

Abstract Submitted
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Development of Active Learning Curriculum for CASPER's Microgravity Drop Tower. JORGE CARMONA-REYES, LI WANG, CASPER, Baylor University, JUDY YORK, Region 12 Service Center, LORIN MATTHEWS, RENE LAUFER, MIKE COOK, JIMMY SCHMOKE, TRUELL HYDE, CASPER, Baylor University — As CASPER's new drop tower comes on line, plans for correlated educational research curricula are underway. CASPER's educational research team is working on developing curricula specific to the CASPER drop tower, modeled on a contest currently in use by (BEST) Robotics Inc. within central Texas independent school districts. The curricula integrates age specific use of computer programming software packages such as "Scratch" with industry standard communication protocols and augmented reality applications. Content is constructed around an earth and space science framework, covering subjects such as stars and galaxies, matter and energy, fusion and fission at a middle school level. CASPER faculty are partnering with the Region 12 Service Center; this combination provides a wide range of expertise that includes professional development, pedagogical methods, computational thinking in addition to microgravity and space science research expertise. The details of this work will be presented and samples of the manner in which it is impacting the CASPER research and educational outreach partnership will be discussed.

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