

## CWSF 2015 - Fredericton, New Brunswick



### Ashna Jain

#### The 3rd Wheel

**Challenge:** Innovation

**Category:** Junior

**Region:** Waterloo-Wellington

**City:** Guelph, ON

**School:** John Galt Public School

**Abstract:** The 3rd Wheel bicycle enables children in developing countries to attend school by reducing their time spent transporting water by eight times. A cost-effective, sustainable solution was designed by considering the type of bicycle, the container size, shape and material, and the attachment location of the container to the bicycle. Using the principles of physics, including forces and work, an optimal design was determined.

#### Biography

Ashna Jain, a grade 7 student at John Galt Public School, Guelph, Ontario, is inspired to make a positive difference in the world. Her inspiration is derived from her travels to over 40 countries worldwide and by being a part of Free the Children, a global organization that focuses on ending inequality in the world. Ashna is a leader in her school and is heavily involved in a variety of activities from initiating and being editor of a first ever school newspaper, to helping run a pizza business, to participating in sport teams and committees. She has been honored the Grade 6 Valedictorian Award, OPC's Principal's Award for Student Leadership and a Free the Children Recognition. Ashna aspires to be an engineer or architect designing sustainable solutions for developing countries. This year was her first experience at a science fair. Ashna designed an affordable, sustainable water carrying bicycle system, called the The 3rd Wheel, that enables children in developing countries to attend school by reducing their time spent transporting water by eight times. Stories from Free the Children inspired her project, and as a next step she plans to create a business case for its implementation.

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