4-9-2014

Improving Female Science Scores Through STEM Curriculum

Erin M. Yacovoni
University of Dayton, stander@udayton.edu

Follow this and additional works at: http://ecommons.udayton.edu/stander_posters

Part of the Arts and Humanities Commons, Business Commons, Education Commons, Engineering Commons, Life Sciences Commons, Medicine and Health Sciences Commons, Physical Sciences and Mathematics Commons, and the Social and Behavioral Sciences Commons

Recommended Citation

This Book is brought to you for free and open access by the Stander Symposium at eCommons. It has been accepted for inclusion in Stander Symposium Posters by an authorized administrator of eCommons. For more information, please contact frice1@udayton.edu, mschlanger2@udayton.edu.
Improving Female Science Scores Through STEM Curriculum
Erin M. Yacovoni
Mary Kay Kelly Ph.D.
Teacher Education

Background:
• Science, Technology, Engineering, Mathematics (STEM) is an integrated curriculum that focuses on higher level thinking (2013, Basham & Marino)
• Focuses on real world application, career skills and information on careers
  - This utilizes the Engineering Design Process
• In the USA we rank 25th in mathematics and 17th in science (2013, United States Department of Education)
• Increase of STEM Careers each year
• Gender roles and self-efficacy plays a role in females thinking about success in STEM
• New curriculum calls for an integrated and real-world application

Survey and Results:
• A survey among Dayton Area Middle School (5th-8th grade) mathematics and science teachers was conducted
• Teachers took a short survey that focused on their teaching methods and how their males and females view their subject
• Teachers found that females enjoyed the hands-on activities and males enjoyed the problem solving. Both genders enjoyed team work.
• Approximately 25% of female students said science was too hard
• Approximately 50% of female students are interested in pursuing a degree in STEM
• Approximately 75% of female students are active in the lesson

Conclusions:
• Females are more active in class
• Increased interest in STEM Careers
• Females breaking out of stereotypes
• Ties into current curriculum

Do you feel your female students are actively involved in your lessons?

- All of the time
- 75% of the time
- 50% of the time
- 25% of the time
- None of the time

Observed Percentage of Female Comments