

# **BIG QUESTION #1 WHAT IS BIOLOGY?**

## **Sample Activity Investigation – “Using your head”**

### **Question:**

**What are the factors that influence head size?**

### **Method:**

**Use string to measure cranium circumferences – hat size and maximum circumference. Tabulate the data from all groups. Compute descriptive statistics. Create a graphical representation of the data.**

### **Class discussion:**

**What are the natural forces and other factors that determine head size (proximate or ultimate causes)? What role might Darwinian evolution play?**

### **Assessment:**

**Write a report that includes the following:**

- **The Point**
- **The Methods**
- **The Results**
- **What You Know Now**
- **Tidbits**

### **Extended Investigations:**

**Collect data about human body relationships. Repeat the above analysis.**

**Rubric for “Big Questions”  
Report Component of the Big Question**

**The Results**

**Include graphs and data tables –**

- **Decide what type of graph(s) to create. (Scatter plot, bar graph, pie chart, etc.)**
- **Label the graphs and units of measurement.**
- **Include a title for each graph and table.**

**Analyze and interpret your results –**

- **Use the graph(s) to make predictions and draw conclusions.**
- **Assess the limitations of the methods employed to gather the data.**
- **Write several sentences that explain the quantitative data show in the graphs and tables.**