



2016 NOBCChE National Science Fair Abstract

Category: **Physical Science**

Title: **The Effect of pH Levels on Metals Influence the Rate of Corrosiveness of Rust**

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Rust is one form of corrosion that is a result of a chemical reaction upon metals. Cars, refrigerators, fences, nails, tire rims and water pipes are exposed to acid rain and in time corrode. The corrosive materials leak into the soil, water and air. A rise in temperature will raise the pH level and speed up the formation of rust. This means that the contaminants affect the environment even more quickly. A variety of acidic liquids are used to represent acid rain. Steel wool will represent metal. In my hypothesis, temperature will speed up the pH level and cause the steel wool to corrode. As temperature rises, the pH level will rise in the lemon juice, accelerating rust on the steel wool, causing corrosion. Unmonitored, the long term negative effects of contamination on the Earth shall result in long lasting health concerns for human beings.

The National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCChE) National Science Fair is a poster competition in which students present an independent completed research project. Each contestant in the Science Fair must demonstrate their ability to conduct a research project by:

- Submitting an abstract of 150 words or less on an individual research project in one of the following **four categories: physical science, math & engineering, consumer science, or biological science.**
- Presenting the results of the research in a poster format, including answering questions from judges; and submitting a written report during the poster presentation.
- For more information, visit www.nobccheSTEMwkd.com.