

A Green Coat

Have you ever wondered why the statue of liberty is green? When the statue was first made in 1886 it was a shiny brown. Over the period of about 20 years it turned green. The green color forms due to the copper reacting to the oxygen and other chemicals in the air.

Copper, brass, bronze metals react to air and create what is called “patina” or “verdigris.” This greenish-blue layer protects the underlying metal from corrosion. That’s why copper and brass sculptures last a long time.



Items Needed:

- Copper pennies (or any copper, brass, or bronze metal)*
- 1 teaspoon salt (sodium chloride)
- 3-4 tablespoons vinegar (dilute acetic acid)
- Small dish
- Napkin or square of paper towel

**Pennies made before 1982 are mostly made up of copper. Pennies made after that are primarily zinc.*

Directions:

- 1 Mix the vinegar and the salt together in a small dish.
- 2 hold a penny halfway into the solution and observe the penny change from dull to shiny.
- 3 Place all the pennies you have in the dish for a few minutes and they will turn shiny.
- 4 Remove them from the solution but don’t dry them off just place them on top of the napkin. Come back in a couple hours or a day and notice how the patina has begun to form and grow.

Before solution



In the solution



VERDIGRIS
After 1 hour



Bible Lesson

Just like the patina/verdigris reacts to its surroundings to protect the metal underneath we have a heavenly father who loves and protects us. We need to do our part by putting His word and His teachings in our hearts and mind every day. We do this by spending time reading His word.

So when you are facing a tough situation you can always remember that God will be with you as a protector.

“Therefore take up the whole armor of God, that you may be able to withstand in the evil day, and having done all, to stand.”

– Ephesians 6:13 (NKJV)

“You are my hiding place; you will protect me from trouble and surround me with songs of deliverance.” – Psalm 32:7 (NIV)