Penny Chemistry

IN IRISH LORE, leprechauns bury pots of bright gold coins at the ends of rainbows. Of course, leprechauns don't exist, but gold coins do shine!

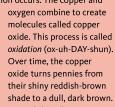
Have you ever seen a shiny new penny and thought it looked like gold? In a few years, that penny will lose its glimmer. While gold coins stay shiny, old pennies become dull.

When God created everything about 6,000 years ago, he created the world to be made of elements. An element is a substance made of just one ingredient that cannot be broken down into smaller ingredients. Some common elements are gold, carbon, oxygen, and copper.

Pennies are made of copper. When copper meets oxygen, a reaction occurs. The copper and

molecules called copper Over time, the copper oxide turns pennies from

a penny and make it shiny again? Let's try it!

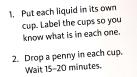


But did you know you can clear away the dull layer on

Let's do it!

What You'll Need

- 2 plastic cups or bowls
- Old pennies
- Paper towel
- 1/4 cup vinegar and 1 teaspoon salt (mixed together)
- 1/4 cup water and a drop of dish soap (mixed together)



What to Do

- 3. Which liquid will clean the pennies the best? Write down your guess.
- 4. Remove the pennies from the cups. Rinse each penny with water, then gently dry them with a paper towel. Make sure you remember which penny came from which cup.
- 5. Which liquid shined the pennies better? Did you guess correctly?



Vinegar is an acid. When the vinegar combines with the salt, the reaction can dissolve the copper oxide from a penny. Copper oxide can dissolve in water, but it usually takes a long time.

Try This!

Gather more pennies and try the experiment again, this time using different liquids. Try using milk, soda, soy sauce, ketchup, or juice. Repeat steps 2-4. Did any of these liquids clean the pennies better than the salt and vinegar? If a liquid cleans well, it probably contains an acid!





I'm Mr P., the host of Unlocking Science on Answers TV. Let's have some fun as we investigate God's amazing creation.