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Zombies Infiltrate Classrooms To Bring STEM Back To Life

Several weeks into the new school year, educators are tapping the undead to bring life to subjects in need: science, technology, engineering and mathematics (STEM). With a decline in student interest, especially among girls, teachers are incorporating popular trends in movies and TV shows into lesson plans.

The National Academy of Science and Texas Instruments, the company behind the large graphing calculators, teamed up to create STEM Behind Hollywood, a program that creates STEM lessons based on zombies, superheroes, space and forensics. The goal is to engage middle and high school students with things they are excited to talk about.

The first theme in the four-part activity is focused on zombies and is centered on the idea that a hypothetical virus is infecting humans. Imagine that



Courtesy of STEM Behind Hollywood.

distinctive shuffle that is commonly used in zombie shows or movies — excluding the terrifying brain-eaters from the "28 Days Later" series. Students can observe a zombie's behavior and deduce that something is wrong with the cerebellum, the part of the brain involved with walking. From there they can work backwards to reverse engineer a zombie brain and learn how a healthy brain operates. From the math angle, students can track how the contagion spreads to write an equation showing the curve of infection rates.

"The activity teaches the concepts and then gives them the ability and opportunity to apply that to real-world situations," said Melendy Lovett, the president of Texas Instruments' <u>Education</u> Technology. "This is the kind of experiential learning that gives students a deep understanding of the

concept."

STEM Behind Hollywood hopes the lessons will ignite curiosity about STEM careers, an area that is expected to see a 17% jump in employment opportunities by 2018, according to the U.S. Department of Labor. But interest in the subjects is diminishing among teens. Almost half ranked STEM and medical-related jobs as their first choice, a 15% decline from last year's figures, according to the <u>Junior Achievement USA and ING U.S. Foundation's 2013 Teen & Careers survey</u>.

"The major interest is to improve student achievement in STEM and build a pipeline of STEM capable students," Lovett said. "The STEM area is the fastest growing area for jobs and having this pipeline of STEM talents will be important."

Math and science educators teamed up with specialists in the featured themes, like Dr. Steve Schlozman, an assistant professor of psychiatry at Harvard Medical School and expert on zombie neurobiology. Gurus in forensics, space and superheroes were also tapped to help create STEM Behind Hollywood.

Zombies have been staggering their way towards students' brains for some time. Dorothy Pomerantz wrote about the <u>new open online course on 'The Walking Dead'</u> and classes on the undead already offered at Columbia College in Chicago and Baltimore University.

STEM Behind Hollywood is available to teachers and students on a free TI-Nspire software trial, the technology made by Texas Instruments, but children who purchased the graphing calculator get the software included at no extra charge. There is also an app available for the iPad.

The program went live on Aug. 8 and has already received about 2,300 downloads (based on the time of publication). The zombies program is underway and the other themes will go live later this fall. Texas Instruments is currently developing a plan to extend the program through 2014.

Katie Martinez, a high school educator who teaches predominately lower level students in San Diego said she started using the program in the second week of school to excite her pupils.

"This is an outlet they are familiar with and comfortable talking about," said Martinez, 33, who uses the program in her algebra class. "It's easy to relate that to what we are studying in class and brings it more to life for them and makes it more accessible."

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