The Penny Experiment (STEM)

Adapted from: http://www.momto2poshlildivas.com

Grade Range: PreK-6 **Time:** 30-40 Minutes

Synopsis: After discussing who is on the penny, in honor of Presidents' Day, students will conduct an experiment!

Materials:

- TONS of old pennies! The older the better!
- 3 Clear Cups per group (plan for 5 or so groups, so 15 clear cups)
- salt
- water
- dish soap
- vinegar and/or lemon juice
- teaspoon

Instructions:

1. Students will break into desk teams of 4.
2. Students will find on their tables the supplies listed above.
3. Mentors will explain to the students the activity – they will be utilizing the materials in front of them to conduct an experiment on how to clean dirty pennies!
4. Students will begin by filling one cup with water and adding 10 pennies.
5. Students will fill the second cup with water and a few drops of dish soap and add 10 pennies
6. Students will fill the third cup with ½ cup of vinegar, 2 tsps. of salt, and add 20 pennies.

7. Ask students which solution they think will work best to clean the pennies!
8. Take one dirty penny and dip half of into the vinegar solution, but only half, for 15-20 seconds. What did the students observe? Why do they think this happens?
9. After about 5 minutes, remove 10 pennies from the vinegar solution and lay them on a paper towel unrinsed. Wait an additional 5 minutes and remove all pennies from all solutions. Rinse the 10 you've just removed from the vinegar solution.
10. What do the kids notice about the vinegar solution pennies that were not rinsed in water? They turn greenish blue!

Talking Points: What's the science behind this activity? The copper in the penny reacts with air and salt and turns the penny green!