

# STEP-UP: PROMOTING YOUNG WOMEN IN PHYSICS

Joe Muise

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## ABSTRACT

In many parts of the world, the number of young women pursuing physics degrees trails behind the number of young men. Participants in this workshop will examine the worldwide context of the state of women in Physics across multiple countries. A view of the global landscape and how we fit into it as physics teachers will be emphasized. This will then be coupled with a statistical breakdown of how women move through Physics training. This will help highlight the importance of the secondary education Physics teacher as a pivotal influencer towards addressing why women are not entering the Physics education at the collegiate level at comparable rates to their participation at the secondary level.

Participants will then be introduced to the STEP-UP Project goals and the structure of the program, which is an initiative comprised of physics educators, researchers and professional societies that created high school physics lessons to empower teachers, create cultural change and inspire young women to pursue physics in college. The participants of this workshop will start with a hands-on exploration of the first lesson provided by STEP UP, which is a Careers in Physics lesson designed to help students assess their personal values in relation to a career in physics, examine profiles of professionals with physics degrees, and envision themselves in a physics career. This lesson is important preparation for a class before engaging in the second component, the Women in Physics lesson, in which students examine the conditions for women in physics and discuss gender issues with respect to famous physicists, gendered professions, and personal experience to neutralize the effect of stereotypes and bias, and make a classroom commitment to support one another. Participants will continue by examining some general strategies about how to support girls in their classrooms through the STEP-UP Everyday Actions guide. Lastly participants will share opportunities from their own countries that are can further encourage young women to pursue physics as a field of study.

Intended Audience: High School Teachers

## PRESENTER



Joe Muise is a high school physics teacher in Burnaby, British Columbia, Canada. His passion for physics education has lead to a large increase in physics enrollment at his school, with much of that growth happening in the number of young women in these courses. One of Joe's main goals in his classroom is getting students up and out of their desks experiencing physics, rather than just talking about it. By doing this, he encourages all of his students to see themselves as physicists, whether they are planning it as a field of study or not. Joe has been recognized with awards from the Canadian Association of Physics Teachers, the National Science Teaching Association and the Prime Minister of Canada.

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