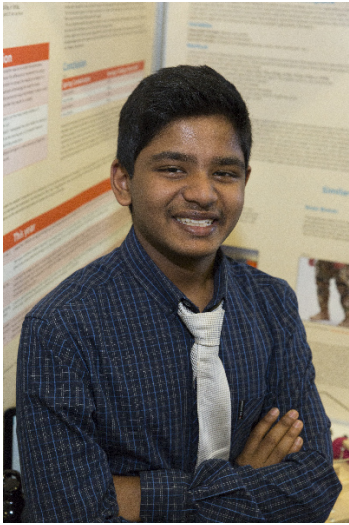


## CWSF 2018 - Ottawa, Ontario



### Tharindu Kottegoda

#### Backpack Potential Energy System

**Challenge:** Innovation

**Category:** Intermediate

**Region:** St. James-Assiniboia

**City:** Winnipeg, MB

**School:** Collège Sturgeon Heights Collegiate

**Abstract:** What if you could make electricity while you walk? With a "Backpack Potential Energy System" you can. This backpack is designed to turn movement (kinetic energy) into electricity (potential energy). I tested different masses, speeds, spring combinations, racks, motors, and mechanisms, to increase the wattage produced by the backpack and make it more user friendly. My ultimate goal is to make these backpacks commercially viable.

#### Biography

Hello, my name is Tharindu Kottegoda. I am a grade 9 student from Sturgeon Heights Collegiate, Winnipeg, Manitoba. My favourite subjects are Math and Science, and have earned several academic awards in these areas. I came first in Manitoba from Canadian Math Kangaroo Contest. I play clarinet, and alto saxophone. I also enjoy volunteering to play piano at a senior homes. I am a junior black belt in Karate and also do lifesaving courses in swimming. My whole family loves camping, hiking, biking, and to explore nature. I always thought that it would be nice if there was a way to generate electricity when you are in remote locations. Something portable, and efficient at producing electricity as well as being a constant and independent source of electricity. The backpack potential energy system exactly matched my ideas. I have done this project for two years and have significantly improved the product. However, I still have a long way to go and I am looking forward to do more experiments next year. My advice to future science fair participants is to do a project that you are really passionate about, start early and to record every detail that relates to your research.

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