Unit: Grade 6 Science Diversity of Life

Title: The Perfect Beak (*Adapted lesson from Pearson 6 Science Textbook)

Objectives:

1)Gr. 6 students will understand that each type of bird eats a specific food that requires a specific beak suited to its food and habitat.

2)Gr. 6 students will learn about different bird beaks as structural adaptations

Timeframe: 2- 45 minute Science classes

Materials: photos of different birds or Pearson Science 6 Textbook pg.56; classroom Budgie; beaks: spoon, tweezers, drinking straw per pair of students; food: marbles, navy beans, toothpicks, gummy worms; plastic cup; graph paper (computer access with graphing optional); stopwatches or clock for timing. ***Can substitute other food materials: popcorn kernels, lentils, buttons, etc.**

Procedures:

1)**Motivational Set**: Teacher (T.) to show different photos of birds with various beaks from varied habitats. T. to ask students to identify, if possible, the various birds. Then, T. will ask students to try to identify what habitat each bird comes from, and what food each bird eats.

2)T. get the class to focus on classroom Budgie. T. to ask students, "What type of habitat does the Budgie come from? What type of beak does the Budgie have? How is the Budgie's beak similar/different from any of the photos displayed?

*optional: Students could sketch each type of bird beak including classroom budgie. Then students could guess what type of food each bird eats

3)T. to ask students which bird beaks look similar to each of the experiment beak replicas: spoon – duck bill; tweezers – kingfisher beak; drinking straw – hummingbird bill.

4)Student pairs collect one of each type of beak and a sample of each type of food and bring them back to their workplace.

5)With a partner, look closely at the different beaks. Place the food in separate piles. One partner will be the bird and use one type of beak, the other partner will be the timer.

6)When the timer says "Go", try to put as much of one type of food (ie: marbles) as you can into the plastic cup.

7)After 15 sec. the timer says "Stop." Count up how many items are in your cup and record them in a table similar to the one below:

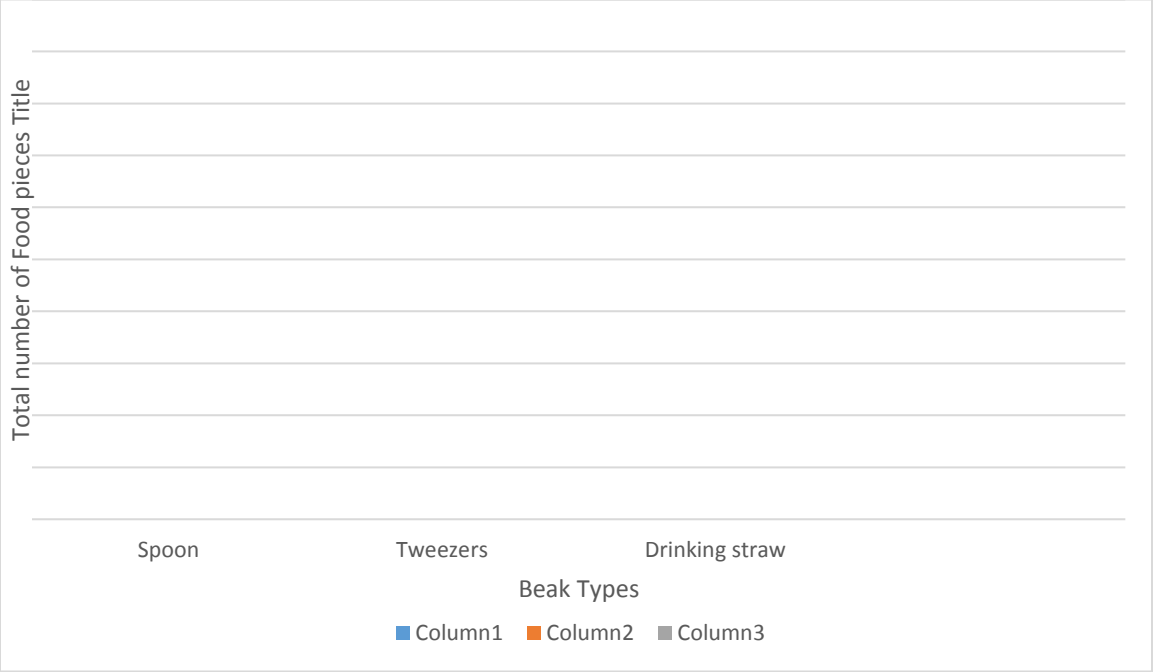
Food	Spoon	Tweezers	Drinking straw
Marbles			
Gummy worms			
Navy beans			
Toothpicks			

8)Change places with your partner and repeat food collection procedures from above using a different beak. Record the results.

9)Repeat procedures for each type of beak for each of the food samples. Record results in your table.

10)Once students have completed the food collection trials, students should analyze their table and construct a Bar graph of their results similar to the one below. The beaks should be on the x-axis and food totals should be on the y-axis. Students should make sure that they label and make a title for their graph. Each food should have a different colour (ie: marbles – green)

Effect of Beak Shape on Food Gathering



Food:

Marbles- green

Gummy worms – purple

Navy beans – red

Toothpicks – yellow

11)**Conclusion:** Students must reflect upon their table and graph to answer the following questions:

a)How does the bird's beak help it collect food?

b)What are some other purposes that the bird's beak could be used for?

c)What other adaptations of each of the birds can you see?

d)How are an animal's adaptations related to where it lives?

Assessment: anecdotal notes on students' answers and observations during food collection trials.