

Abstract Submitted
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Enhancing Amusement Park Physics Curriculum for USU Physics Day at Lagoon¹ JR DENNISON, PHIL LUNDGREEN, EMILY STALDER, BRENNE WILCOX, Utah State University — USU Physics Day is one of the Intermountain West region's oldest and largest STEM outreach activities. Held annually at Lagoon Amusement Park for the last 31 years, in recent years it has had annual participation of ~10,000 students and ~600 teachers from over 130 high schools and middle schools. To enhance the educational benefits for secondary students attending Physics Day, web-based STEM curriculum has been developed to support activities both during Physics Day and in the classroom before and after the one-day event. Amusement park physics accesses associative learning situations, and utilizes hands-on activities to apply basic concepts studied in physics and physical science classrooms; it also instills excitement about science by focusing on myriad real-world examples of physics principles so ideally demonstrated at an amusement park. It is not hard to motivate secondary STEM students to pick up their cell phones, climb on roller coasters with their classmates, and delight in doing physics. As a first step for our current efforts to rejuvenate the curriculum (<https://physicsday.usu.edu/>), we report on our evaluations of 12 years of teacher surveys and educator recommendations to identify the most looked-for and effective enhancements to the Physics Day contests and curriculum including physics topics, content, educational objectives, and incentives.

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