

## CWSF 2016 - Montreal, Quebec



### Maggie Hodgson

#### Malacostracology LC50

**Challenge:** Environment

**Category:** Junior

**Region:** Sahtu

**City:** Norman Wells, NT

**School:** Mackenzie Mountain School

**Abstract:** At my cabin in Doris Lake we have a water-bucket. In the water-bucket there were little bugs called daphnia. I thought of killing them with bleach, my question was how much bleach will it take to kill all the daphnia in my water-bucket.

#### Biography

Hello my name is Margaret Hodgson, from Norman Wells NWT. I attend Mackenzie Mountain School and I did my project on Malacostracology. Malacostracology is the study of Crustaceans, which are soft-shelled animals like shrimp or crabs. When I first got my idea I was at my cabin in Doris Lake. One of my responsibilities there is to fill the water-bucket. Every time I filled it there were small bugs swimming around. I identified them in my last project, where I compared clean and polluted water ecosystems, as Daphnia. Daphnia are Crustaceans. Scientists are counting the amount of micro plastics in daphnia to measure water quality. I learned that Daphnia are Parthenogenic meaning they don't have to produce sexual, that does not mean they are asexual, Daphnia reproduce Parthenogenically when the weather is good, that means they practically clone themselves because there is no other DNA used so the child is an exact replica of the parent, but when the conditions are bad they produce sexually. I was thinking of ways to get rid of the daphnia, I decided to use bleach. So my question was how much Bleach will it take to kill the Daphnia in my water-bucket?

Youth Science Canada  
PO Box 297  
Pickering ON L1V 2R4  
[www.youthscience.ca](http://www.youthscience.ca) / [info@youthscience.ca](mailto:info@youthscience.ca)  
416-341-0040