



2016 NOBCChE National Science Fair Abstract

Category: **Physical Science**

Title: **Water Filtration Design**

Ellianna Polesky

Junior Level (Middle School)

Greenbelt Middle School

This project was about designing a water filtration system. The purpose of this experiment was to determine which filter design would filter “polluted” water the best. I predicted the filtration system using the most activated carbon would filter the “polluted” water the best. In this experiment, I varied the amount of filtering material in different filtration system designs to determine if a specific material would cause a filtration system to perform better. The materials used were activated carbon, cotton, sand, and gravel, in varying amount, in 3 different filtration systems. The filtered water was visually compared in color. In the end, my hypothesis was correct, and the filtration system design using the most activated carbon filtered the “polluted” water the best.

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.