

Name: _____ Period: _____

DUE DATE: _____

7th Grade Science PBA

BATTLE OF THE BEAKS

Lab & Rubric

Name: _____

Teacher: _____

Date: _____

Title of Work: _____

Criteria				Points
	Below Standard	Approaching Independent, Dependent Variables and the Hypothesis are correct with two errors.	Meets Independent, Dependent Variables and the Hypothesis are correct with only one error.	Exceeds Independent Variable is the variable that I, the scientist, is changing in the experiment. The Dependent Variable is measurable and dependent on the independent variable. The hypothesis is correctly formatted including an if/then statement.
Hypothesis/ Variables	Independent, Dependent Variables and the Hypothesis are correct with three errors.			/15
Data Chart	24 or fewer data points	25-37 data points	38-44 data points	/10
Analysis Chart	19 or fewer data points	20-24 data points	25-29 data points	/10
Bar Graph	Color coded accurately, with correct scale and sixteen bar graphs, with 7 or more errors.	Color coded accurately, with correct scale and sixteen bar graphs, with 4-6 errors.	Color coded accurately, with correct scale and sixteen bar graphs, with 1-3 errors.	/20
Analysis Questions	Answers use no data and are not thorough or accurate.	Answers use little data and are somewhat thorough and accurate.	Answers use supportive evidence and are somewhat thorough and accurate.	/21
Analysis Essay	At least three terms are explained in detail and examples used contain little supportive evidence with collected data.	At least four terms are explained in detail and examples used contain some supportive evidence with collected data.	At least five terms are explained in detail and examples used contain some supportive evidence with collected data.	/25

Teacher Comments:

PBA: BATTLE OF THE BEAKS

Name _____ Period _____

Group Members _____

BACKGROUND

Woolyboogers usually live in an environment with a wide variety of food types, and the species shows a wide variation in the types of beaks the individuals have. One year, several groups of woolyboogers are blown off their normal migration path by a big storm, and land on several islands. Unlike their normal, diverse environment, each island has very specific types of vegetation and small animals. This lab will investigate the effect of the new environment on each group of woolyboogers.

HYPOTHESIS

Independent variable (5) _____

Dependent variable (5) _____

Hypothesis (5) _____

PROCEDURE

1 pie pan 1 spoon 1 clothespin 1 tweezers 1 toothpick
 20 rubber bands 20 beans 20 paperclips 4 plastic cups 20 mini marshmallows

- Place the rubber bands, marshmallows, paperclips and beans (food) each in its own pie pan (environment). Place the pie pan in the middle of the table. Each table will represent a different island with a different type of food available. Place the cup (stomach) about thirty centimeters from the pie pan.
- Each student will play the part of one variety of woolybooger. Use the "mouth" to take food from the environment and place it in the "stomach"-all four will be taking food at the same time in competition. After thirty seconds, count the food and record the data in the table below.
- Repeat the process two more times.

AMOUNT OF FOOD BY BEAK TYPE (10)

Type of Beak

food type	spoon			tweezers			clothespin			toothpick		
	1	2	3	1	2	3	1	2	3	1	2	3
rubber bands (worms)												
marshmallows (beetles)												
beans (seeds)												
paper clips (fish)												

ANALYSIS:

Figure out your individual average and enter the value in the chart below under the "I". You will be completing only one column of the table above with your numbers. Share the data with your table mates to complete all four columns. You will give that data to your teacher and as a class you will figure out the class average for each island and beak type. Enter this value under the "C".

AVERAGE AMOUNT OF FOOD PER BEAK TYPE (10)

Averages

Beak Type → Food Type	Spoon		Tweezers		Clothespin		Toothpick	
	I	C	I	C	I	C	I	C
rubber bands (worms)								
Marshmallows (beetles)								
Beans (seeds)								
paper clips (fish)								

