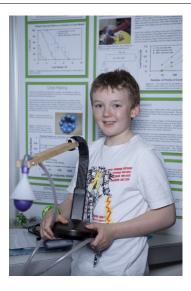


## CWSF 2013 - Lethbridge, Alberta



## Biography

My name is Nicolaas Doyle. I am a grade 7 student at Grand Avenue Public School in Grimsby, Ontario. I'm on a swim team and play water polo. I also play baseball or soccer in the summer. I play saxophone in a beginner jazz band. My favourite hobbies are racing RC cars and riding my scooter. I got the idea for my project from my mom who is a physicist. She went to Boston for a conference and attended a presentation on a Universal Jamming Gripper. My mom told me about it because she knows I am very interested in robotics, and so I decided to investigate it further as my science fair project. For future work I would like to give my gripper remote mobility. The advice I would give other students about doing a project is to do something that you know will really capture your interest so that you will be excited to work on it for most of the school year.

## **Nicolaas Doyle**

## Jammed Up! Investigating a Universal Jamming Gripper

Challenge: Innovation		
Category:	Junior	
Region:	Niagara	
City:	Grimsby, ON	
School:	Grand Avenue E.S.	
Abstract:	Granular materials are made of many particles of the same substance, and have a jamming transition which turns them from fluid-like to solid-like when the particles pack so closely that they can no longer move. A universal gripper was built based on the jamming process which can successfully pick up objects of different geometry. Its performance was evaluated as a function of particle size.	

Awards	Value
Excellence Award - Junior - Bronze Medal	\$100
Sponsor: Youth Science Canada	
Western University Scholarship	\$1 000
Bronze Medallist - \$1000 Entrance Scholarship	
Sponsor: Western University	
Total	\$1 100



Youth Science Canada PO Box 297 Pickering ON L1V 2R4 www.youthscience.ca / info@youthscience.ca 416-341-0040

