

Polishing Pennies Experiment



When pennies are made, the copper on their surface is bright and shiny. Over time, the copper oxidizes and becomes dull and dark. Sometimes the pennies even turn green. In the presence of an acid, the copper oxide on the pennies dissolves revealing the shiny copper underneath. In this experiment, we will test different liquids with various acid levels to see which ones react with and dissolve the copper oxide.

Instructions:

1. Choose 3 dark, aged pennies and one new shiny penny to compare them to. Make a note of the color of each.
2. Pour 3 different liquids into small cups. We used vinegar, ketchup and milk. You might consider lemon juice or soda. Place one penny into each liquid.
3. After 5 minutes, remove the pennies and make a note of the color.
4. Put the pennies back and wait another 10 minutes. Remove the pennies and make a note of the color.
5. Wipe each penny with a cloth and, once again, make a note of the color.

Record your observations in the table below. Don't forget to add the liquids you are using in the liquids column.

	Penny Color			
	Beginning Color	After 5 minutes	After 10 minutes	After towel
Liquid #1				
Liquid #2				
Liquid #3				

Which liquid made the greatest difference in the penny? _____

Did time make a big difference in the changes to the pennies? _____

Did wiping the pennies with the towel make any difference in their appearance?

Which liquid do you think had the highest acid content? _____

Can you think of a liquid you would like to try this experiment with next time?

