



## Keep it Clean!

Supplies: 5 Pennies (preferably aged with similar color tone), 5 small cups, 5 household liquids (like lemon juice, vinegar, soapy water, etc.), paper towel cut into 5 pieces, marker, masking tape, timer, spoon

### Instructions:

1. Collect 5 household liquids for cleaning pennies, like lemon juice, vinegar, and soapy water. Be creative in choosing your final 2 liquids!
2. Place the liquids in each of the 5 cups and label with tape and a marker. Set a piece of paper towel in front of each cup.
3. Predict which liquid will best clean the penny. Draw a star on the cup you think will win!
4. Place a penny in each of the cups. The penny should be submerged in the liquid.
5. Set a timer for 5 minutes.
6. Observe the pennies. Do you notice anything happening in any of the solutions?
7. After 5 minutes, remove each penny with a spoon, and place on the paper towel in front of each cup.
8. Observe which liquid made the penny the cleanest and shiniest. Was it as you predicted? Were there any unexpected results?
9. In this activity you observed how different chemicals clean. In making semiconductors, we use several different kinds of chemicals to **clean** the silicon wafers. Now watch the Sand to Silicon video clip to see **Cleaning** in action!