Cleaning Pennies:

A controlled Experiment is one in which only one variable is tested at a time. In order to perform a good experiment it is best to control as many variables as possible in order to isolate the one you are testing for.

Which solution will clean pennies the best?

Solutions:

Soap and water Ketchup

Coke Vinegar Water

Observations: _____

(Need to record observations of penny so you can show any type of change)

1. Create a hypothesis that identifies which solution will clean the pennies the best:

(Remember a hypothesis has to be a testable statement.)

Hypothesis: _____

2. Identify 5 controlled variables:

(Remember controlled variables are factors within an experiment that a scientist purposely keeps the same.)

_____

_____

_____

3. Identify the independent variable:

(The independent variable is a factor within an experiment that a scientist purposely changes.)

_____

4. Identify the control:

(The control is a factor within an experiment that isn't supposed to change. Scientists use it to compare to the independent variable)

5. Identify the dependent variables:

(The dependent variable is the "ta-da!" or what happened. Usually the dependent variable is shown with data.)

Quantitative data:

_____

Qualitative data:

_____

Conclusion: (Was your hypothesis correct or not and why.)

_____

_____