

Name _____ Period _____

Choose any or all of these labs for points.



- Find & record the mass of a variety of pennies from numerous years in an organized chart. Use the back→
- Choose: Surface. _____ Distance. _____ Drop each penny. Record sound in chart. (dull/sharp/full or ?)
- Organize your data in a graph. Label the x- and y- axes.

[illegible]A large grid of graph paper, consisting of 20 columns and 15 rows of squares, intended for drawing a picture.

d) Write a conclusion using your data.

Have Checked



___a) Use a small plastic or glass container/dish. RINSE before using. Rinse after soap.
___b) Try a small amount of each of the following, in order, to clean a penny.
c) Observe and record to fill in the chart.

Substance for cleaning	Describe Change ↓	Change: Physical or Chemical?	Reason from C/P Worksheet Color Change/New Substance/??
Water			
Soap and Water: Rinse after!			
Vinegar			
Vinegar and salt If time, Save this liquid for 3.			

Clean up

Have Checked

- Use the vinegar and salt mixture from above, or make more.
- Use steel wool to break up the finish on a paperclip (or nail) that is made using iron.
- Add 2-4 copper pennies (1981 or older) in your vinegar and salt mixture.
- Add your paperclip. If you want to compare the change, leave part of it out of the liquid.
- Let sit, checking every 5 minutes. If needed, mark with your name and period and **ask where**.
- Observe until you have change. Draw or tape your nail or paperclip ↓. Describe the results.**

Time in solution:

Draw results:

Describe results:

There are **2 chemical reactions**: 1. The copper first leaves the _____ & combines with the acetic acid (vinegar).
2. Copper is then attracted to the iron.

Then the _____ leaves the acid and sticks to the iron.

g) Rinse and dry your pennies and paperclip or nail.

Have Checked

[illegible]