

# The lab of **MR.Q**

## How green does your money grow?



### What you need:

GLASS PLATE  
PAPER TOWEL  
VINEGAR  
SALT  
CLEAN PENNIES  
GLOVES

### What to do:

FOLD THE PAPER TOWEL SO THAT IT WILL FIT ON THE PLATE. SOAK IT WITH ENOUGH VINEGAR TO KEEP ITS ENTIRE SURFACE WET. PLACE THE PENNIES ONTO THE VINEGAR-SOAKED PAPER TOWEL. SPRINKLE SALT OVER THE SURFACE OF THE PENNIES. CHECK THE PENNIES EVERY HOUR OR SO AND LOOK FOR A GREEN RESIDUE TO FORM ON THE PENNIES OR THE TOWEL. AFTER A DAY, THE PENNIES MAY BE ENTIRELY COVERED WITH THIS GREEN SUBSTANCE. (OPTIONAL) YOU CAN REMOVE THIS GREEN MATERIAL FROM YOUR COINS USING ANOTHER LABNOTE ACTIVITY IN OUR ARCHIVES: "CLEANING WITH TACO SAUCE"

WE'VE SEEN  
**BETTER** DAYS  
FOR SURE.

### What's going on?

IF YOU HAVE EVER LOOKED AT THE STATUE OF LIBERTY YOU HAVE WONDERED WHY SHE IS GREEN COLORED. THIS WAS NOT ALWAYS THE CASE. WHEN SHE WAS FIRST BUILT SHE SHINED JUST LIKE A NEW COPPER PENNY! THE GREEN MATERIAL THAT HAS FORMED AROUND HER (AND YOUR PENNIES) IS A MINERAL CALLED MALACHITE. IT IS FORMED ON COPPER WHEN IT IS EXPOSED TO SALT, ACID (LIKE VINEGAR), AND THE AIR. LUCKILY, ONLY THE TOP LAYER OF THE COPPER PENNY UNDERGO THIS CHEMICAL CHANGE AND CAN BE CLEANED VERY EASILY.