

## CWSF 2015 - Fredericton, New Brunswick



### Anirudh Shahi

#### Vegetable Oils and Amines: A Novel Approach for Capturing and Utilizing CO<sub>2</sub>

**Challenge:** Environment

**Category:** Intermediate

**Region:** Northwestern Ontario

**City:** Thunder Bay, ON

**School:** Sir Winston Churchill C.V.I.

**Abstract:** CO<sub>2</sub> is a hazardous greenhouse gas and has adverse impacts on the environment. This project provides an economical and eco-friendly way to control CO<sub>2</sub> using amines in vegetable oil mediums. Vegetable oils contain saturated fatty acids, which increase the loading capacity of the amines. Various operating parameters are tested to increase the efficiency of the CO<sub>2</sub> absorption and some value added products are assessed.

#### Biography

I am a grade 10 student at Sir Winston Churchill, Thunder Bay, attending the International Baccalaureate program. My favourite subjects include math, sciences and gym. I have participated in various math competitions including the Caribou Math Contest, Waterloo Mathematics Contest and the TD Canada Mathematics. I equally enjoy playing sports and have played on a local competitive soccer team. I have represented my school on volleyball, soccer, badminton and tennis teams. I enjoy volunteering at local organizations and started at a young age. I volunteer at the Heart and Stroke foundation, the Kidney Foundation, and at the local summer science camp for children. I have attended the previous regional science fairs and won numerous awards. However, this is my first year at the Nationals and I am looking forward to having a great experience. I plan on attending a University and pursuing a career in the medical sciences. However, I have yet to decide exactly where I wish to go.

#### Awards

#### Value

Excellence Award - Intermediate - Bronze Medal Sponsor: Youth Science Canada	
Western University Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: Western University	\$1 000
Total	\$1 000

