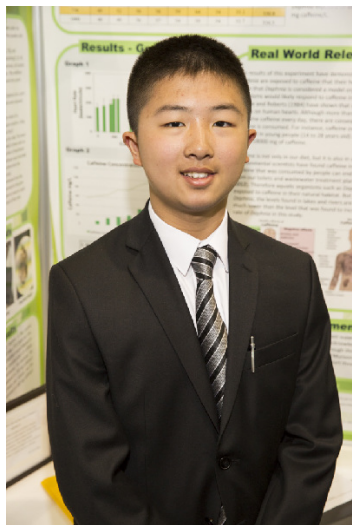


## CWSF 2015 - Fredericton, New Brunswick



### Kevin Ding

#### How does caffeine affect the heart rate of daphnia?

**Challenge:** Health

**Category:** Junior

**Region:** Bay Area

**City:** Oakville, ON

**School:** Appleby College

**Abstract:** This project studied the effect of caffeine on heartrate, using the crustacean *Daphnia magna*, as a model organism. *Daphnia* were exposed to nine concentrations of caffeine ranging from 0 to 1000 mg/L using 7 replicates per concentration. The average heartrate of *Daphnia* increased from 170 beats per minute in control *Daphnia* (0 mg/L) to 316 beats per minute in *Daphnia* exposed to 1000 mg caffeine/L.

### Biography

My name is Kevin Ding and I am in grade 8. I enjoy a number of sports including swimming, squash, and karate. I am also on many of my school's sports teams where I have earned team and personal awards (competitive squash, volleyball, and softball). In my spare time, I really enjoy cooking, reading books, and playing sports. My inspiration for this project came from many different places. First of all, most of my teachers drink coffee. As well, my grandmother once had to be rushed to the hospital just because she drank too much coffee, and the caffeine caused her heart rate go abnormally fast. So, I decided that it would be beneficial for me to learn first-hand about the effects of caffeine, and how and why it affects one's heart rate. For future investigations, I would probably study the effect of caffeine on the nervous system, how it stimulates certain parts of the body, and the psychological effects of this chemical. For those students who are thinking about doing a science project next year, I strongly encourage you to do so. It is a wonderful and fun experience. You will definitely learn a lot from the process.

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