WildCam Gorongosa Activity

Date:_____

Name:_____ Partner:_____

Background Information

Gorongosa National Park is a 1,570-square-mile protected area in Mozambique. Lion researcher Paola Bouley and her team use motion-detecting trail cameras to learn more about Gorongosa's lions. Lions are not the only animal captured by these cameras. The photos provide valuable information on a variety of different animals, including numbers to help estimate populations, behaviors, and interactions with other animals. The public has identified animals and collected data from the photos on a citizen science website called WildCam Gorongosa. The WildCam Lab is a part of WildCam Gorongosa where you can view trail camera data on a map, filter, and download the data to investigate scientific questions.

In this activity, you will learn firsthand what it is like to be an ecologist studying Gorongosa's wildlife. You will use actual trail camera data to generate a testable question, form a hypothesis and prediction, and choose and analyze the appropriate data to answer your question from the WildCam Lab. The results of your investigation may contribute to the conservation effort in Gorongosa National Park.

Procedures and Questions

Part 1: Making Observations and Asking Questions

1. Visit WildCam Gorongosa (www.wildcamgorongosa.org). Click the "Get Started" button and read through the tutorial.

2. With a partner, spend 10 minutes observing and identifying animals. Record your observations and questions in the table on the next page.

As you work, consider the following questions and make notes in the areas below:

What do you notice?

What do you wonder?

Areas to look for Information: Check out the bottom of the picture. Click on the (i) button. Click on the animal's name. Click on the field guide inside the animal's popup window.

OBSERVATIONS	QUESTIONS

Fragrant Pheromones: Gorongosa Activity

Part 2: Testable Questions

A good research question is one that can be answered by performing an experiment, collecting data, or analyzing existing data. In order to determine which questions you can answer, you need to know which kinds of data can be gathered from the trail camera photos.

3. With your partner, brainstorm which kinds of data you can gather from the trail camera photos (HINT: Look at the website pictures and questions you just spent time on).

Write 2 testable questions (or more) in the spaces below:

A.

B.

Place a star by the testable question your group likes best.

The process of science is iterative and adaptable. The first step in scientific inquiry typically consists of making observations about the natural world. Observations can inspire questions about phenomena to gain understanding about how nature works. For scientists to answer a question, it must be *testable*, meaning that it could be answered by designing an experiment and/or collecting data.

4. (Note: This question is answered and filled in by another group.) Exchange papers with another group. Read through the testable question the other group starred above. Assess whether their question is testable, given the types of data you could collect from the trail camera images and based on the list your group generated.

Group 2 Feedback: This question (is/is not) testable. If so, what information would you include in your analysis from the images? If not, what additional data would you need to test this question?

_____

_____

_____

_____

_____

Name/Signature, Student 1 Group 2 _____

Name/Signature, Student 2 Group 2 _____

5a. The two data tables below show some of the types of data that can be collected about an image using the WildCam database. Which of the research questions you wrote for question four, above, is potentially testable using this data? Highlight or circle each question you think you could answer through experimentation.

Human Type	Water Type	Vegetation Type	Distance Humans (m)	Distance Water (m)	Longitude	Latitude	Camera
Road	River	Floodplain Grassland	534	3786	34.4832	-18.9422	D73
Road	River	Mixed Savanna & Woodland	1195	195	34.3602	-18.9306	C01

Camera	Date (UTC)	Month	Year	Season	Time Period	Species	# of Animals	Are Young Present?	Do you See Horns?
D73	11/2/14	NOV	2014	Dry-Wet Oct-Dec	Night 1736-0556	Aardvark	1	------	------
C01	12/5/13	DEC	2013	Dry-Wet Oct-Dec	Day 0623-1709	Impala	1	False	0

5b. In the box below, write one (1) more, final testable question using the data in the tables above, NOT using any of your testable questions you have already wrote above.

Adapted from: Howard Hughes Medical Institute. (2016, March 14). Scientific inquiry using WildCam Gorongosa: Student worksheet. Retrieved from http://media.hhmi.org/biointeractive/activities/wildcam/inquiry/WildCam_Inquiry_Student.pdf?download=true&_ga=1.256284879.599851589.1466440285