be _____.
2. The beak that will be most successful at consuming nectar will be _____.
3. The beak that will be most successful at catching fish will be _____.
4. The beak that will be most successful at eating insects will be _____.
5. The beak that will be most successful at collecting sticks will be _____.

DATA:

Hypothesis: _____

SEEDS	Beak 1: Tweezer	Beak 2: Spoon	Beak 3: Straw
Trial 1			
Trial 2			
Trial 3			
Average			

Hypothesis: _____

NECTAR	Beak 1: Tweezer	Beak 2: Spoon	Beak 3: Straw
Trial 1			
Trial 2			
Trial 3			
Average			

Hypothesis: _____

FISH	Beak 1: Tweezer	Beak 2: Spoon	Beak 3: Straw
Trial 1			
Trial 2			
Trial 3			
Average			

Hypothesis: _____

INSECTS	Beak 1: Tweezer	Beak 2: Spoon	Beak 3: Straw
Trial 1			
Trial 2			
Trial 3			
Average			

Hypothesis: _____

STICKS	Beak 1: Tweezer	Beak 2: Spoon	Beak 3: Straw
Trial 1			
Trial 2			
Trial 3			
Average			

Conclusion:

Your conclusion should include the following parts:

- ✓ An introduction sentence stating the name of the lab and a brief description of its purpose.
- ✓ Restatement of all 5 hypotheses
- ✓ Discussion of how your data supported or did not support each of your hypotheses.
  - ❑ Which beak was the best for each type of food?
  - ❑ Which beak was the worst for each type of food?
- ✓ Concluding sentences stating:
  - ❑ Reasons why your hypotheses may not have been true.
  - ❑ What else could you have used to conduct more experiments.
  - ❑ What you learned about adaptations.