

# CWSF 2010 - Peterborough, Ontario



## Macall Robinson

### Carbon Counts

**Division:** Life Sciences

**Category:** Senior

**Region:** Annapolis Valley

**City:** Halifax, NS

**School:** Central Kings Rural High School

**Abstract:** This project studied the effectiveness of dosing ethanol in a reef aquarium to increase the biomass of heterotrophic bacteria. During the process of cell synthesis the bacteria utilized NO<sub>3</sub> and PO<sub>4</sub>. The by-product of the bacteria was then removed through specialized filtration. Ethanol dosing replaced the need for water changes, reduced nuisance algae growth and lowered the amount of nutrients within the reef system.

### Biography

I am a grade 12 student at Central Kings High School in Kings County Nova Scotia. I have been in 4-H for over 10 years and am involved in projects such as dog obedience, fisheries, sheep, poultry, waterfowl, vet science, market lamb market turkey, and self determined. I was also part of the Rotary Exchange program and lived in Salvador, Brazil for 10 months. I work at the Oaklawn Farm Zoo in Aylesford. My hobbies are fishing, camping, hiking, fly tying, raising and showing Border Collies, and paintball. I live on a farm and I have many pets such as 125 gallon reef aquarium, african grey parrot, chameleon, King snake, tarantula, Border Collie and a hedgehog. I would like to learn more about our oceans and take a marine biology coarse and get my bachelors in science. I am interested in working at a bigger zoo in the marine or reptiles department.

### Awards

### Value

Honourable Mention - Life Sciences - Senior	\$100
Sponsor: Pfizer Canada	
<b>Total</b>	<b>\$100</b>