SHINING PENNIES

Find out which cleaner shines pennies better.

**Materials**

- 3 Dull pennies
- 2 Paper cups
- Vinegar
- Liquid soap
- Paper towels

**Procedure**

- Put one penny aside.
- Put the other pennies in each of the paper cups.
- Pour enough vinegar in one cup to completely cover the penny.
- Pour enough soap into the other cup to cover the penny.
- Wait at least ten minutes.
- Wash the two pennies off and rub them clean with a paper towel.
- Compare all three pennies. Which is the shiniest? Did the vinegar and soap clean them a lot, or a little?

**Results**

The vinegar made the penny shiny again!

**Why?**

Pennies are made out of copper, which reacts with oxygen in the air to create dark chemicals called copper oxides all over the surface of the pennies. This is what gives pennies their dull look. Soap has no effect on copper oxides, but acidic vinegar breaks them down so they can be removed, making the pennies shiny again.

To learn more about Physical Science, check out the Pink Palace Museum's Magic of Science: Physical Science Sampler Program.