

## CWSF 2018 - Ottawa, Ontario



### Elouan Duranton-Mamadou

#### Production d'énergie thermique par un chauffe-mains (oxydoréduction)

**Challenge:** Energy

**Category:** Junior

**Region:** Districts francophones du N-B

**City:** Rothesay, NB

**School:** École Samuel-de-Champlain

**Abstract:** My project explores the use of oxydo-reduction in alternate energy production from a simple everyday item such as an hand-warmer to rocket fuel while focusing on energy mobility from bike to phone, as well as constraints linked with hydrogen production, stockage and safety.

#### Biography

My name is Elouan, I am Canadian and French and lived in many countries. I live now in Rothesay New Brunswick where I practice boxing and play piano. I got the inspiration for my project by asking how hand-warmers produced heat to friends and teachers and realizing that nobody really knew how it worked what picked my curiosity. I quickly discovered how vast the application of this way of producing energy was and decided to expand my project to alternate energy source on everyday items such car, bike, laptop or phone. I got so interested that I used my pocket money to purchase a fuel cell and use it as energy source to power my Mindstorm. I also convinced my parents to purchase a Pantone reactor to install and check whether the addition of water in a traditional explosion engine can help to improve efficiency. My advice would be to drop the console or TV and get their hand dirty. My father always repeats that there is no substitute for hard work, and that failure is part of learning. With such a simple idea, I learned programming, chemistry and mechanics. So much fun!

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