

Measuring Frequency

This lab is going to make you get outside! No inside observations allowed here. This lab may either be done during one day or over the entire week. You will learn how to measure frequency in this lab. Remember- Frequency is how many times something occurs in a given time period.

Directions:

1. Select something that you can observe outside. Make it something that happens or can be observed more than once every five minutes – but still small enough to be counted. For example, if you live on a moderately busy street – you could count the number of cars. If you live in the country, perhaps the number of birds you see fly by.
2. Go outside for 5 minutes and record how many of your events happen on your log paper. Repeat this 10 times. You may do this in one day or over the course of a few days.
3. Once you have completed your observations, create a graph of your results. You may create a bar or line graph with the observation number (e.g. observation 1, observation 2) on the X axis and the number of events recorded on the Y axis (see below).
4. Calculate the frequency of your event for the entire observation period.
5. Answer the questions in your lab book

Supply List

- Pencil

Measuring Frequency – Lab Book

Observations:

State the date and time for Observation 1 _____

State the date and time for Observation 10 _____

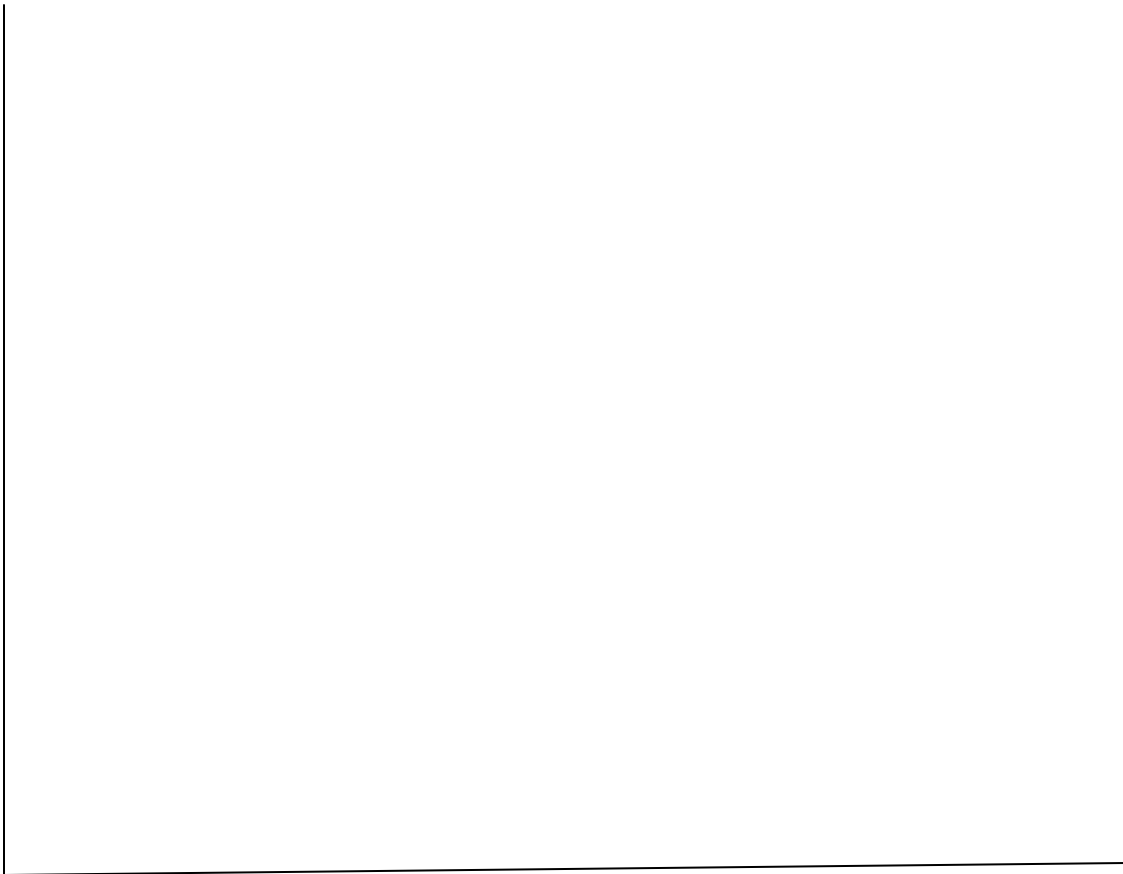
Observation Number	Number of Observations	What was observed?
Observation 1		
Observation 2		
Observation 3		
Observation 4		
Observation 5		
Observation 6		
Observation 7		
Observation 8		
Observation 9		
Observation 10		

Measuring Frequency – Lab Book

Graph:

X axis = Observation Point (e.g. OB#1, OB#2, etc.)

Y axis = number of things observed (e.g., 5 cars, 7 birds, etc.)



Measuring Frequency – Lab Book

Lab Questions:

1. Which observation point had the most occurrences?
2. Which observation point had the least amount of occurrences?
3. What is the mean of the number of occurrences for all 10 observations?
4. What is the median of the number of occurrences for all 10 observations?
5. Calculate how long your period of measurement was (Hint: Observation Date/Time 10 – Observation Date/Time 1).
6. What is the frequency of your observed occurrence over your entire period of measurement? (Hint: Frequency = Number of Occurrences ÷ Time Observed) Be careful! Time Observed does not equal period of measurement!
7. State your frequency calculation in words.

*SOLUTION EXAMPLE PROVIDED IN TEACHER ANSWER GUIDE