

# CWSF 2011 - Toronto, Ontario



## Steven Liu, Kevin Peng

### The Germ-inator

**Challenge:** Information

**Category:** Junior

**Region:** Waterloo-Wellington

**City:** Waterloo, ON

**School:** Centennial P.S.

**Abstract:** The purpose of this investigation was to identify a natural preservative that can preserve foods and other edibles effectively without posing any health risks, therefore acting as a replacement for synthetic preservatives. Two factors were considered to determine the effectiveness of a preservative: bacterial concentration and size of antimicrobial ring. It was concluded that the preservatives lemon rind, garlic, and salt are an effective alternative.

### Biographies

Steven - Steven is an active grade 8 boy in Waterloo, who goes to Centennial Public School. He has several hobbies which include basketball and chess. Steven plays on the Waterloo Wildhawks, the Waterloo rep basketball team. He also enjoys to play chess. He is currently the 8th top rated chess player in Canada for his age group, which is Under 14 Boys. This is Steven's second year participating in a science fair in secondary school. It is also his second experience at the CWSF.

Kevin - Kevin Peng is a grade 8 student at Centennial Public School. He is currently in the congregated gifted program. He continues to be involved in school art and science clubs, as well as the mentor program and athletic council. He enjoys playing musical instruments, which includes the electric guitar, acoustic guitar, piano and trumpet. He is not quite sure about his future post secondary career plans, however he enjoys math, science and arts. In the Waterloo-Wellington Regional Science Fair, Kevin and his partner, Steven, won numerous awards, including a gold medal and best in division. In previous years, they also won the Sir Issac Newton Jun...

### Awards

### Value

Challenge Award - Information - Junior Sponsor: Intel of Canada, Ltd.	\$500
Excellence Award - Junior - Silver Medal Sponsor: Youth Science Canada	\$700
The University of Western Ontario Scholarship Silver Medallist - \$2000 Entrance Scholarship Sponsor: University of Western Ontario	\$2 000
<b>Total</b>	<b>\$3 200</b>