

JR-SCIENTISTS

GREEN PENNIES

Why is the Statue of Liberty green? It's a beautiful patina, but how does it happen?

INSTRUCTIONS

STEP 1: Prep the green pennies experiment by filling 2 small bowls with about 1/4 cup of vinegar and a teaspoon of salt each. Mix thoroughly.

STEP 2: Take one and dip it halfway into the bowl. Count to 10 slowly and pull it out. What happened? Add a few more and let them sit for a few minutes. Make sure to add 6 pennies to the other bowl too.

STEP 3: Now, take the pennies from one bowl and give them a good rinse and let them dry on a paper towel.

STEP 4: Take the other pennies from the other bowl and place them directly on another paper towel.

THE SCIENCE

Can you see the differences between the two groups of pennies, the rinsed and unrinsed pennies? Do you now have some green pennies? I bet you do! Your dull pennies should either be green or polished!

Your green pennies have what is called a patina. A patina is a thin layer that has formed on the surface of your copper penny from "weathering" and oxidization from the chemical process we just put the penny through. The Statue of Liberty is covered in a thin layer of copper. Because she sits out in the elements and is surrounded by salt water, she has a patina similar to our green pennies. It would be a huge job to polish her!

SUPPLIES

White vinegar

Salt

Water

Bowl

Teaspoon

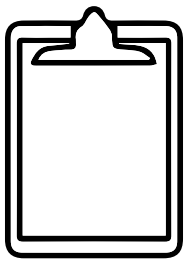
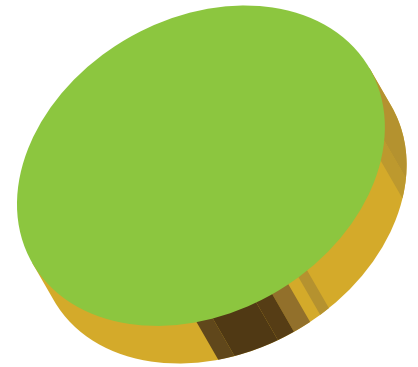
Paper towels

Pennies



Green Pennies Observations

Use this worksheet to process and evaluate your work.



RECORD

What why do some pennies look dull?

So what makes green pennies green?

What is copper?

What does all this have to do with the Statue of Liberty?
