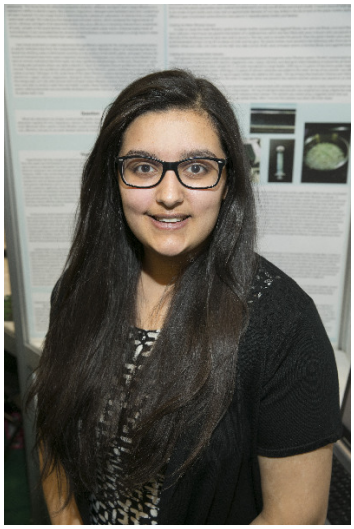
CWSF 2017 - Regina, Saskatchewan



Pakeeza Mushtaq

Development of a Low Cost and Effective Water Filtration System

Challenge: Environment
Category: Intermediate
Region: Southeast Alberta
City: Brooks, AB
School: Brooks Junior High School

Abstract: My project involved developing a low-cost and easy to use water filtration system consisting of low-cost biowastes to aid in providing a solution to the global water crisis. 3 of the filtration systems constructed were able to produce potable water. These systems used corncobs, eggshells, coconut shells, sand, and orange peels. Results indicate that orange peels are effective adsorbents and promising for future wastewater treatment.

Biography

My name is Pakeeza Mushtaq. I am a grade 9 student at Brooks Junior High School in Brooks Alberta. I spend a large chunk of my time volunteering for 14 organizations in and outside of school. In the past two years, I have raised over $500 in donations for local organizations. I also play on my school's badminton team. Academics are also an important aspect of my life. Throughout my junior high years, I have received the Highest Academic Achievement Award for having the highest average in my grade. I also enjoy writing short stories and am a published author. In the future, I intend to pursue a career in medicine. The inspiration for my project came during a family trip to Pakistan where I witnessed small children drinking turbid and brown water from roadside streams. This motivated me to develop a water filtration system that is suitable for use in developing countries. In the future, I would like to test my water filtration system's ability to remove heavy metals such as lead from wastewater. I would encourage students looking to partake in science fairs to choose a project that interests them.