

Leveling Up

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EdGE and its commercial game design partner, GameGurus, are creating Leveling Up, a series of games on multiple media platforms. The Leveling Up games will use cutting-edge digital tools such as augmented reality and data collection apps on mobile handhelds (e.g., iPhones), creating a transmedia experience that supports and measures standards-based high school science. The game mechanics for Leveling Up games are based on such core science content as forces and motion, structure of matter, and diversity and adaptation of living organisms.

EdGE researchers will study Leveling Up to understand how social digital games commonly played outside of school can be used to support and measure players' standards-based high-school STEM learning. In order to do this, EdGE is designing, developing, and validating a set of game challenges (assessments) to measure individual players' STEM knowledge effectively and seamlessly within the evolving, ongoing game.

Along with the development of Leveling Up game elements, EdGE will work with a cohort of high-school teachers to design, develop, and test bridge activities that leverage STEM learning that takes place in out-of-school digital gaming and utilizes that knowledge in high-school science classroom activities. EdGE researchers will use the challenge assessments and bridge activities in an implementation study to understand what types of design and facilitation support high-school STEM learning in digital games.