

Chemistry Name _____

“Striking It Rich” Penny Lab

Date _____

Block _____

Purpose: To change the appearance of pennies through chemical and heat treatments.

Procedure:

1. Obtain three pennies. Use steel wool to clean each penny until it is shiny. Record observations.
2. Set up a ring stand with a wire mesh. Place an evaporating dish on the mesh.
3. Add a small amount of 3M NaOH to the evaporating dish (enough to cover a penny laying flat).
4. Add a small amount of “zinc mesh” to the evaporating dish.
5. Add a penny to the evaporating dish.
6. Gently heat the solution until it is WARM (bubbling). Do NOT allow it to boil vigorously!
7. Using crucible tongs, grab the sides of the penny and flip it so that both sides are exposed to the NaOH/Zn mesh.
8. Take it out of the evaporating dish with the tongs, rinse it in water and dry it off.
9. Do the same thing with the second penny.
10. When the second penny is done, heat it in a Bunsen burner flame for a few seconds. **Don't overheat it.**
11. Let the penny cool then rinse with water.
12. Rinse off the tongs, and put everything away.

Observations:

Discussion: Explain what happened. Use the ChemCom book page 161 to help with your explanation.

Questions:

- 1.) Compare the three coins. Do they remind you of anything? Explain.
- 2.) If someone claimed that a precious metal was produced in this activity, how would you decide whether the claim was correct?
- 3.) Identify two practical uses for metallic changes similar to those you observed in this activity.