

# **The Scientific Method with Dr. Bunsen Honeydew and Beaker**

<http://www.youtube.com/watch?v=8Xg4bIpuvRw&feature=related>



**The SCIENTIFIC METHOD is investigation process made up of 5 basic steps.**

**Scientists and non-scientists use this method to solve a problem or answer a question.**



# **The SCIENTIFIC METHOD: 5 Basic Steps**

 **Question**

 **Hypothesis**

 **Experiment**

 **Data**

 **Conclusion**



# Problem/Question:

**Develop a question or problem that can be solved through experimentation.**



# Formulate a Hypothesis:

**Predict a possible answer to the problem or question.**

**Example: If soil temperatures rise, then plant growth will increase.**



# Experiment:



**Develop and follow a **procedure**.**

**Include a detailed **materials list**.**

**The outcome must be **measurable** (quantifiable).**

# Data:

**Modify the procedure if needed.**

**Confirm the results by retesting.**

**Include tables, graphs, and  
photographs.**



# Conclusion:

**Include a statement that **accepts** or **rejects** the hypothesis.**

**Make recommendations for further study and possible improvements to the procedure.**





**Let's put our knowledge of the Scientific Method to a realistic example that includes some of the terms you'll be needing to use and understand.**





**Dr. Bunsen Honeydew has OBSERVED that Beaker has been sleeping more than usual. He knows that winter is approaching and that amount of sunlight present each day is decreasing. He is unsure if the lack of light is affecting Beaker's sleep pattern.**

## **Problem/Question:**

**Does the amount of sunlight affect the length of Beaker's sleep?**



# Writing a Hypothesis:

**IF...independent variable (what you changed),**  
**THEN ... dependent variable**  
**(what changed because of what you did).**

## Dr. Honeydew's Hypothesis:

**If** the amount of light is decreased,  
**then** Beaker's length of sleep will increase.



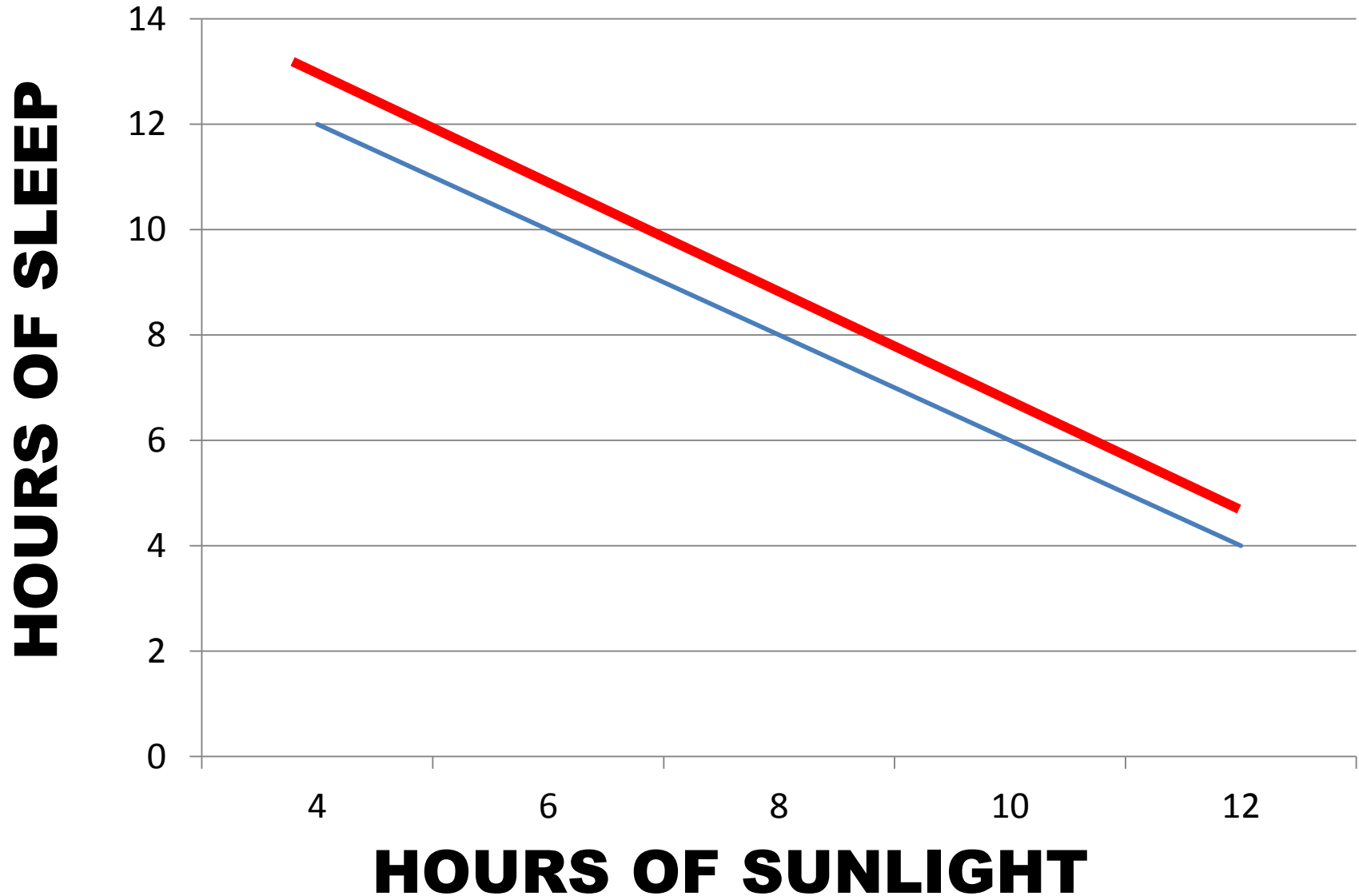
# Experiment:

**Select a lab group.**

**In your group propose an experiment to test Dr. Honeydew's HYPOTHESIS.**

**Make sure you include the steps and any materials you would need.**

# Dr. Honeydew's Data:



# **Conclusion:**

**With you lab group  
write a conclusion.**

**Be prepared to share  
it with the rest of the  
class.**

**Do you accept or reject  
Dr. Bunsen's hypothesis?**





# THE OLD DRAWING BOARD

- 1.    
- 2.    
- 3.    
- 4.    
- 5.    
- 6.    
- 7.    
- 8.    
- F.    

## MUPPET LABS FX DEPARTMENT

CHIEF TESTER: DR. B. HONEYDEW  
CHIEF VICTIM: BEAKER

SAFETY FIRST  
0 DAYS SINCE LAST ACCIDENT  
0 HOURS SINCE LAST ACCIDENT  
0 MINUTES SINCE LAST ACCIDENT  
0 SECONDS SINCE LAST ACCIDENT

EMPLOYEE OF  
THE MONTH



BIGGER, BETTER, LOUDER, MORE PAINFUL

**CAUTION**  
CONTENTS UNDER  
EXTREME PRESSURE

**DANGER**  
HAZARDOUS  
S

FX GENERATOR 9000

*by Little Winkles*

