

# CWSF 2016 - Montreal, Quebec



## Spencer Whitehead

### Less Mass Run Fast

**Challenge:** Health

**Category:** Junior

**Region:** Bluewater

**City:** Hanover, ON

**School:** Holy Family E.S.

**Abstract:** Over 184 trials were conducted to investigate the effect of external loading on the stride length and the time to run 400m. Stride length decreased with heavier loading. The stride length of heavier runners decreased by as little as 7cm while that of lighter runners decreased by up to 40cm. The average run time increased by 1.14 seconds for every 1% increase in external loading.

#### Biography

My name is Spencer Whitehead and I am a grade 8 student at Holy Family School in Hanover, Ontario. I enjoy many activities such as cross country running, track and field, hockey, and volleyball. I would like to become a lifeguard and I am currently working on my Bronze Medallion swimming course, which will make me a qualified life saver. The activity that I am most passionate about is my running. I have been running competitively with the Saugeen Track and Field Club for 4 years. My passion for running played a big part in inspiring me to complete a project related to running. I wanted to select a topic that would motivate me as a runner, as well as others. Whenever I would go to 5k races, I noticed that the slower runners had relatively more body weight than the faster runners. This made me think about how much of an advantage the one body type had over the other. I researched the effect of weight on running time, stride rate, and stride length. This was my first year taking part in science fair. I am excited to be competing at the Canada Wide Science Festival.

#### Awards

#### Value

The Actuarial Foundation of Canada Award - Junior Sponsor: The Actuarial Foundation of Canada	\$500
<b>Total</b>	<b>\$500</b>