Abstract Submitted
for the APR18 Meeting of
The American Physical Society

Assessing the Impact of a Game-Centered, Interactive Approach for Using Programming Exercises in Introductory Physics[1] DEMETRIUS TUGGLE, CHRIS ORBAN, RICHELLE TELLING-SMITH, CHRIS PORTER, Ohio State Univ - Columbus, STEMCODING TEAM — Computer programming is an increasingly desired skill for all STEM fields, not just computer science. We created simple and interactive computer programming activities based on the physics of video games and integrated these into introductory physics classes. Importantly, these activities typically involve less than 75 lines of code. Students completed an online assessment before and after each activity to measure the students' comprehension of physics concepts and to gauge student perceptions about the activity, such as difficulty, level of enjoyment and whether it changes their attitudes about STEM. The target population ranges from high school students to first year college students. Data have been collected from introductory physics courses at two different universities. To aid in this work we have also launched the STEMcoding YouTube channel for instructors and students.

[1]Funding from an internal OSU grant and the Meggars award

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Date submitted: 12 Jan 2018 Electronic form version 1.4