

CHEMISTRY FOR KIDS: PENNY CHANGE EXPERIMENT

This two-part chemistry experiment uses a household acid, vinegar, to clean copper pennies. Kids can observe the oxidation process as the copper in the pennies reacts with oxygen in the air to first form copper oxide and then malachite. Get your kids interested in STEM → science, technology, engineering, and math with this easy chemistry project!

Vocabulary

- **Oxidized:** combine chemically with oxygen
- **Evaporate:** to turn from liquid to vapor
- **Mixture:** when two or more substances are combined so that each retains its own chemical identity
- **Observe:** notice and record data



Materials

- 3 dull or dirty looking pennies
- 1/4 cup white vinegar
- 1 teaspoon table salt
- paper towel or cotton pad
- small non-metal bowl
- Small non-metal container with lid

Instructions

Part 1

1. Pour vinegar and salt into the small non-metal bowl and stir to dissolve.
2. Put 3 pennies into the bowl for about 30 seconds.
3. The pennies now look shiny! Take the pennies and rinse them with fresh water. Place them on a paper towel to dry off.

Part 2

1. Fold a paper towel or cotton pad to fit the bottom of your container with a lid.
2. Wet the paper towel or cotton pad with a few drops of vinegar.
3. Put one penny on the wet pad and cover with the lid. (The lid keeps the vinegar from evaporating).
4. Put one penny on a dry pad or paper towel.
5. Dip one penny in your salt and vinegar mixture and place it on a dry pad or paper towel.
6. Observe your pennies at 1, 2, 3 and 8 hours.

*For even more fun try pennies from different years! Do older pennies (older than 1982) work better or worse?

** Be sure to record your predictions and observations.

Questions:

1. Which pennies oxidized most quickly?
2. Why do think this happened?
3. Look back at the penny on the vinegar pad. What does it look like? Why?