# **The Scientific Method and Crickets**

http://webapp.gccaz.edu/academic/biology/scientific\_method/

#### **Observations at White Tank Mountains**

Date	Time	Chirps	
3/21	6 am	slow	
6/21	2 pm	fast	
9/21	8 pm	medium	

### **Research Question:**

Is there a single factor that affects chirping rates in crickets?

#### What are 7 research facts discovered about crickets?

POSSIBLE HYPOTHESIS- If I increase the	, <b>then</b> the rate of
7.	
6.	
5.	
4.	
3.	
2.	
1.	

cricket chirping will \_\_\_\_\_.

# The laboratory conditions are set up to recreate the field conditions of your last visit to the White Tanks Mountains as much as possible.

Air Temperature	25 C	
Atmospheric Pressure	760 mm	
Humidity	15%	
Number of crickets nearby	5	
Wind speed	2 m/sec	
Cricket chirps	148 chirps/min	

For each variable, you must do three (3) different trials varying the value of your independent variable each time representing the low, medium and high ends of the range that they give you. For example, if you test wind speed, you could do 0 m/sec, 3 m/sec and 7 m/sec. Fill in your values below and then repeat the process testing for each of the 5 variables given.

	Air Temperature	Atmospheric Pressure	Humidity	Number of crickets nearby	Wind Speed
	Your value-# of chirps	Your value-# of chirps	Your value-# of chirps	Your value-# of chirps	Your value-# of chirps
Trial 1-Low	-	-	-	-	-
Trial 2-Med	-	-	-	-	-
Trial 3-High	-	-	-	-	-
Did it affect the rate of chirps?					
Y or N					

### Low, Medium and High Range Values

So, given the data above, what is your conclusion? Provide <u>QUANTITATIVE DATA</u> that supports your conclusion.

Restate your hypothesis-

Was your hypothesis correct-

What data supports or disproves your hypothesis-