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Fostering Physics Learning and Interest for Middle School Girls and Boys through STEM Integration

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It is well-known that women are highly underrepresented in the field of physics, typically comprising only around 25% of physics bachelor's degrees. Although many factors impact one's career decisions, one factor that is thought to play a significant role related to STEM careers is K-12 educational experiences. By exploring what those educational experiences are and how they impact students' interest and attitudes towards careers in physics and other STEM fields, educational researchers can shed light on understanding why few women choose to pursue STEM careers. Reforms in K-12 science education that push for a more integrated approach to science through the incorporation of other STEM fields in meaningful contexts provide an ideal opportunity to explore how such changes impact student interest. This is increasingly important for underrepresented populations in STEM, such as women. This presentation will focus on the perceptions of 6th grade students regarding physics and physics-related careers. This work explores similarities and differences of girls' and boys' perceptions of physics and physics-related careers through surveys and focus group interviews as they are immersed in a classroom that combines girl-friendly instructional strategies (Hussler et al., 1998; Newbill & Cennamo) with an integrated STEM framework (Moore et al., 2014). Understanding these perceptions may lead to identifying what type of classroom culture fosters students' interest and self-concept in physics, and may further reveal pathways to interest more young women in pursuing physics-related careers.