

## **Twin Traits**

### **Experiment Design using the Scientific Method**

- The experiment should begin with a question to be answered.  
*Example: Is musical ability determined by nature or nurture?*
  
- The experimenters should form a hypothesis based on knowledge and/or experience.  
*Example: Musical ability is determined by nature.*
  
- The experiment should be set up so that there is only one variable. That is all conditions must be the same except for the one variable the experiment is designed to test.  
*Example: In the case of twins, we know that each twin has the exact same genetic makeup or “nature,” therefore; the only variable is environment or “nurture.”*
  
- The experiments should have a control.  
*Example: In the case of a twin study, the “experiment” might be a musically talented twin who was raised by musically talented parents. The “control” might be the other twin raised by parents who are not musically talented.*
  
- The results of just one experiment are rarely considered sufficient. An experiment must be repeated many times before the results can be taken seriously.