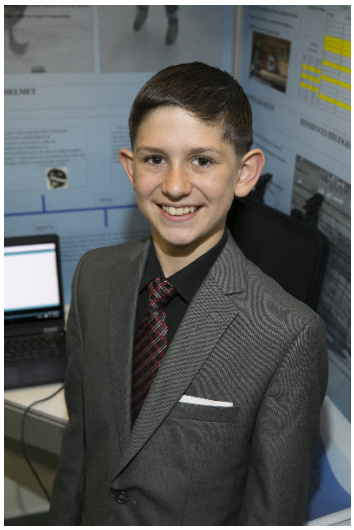
CWSF 2017 - Regina, Saskatchewan



Mac Smith

Head Start Concussion Alert System

Challenge: Innovation
Category: Junior
Region: Fraser Valley
City: Abbotsford, BC
School: Clayburn Middle School
Abstract: Head Start is an innovation involving circuits and coding. When integrated into a helmet, it will be able to alert officials (ie light or buzzer) when a player has sustained enough impact force to the head to cause a concussion. This will be helpful to all athletes who play contact sports and will hopefully reduce the number and severity of concussions.

Biography

Hi I'm Mac and I'm 12 years old! I Invented Head Start: Concussion Alert System. My innovation is a circuit which, when integrated into a helmet, will be able to alert officials when a player has sustained enough impact force to the head to cause them a concussion. I have played hockey since I was five and had two concussions, so I decided to help out athletes like me. I thought, "Wouldn't it be cool to have a device to detect a concussion to take the player off the ice sooner rather than getting hit again?" At first it seemed like a dream but after further research I found that this is possible! With the help of my dad, driving to Vancouver and helping me get the supplies, I created my first circuit. I also needed help from a professor at UFV to create a fully working circuit with a light and buzzer. Eventually, I want to integrate this into a helmet! My advice to young scientists is to do a project related to you. The coolest part about my project to me is that this could help me and my friends- which is very rewarding in the end!

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