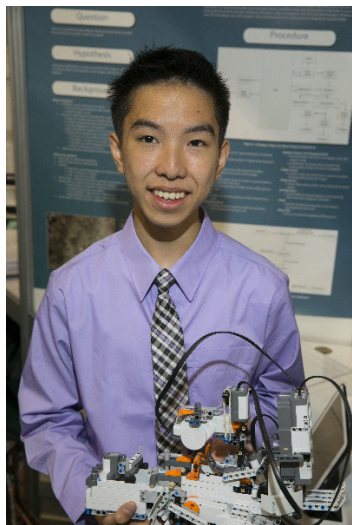


# CWSF 2017 - Regina, Saskatchewan



## Jonathan Cao

### reduce, reuse, reCompass

**Challenge:** Innovation

**Category:** Intermediate

**Region:** Greater Vancouver

**City:** Vancouver, BC

**School:** David Thompson Secondary

**Abstract:** Compass is a contactless smart card payment system used in Metro Vancouver transit whose single use tickets are posing an environmental concern. They are currently thrown out as trash because of electronics embedded inside them. A Lego based robotics system, reCompass, was developed as a recycling process in which these electric components are removed and separated from the paper.

### Biography

My name is Jonathan Cao, a ninth grade student attending the mini school program David Thompson Secondary. Beyond the science-loving side of me, I am your typical teenager: diverse and busy. I am a huge sports fan, particularly for hockey and soccer. Music also plays a big role in my life. In the band program at my school, I play the saxophone and clarinet, and study piano as well. Volunteering at a community garden and performing lion dance routines for public events are among other commitments. My project was created from a thought one day as I walked by a SkyTrain station, after noticing these peculiar looking circuits on the ground. I discovered the cause to be the one-time use tickets. I built a Lego robotics system to recycle these tickets, though because I plan on making a fully-functional device, the material will likely change. Some advice to anyone partaking in science fairs: when there is a will, there is a way. No matter what topic you choose, as long as it is something you are passionate about and can spend hours working on, you will reach success. Never underestimate what you are capable of!

### Awards

### Value

|   |         |
|---|---------|
| Excellence Award - Intermediate - Silver Medal<br>Sponsor: Youth Science Canada                                 |         |
| Western University Scholarship<br>Silver Medallist - \$2000 Entrance Scholarship<br>Sponsor: Western University | \$2 000 |
| Total   | \$2 000 |

