

New Minecraft modding software revolutionizes the way we teach kids coding

December 18 2014, by Ioana Patringenaru



Screen shot from a LearnToMod demo showing how to create a lightning strike within Minecraft.

A new e-learning software, developed by San Diego education start-up ThoughtSTEM, teaches K-12 students how to code by allowing them to write mods ("modifications") to the popular video game, Minecraft. The software, called LearnToMod, was recently tested by over 1,000 Beta users and 100 teachers, and the final release of LearnToMod is slated for Jan. 15, 2015. ThoughtSTEM was co-founded by computer science Ph.D. students Stephen Foster and Sarah Esper.

LearnToMod, a software that allows users to learn programming inside

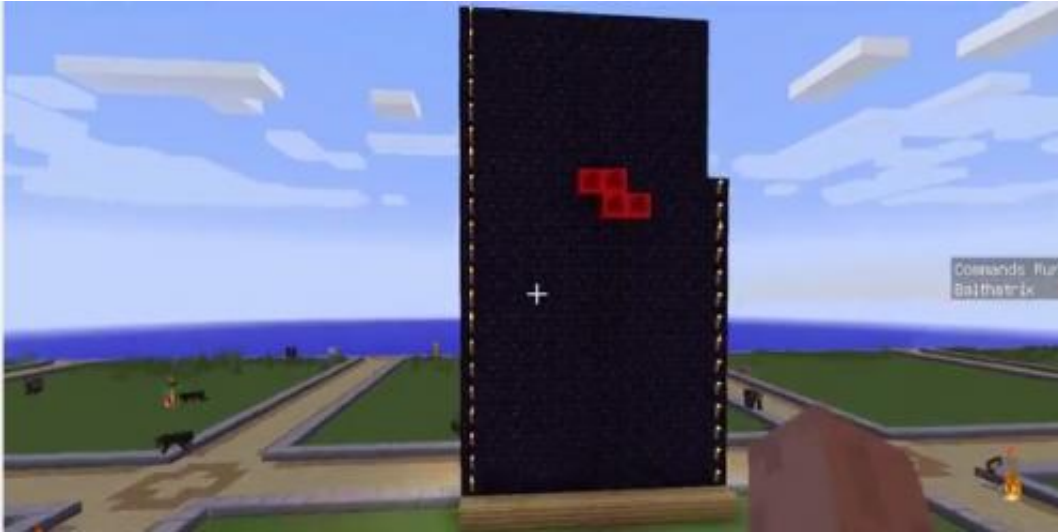
of the popular computer game Minecraft, is now available to preorder for \$30/year at <http://www.learntomod.com>. The software will be delivered Jan. 15.

LearnToMod seeks to inspire a new generation of young programmers by allowing [students](#) to explore their favorite [video game](#), Minecraft, in a new way. The software allows students to learn the fundamental concepts of programming while they add new features (called "mods") to Minecraft.

"Students have been coming into our classrooms for years raving about Minecraft. It dawned on us that the video game could be the perfect tool for teaching kids how to code," said Foster, ThoughtSTEM CEO and lead software developer.

ThoughtSTEM has been teaching kids across the greater San Diego area how to code for the last two years. More recently, ThoughtSTEM has put their energy into developing LearnToMod, a software for teaching kids how to mod (i.e. code) Minecraft.

With LearnToMod, students learn how to code through hundreds of video tutorials and puzzles that teach them everything from how to create houses at the click of a button to how to design games within the game, like Portal or Tetris. Students can even create custom blocks and items within Minecraft by importing new textures. Soon, the software will allow students to program the artificial intelligence of entire "bot" armies.



Screen shot from a LearnToMod demo showing how to create a game of Tetris within Minecraft.

"Kids all over the world love Minecraft. Unlike most other video games, Minecraft is completely moddable, which gives it the potential to be a great educational tool. Now, LearnToMod is teaching kids around the world to code through Minecraft," said Esper, CTO of ThoughtSTEM. "In the past two months, over 100,000 lines of code have been written by LearnToMod Beta users. We've never seen kids so motivated to learn coding."

For the last three months, over 1,000 kids from 44 countries have been Beta testing the LearnToMod software. LearnToMod is also being tested by over 100 school teachers in classrooms across the United States.

"We're developing tools to make the software really easy for teachers to use. We want to empower teachers to be able to create classroom activities and custom lesson plans inside of Minecraft," said Foster. ThoughtSTEM is currently offering the software for free to low-income schools, encouraging them to teach coding in the classroom.



Screen shot from a LearnToMod demo showing how to create a game of capture the flag within Minecraft.

The LearnToMod software implements the best practices learned by the Computer Science Education research community in its coding tutorials and puzzles. LearnToMod developers, Foster and Esper, are PhDs specializing in Computer Science Education, with over 15 years of experience developing curriculum and writing software and games for teaching coding. The [software](#) aims to make the act of learning how to [code](#) as active and engaging as possible.

Provided by University of California - San Diego

Citation: New Minecraft modding software revolutionizes the way we teach kids coding (2014, December 18) retrieved 3 October 2025 from <https://phys.org/news/2014-12-minecraft-modding-software-revolutionizes-kids.html>

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