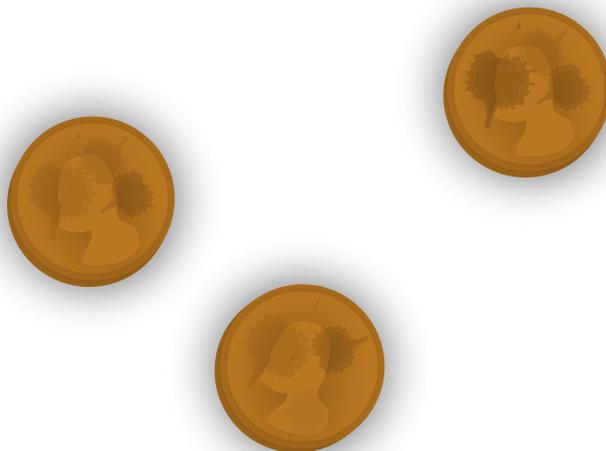


Coin Cleaning Chemistry

Ever wonder how to make grimy pennies shiny again? Celebrate National Coin Week with this coin cleaning chemistry experiment!

Materials:

- Dirty pennies
- Taco sauce
- Vinegar
- Tomato paste
- Salt
- Water
- Four cups
- Masking tape
- Something to write with



Experiment

1. Clear a workspace and place one or two dirty pennies in each of the four cups.
2. Use masking tape to label each cup with the name of one of the experimental cleaning agents: taco sauce, vinegar, tomato paste, and salt.
3. Pour some of each cleaning agent into its designated cup, covering the pennies inside. Wait two minutes for any reactions to take place.
4. Rinse the pennies off with water.

Make Observations

Did one cleaning agent work better than all the rest? Why? If you look at the ingredients list on the taco sauce, you will notice that it consists of the other substances we tested. Were any of these ingredients successful cleaning agents independently? Which combination of ingredients made the taco sauce so successful?

Take it further

1. Thoroughly clean the cups used in the previous experiment and then label each cup to reflect the new cleaning agent combinations: tomato paste + vinegar, tomato paste + salt, and salt + vinegar.
2. Place a dirty penny or two in each cup and add the labeled ingredients.
3. Allow two minutes to pass, and then rinse the pennies off with water.

Analyze results

Which combination of ingredients made the best cleaning agent? When salt dissolves in vinegar, a chemical reaction takes place. This chemical reaction creates an acid which eats away at the copper oxide covering the pennies, making dull and dirty pennies look bright and clean again!

