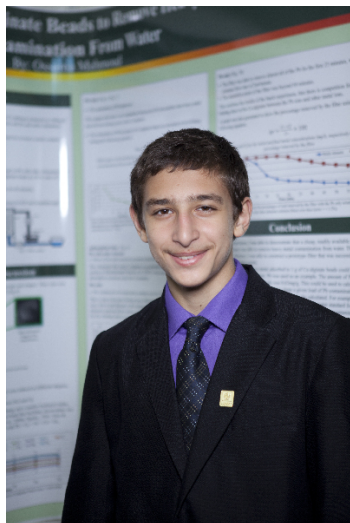


## CWSF 2013 - Lethbridge, Alberta



### Ossama Mahmoud

#### The use of Ca-alginate beads to remove heavy metal contamination from water

**Challenge:** Environment

**Category:** Intermediate

**Region:** London District

**City:** London, ON

**School:** Al Taqwa Islamic Secondary School

**Abstract:** In this project, I tested the potential of an affordable readily available material (Ca-alginate beads) to remove heavy metals (using a multi-element solution and a single element solution of Pb) from our water systems. The Ca-alginate beads were able to remove all the heavy metals from the water at different degrees. Also, a prototype filter using the Ca-alginate beads was constructed and successfully tested.

### Biography

My name is Ossama Mahmoud, I am in grade 9 and go to the Al-taqwa Islamic School. I really enjoy science and math. I got inspired to do this project because I wanted to find out how clean the water is in London, especially that one of the biggest water pollutants are heavy metals. I did some research and found out that I can use certain types of plants to clean water. My favorite sport is Judo, I am a blue belt and enjoy competing at high levels. This is my second year in the Canada wide science fair. In the future I would like to be a physician.