



SCIENCE EXPERIMENT

Name: _____

Date: _____

Parent/Teacher: _____

TESTING WHICH METALS ARE MOST RESISTANT TO CORROSION

Corrosion is when metals react with the environment and break down (rust, tarnish, or corrode).
In this experiment, you will test several common metals to see which is most resistant to corrosion.



QUESTION

Which metal is most resistant to corrosion?



SAFETY FIRST

- Do not eat or drink during the experiment.
- Do not touch your face or eyes while handling materials.
- Wash your hands thoroughly after the experiment.
- Ask an adult for help if needed.



HYPOTHESIS

I think _____
will be the most resistant to corrosion because _____



MATERIALS

- Steel (Iron) nail
- Copper penny
- Aluminum foil piece
- Brass screw or piece
- Stainless steel paper clip
- 5 small clear cups or jars
- White vinegar
- Water
- Salt (table salt)
- Sandpaper or steel wool (optional)
- Paper towels
- Timer or clock
- Notebook or lab sheet (this page)



PROCEDURE

1. Label five cups: Steel (Iron), Copper, Aluminum, Brass, Stainless Steel.
2. Pour $\frac{1}{2}$ cup of white vinegar into each cup.
3. Add $\frac{1}{2}$ teaspoon of salt to each cup and stir until dissolved.
4. Clean each metal piece with sandpaper or steel wool (if needed) to remove any coating. Rinse with water and dry with a paper towel.
5. Place one metal piece in each labeled cup.
6. Start the timer. Observe the metal pieces at the same time each day for 5 days.
7. Record your observations in the data table below.
8. After 5 days, compare the metals. The metal that shows the least signs of corrosion is the most resistant.



Steel (Iron)



Copper



Aluminum



Brass



Stainless Steel



DATA TABLE – RECORD YOUR OBSERVATIONS

Day	Steel (Iron) Nail	Copper Penny	Aluminum Foil	Brass Screw	Stainless Steel Paper Clip
0 (Start)					
1					
2					
3					
4					
5 (End)					

Observation Guide: 0 = No change 1 = Slight change 2 = Some corrosion 3 = Heavy corrosion



OBSERVATIONS

What did you notice?



CONCLUSION

Which metal was the most resistant to corrosion? _____

Which metal was the least resistant to corrosion? _____

Why do you think some metals corroded more than others?



THINK FURTHER: How could you prevent corrosion in everyday life? List some examples.