knotch

App/Widget
www.knotch.it

Combine social networking, survey software and a mood ring and you'll get something approaching Knotch, a new social media app getting quite a bit of buzz around the Internet. Knotch offers a user-friendly platform for sharing opinions on the major newsworthy topics of the day. The service lets users write comments and then pick a color reflecting the overall temperature of their opinion. Knotchers may select a color ranging somewhere between dark red to dark blue, denoting highly positive to highly negative opinions, respectively. Educators can use Knotch to provide visual data on students' interest levels on news in the CTE world.

Don't Quit Playing: Video Games in the STEM Classroom

By Brian Jenkins

Recently, a much-touted study from the University of California, San Francisco suggested that playing video games can be beneficial for the human brain. As more researchers delve into the potential benefits of moderate video game use on children's brain development, the conversation has turned naturally into how educators can harness the power of video games for their classrooms, particularly in the fields of science, technology, engineering and math (STEM). With a seemingly endless flood of "edutainment" games entering the market, it can be difficult to know what games are right for your students. To get a sense of the kind of learning that can be fostered through video games, E-Connect will delve into how educators have used two popular video game franchises to enhance STEM learning.

Portal

The puzzle-platform game Portal has a simple premise: players control the protagonist Chell as she moves from room to room solving puzzles by using a handheld gun that makes, you guessed it, portals. The portal gun creates two distinct portal ends—one orange and one blue. The portals form a visual and physical connection between two different locations in a 3-D chamber; it is up to the player to move around boxes and other items via the physics of the portals in order to beat the puzzle. Chell must make her way through successive chambers, besting puzzles designed by the malfunctioning robot GLaDOS. Portal, and its sequel Portal 2, give players who have a strong understanding of physics and geometry an advantage in mastering the game.

Enter Teach with Portals (TWP), a free service devised by Valve, the developers of Portal. TWP provides a lesson plan library for educators to use Portal and Portal 2 to teach physics and mathematics. Lessons on TWP include gravity, momentum, velocity, oscillation, geometry and parabolas. Part of Valve's "Steam for Schools" campaign, TWP presents a model for how teachers can encourage STEM/video game collaboration inside the classroom and out. Visit **www.teachwithportals.com** for more information.

Minecraft

Teachers looking to have their students learn STEM lessons in a more interactive, online environment would do well to consider the popular game Minecraft, which is designed to foster exploration and
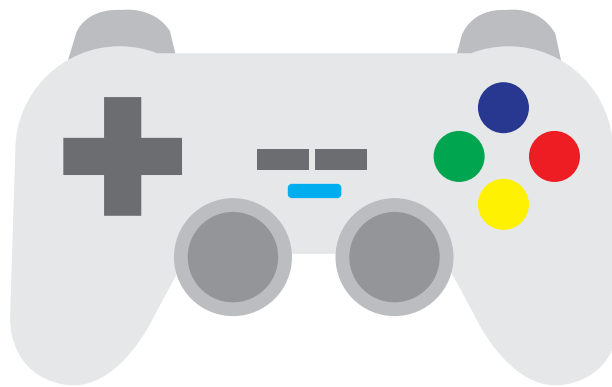
creativity. Minecraft is an open-world "sandbox game," meaning that the game player has no specific goals or objectives to fulfill while playing. Players have used Minecraft to build scale models of the Empire State Building and the Taj Mahal, reproductions of famous works of art and even a working calculator.

Minecraft players may choose one of two game modes: survival mode and creative mode. In survival mode, players have to forage for natural resources during the daytime in order to build protective shelter and otherwise survive. At night, players must withstand attacks from lurking creatures like zombies and spiders. The structures the players build are made up of hundreds of tiny blocks representing materials such as iron, wood and stone. Minecraft's creative mode removes many of the dangers of survival mode to allow players to focus on building large structures, freeing players to use the game to their creative potential.

Minecraft has no pre-set levels, no missions and no endpoint. It only ends when the user stops playing. It is no wonder then that STEM educators have turned to Minecraft for lessons regarding engineering, physics and mathematics. Sites like MinecraftEdu not only provide advice for how teachers can use Minecraft in their classrooms, but these sites also give advice for using the game to meet Common Core State Standards. Visit **www.minecraftedu.com** to find out how CTE educators are using the game to offer a unique, flipped 21st-century classroom experience. **T**

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