

# CWSF 2017 - Regina, Saskatchewan



## Aaliyah Mahboubi

### Microbial-film Power Generation 2.0 ? It's about to get cooler

**Challenge:** Energy

**Category:** Junior

**Region:** Pacific Northwest

**City:** Prince Rupert, BC

**School:** Prince Rupert Secondary

**Abstract:** This project is part of a two-year study testing electricity production from microbial decomposition. In year 1, I demonstrated the concept of microbial film power generation using graphite plates (29x20cm) and muskeg. This study showed that graphite felt could increase energy output by 37 times, that the fuel cell is self-recharging, and that various sources of muskeg do not influence the power produced.

#### Biography

As a young individual, my fascinations are frequently changing. Above all this my fundamental goal has remained the same throughout my entire life, doing my part for the improvement of our planet. I believe my part is being fulfilled through science. For example, testing and developing new possible renewable energy sources. In my personal time, I take interest in many different activities such as video game programming, piano competition, creative writing etc. I plan to attend university in the future. I want to become an environmental biologist. I enjoy science because I can use it to test my questions and help improve the planets shortcomings. I got my inspiration for this project from my concern for the environment. I wanted to do a project on renewable energy because it is a challenge that the world is presented with. My project includes harvesting electricity from microbial activity. As for all the bright people thinking about doing a project, I encourage you to present your ideas. We are the worlds next generation and we need to work towards the improvement of our planet so that we can live in a healthy environment and discover new things.

#### Awards

#### Value

Renewable Energy Award - Junior Sponsor: Ontario Power Generation	\$500
Challenge Award - Energy - Junior Sponsor: Youth Science Canada	
Excellence Award - Junior - Gold Medal Sponsor: Youth Science Canada	\$250
Western University Scholarship Gold Medallist - \$4000 Entrance Scholarship Sponsor: Western University	\$4 000
<b>Total</b>	<b>\$4 750</b>