PCS edventures!™

Experts in Hands-On **STEM** Education

Discover Blocksmith: 3D Coding & Design
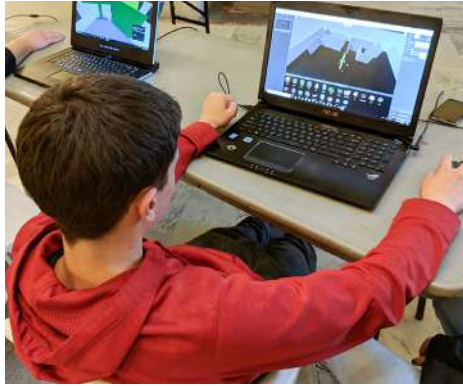
Grades 4-12

CURRICULUM SAMPLE

DISCOVER

edventures.com

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(800) 429-3110

DISCOVER

PCS edventures!™
Experts in Hands-On STEM Education

Discover Blocksmith:
3D Coding & Design

GRADES: 4-12

STUDENTS	TIME
Groups of 30, 75, or 150	12+ Contact Hours

SUBJECTS	SETTINGS
• Technology • Robotics & Coding	• Summer camps • Classrooms • Before & After-school programs • Homeschool

Using step-by-step lessons, and **differentiated instruction**, this **scaffolded** program allows learners to create, share and experience computer science and video game design in virtual reality–no prior experience required.

📅 annual subscription

TECH REQUIREMENTS

• 1 device per student recommended. BlocksmithXR Builder software is compatible with Windows, macOS and Chrome OS devices. (Scan QR code for full tech requirements)

PRICING OPTIONS

Each program includes 1 Instructor Guide and a 1-year license* to Blocksmith, which grants access to the Blocksmith Content Library and customizable workspace.

• 30 Group License: $400^{00}
• 75 Group License: $850^{00}
• 150 Group License: $1,500^{00}
• 10 Group Add-On: $120^{00}
• VR LAB: $3,250^{00}

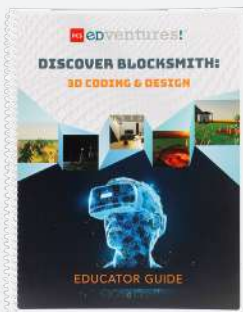*License renews yearly. Ask a STEM Program Specialist about 3-year licensing options.

SCAN OR CLICK QR CODE FOR:

PRODUCT ORIENTATION	FULL MATERIAL LIST	STANDARDS & ALIGHMENT

COMPLETE PROGRAM

*laptop not included

PRINT MATERIALS

edventures!
DISCOVER BLOCKSMITH:
3D CODING & DESIGN

EDUCATOR GUIDE

SAMPLE BUILD

CONTACT US:

Call: **(800) 429-3110**
Email: **sales@edventures.com**
Web: **edventures.com**

Rev: 11/28/23

Collectible Items, Object Spawners & Intermediate Level Design

STEM CONNECTIONS

Technology: Empowered Learning

DURATION

60 Minute Lesson

MATERIALS

- **Internet-connected devices with *Blocksmith Builder* installed** (1 per student)
- **Computer connected to projector** (optional)
- **VR viewer(s) with *Blocksmith Viewer* app installed** (optional)

SCHEDULE

- Welcome (10 min)
- Blocksmith Builder (45 min)
- Wrap-Up (5 min)

OBJECTIVE

Get creative with the *Frog Game, Squashing Slugs* or *Royale Legends! 1/2* quests.

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ALIGNED STANDARDS

ISTE

1d Students understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.

21ST CENTURY SKILLS

- Creativity and Innovation
- Information, Media and Technology Literacy
- Initiative and Self-Direction

HABITS OF MIND

- Creating, Imagining, Innovating
- Persisting

KEY TERMS

- **Static Object:** objects or things that do not move.
- **Variable:** fine-tuning in-game factors such as health bars or player score. An element, feature or factor that is liable to vary or change.

BACKGROUND INFORMATION

In 1981, Konami introduced the video game *Frogger*, a worldwide phenomenon and classic arcade game from the golden age of video games. Even with the advent of new technology, the game has remained a favorite of new and experienced gamers, making a solid comeback with the mobile game *Crossy Road*. Besides being an icon of video game history, *Frogger* is worth studying due to its changes in controls and modernized gameplay — and the VR crossover is unlike anything learners will have experienced before. In virtual reality, you're the frog, and it's up to you to hop for your life. The cars are life-size, fast and terrifying and the game is downright fun!

DAILY PREP

- Review the day's quests and be prepared to help with ambitious amphibians, slugs and battle royales.

STEP-BY-STEP DIRECTIONS FOR INSTRUCTORS

Group Discussion

WELCOME

Welcome back to *Blocksmith*! Today, learners continue their video game building, this time remaking a classic arcade game or designing a brand-new one. Once everyone has settled in, get the class excited to get to work by posing these discussion questions:

- Do you know any video games that are remakes of classic games?
- What has changed from the classic to the modern game?

When everyone is ready to start hopping, squishing or battling, direct learners to their computers.

Individual

BLOCKSMITH BUILDER

Make sure everyone has logged into the online curriculum and found the instructions for the day. Be prepared to help the class as they work through the new editing techniques.

Blocksmith Technical Advice:

- It took almost a decade for designers and players to understand the potential of mobile (smartphone/tablet) games. With limited playspace and an audience's appetite for endless gameplay, your learners should be inspired to try what the *Crossy Road* developer did: create a fantastic version of an old arcade game that takes players by storm. VR offers many new aspects to this classic game and the *Blocksmith* system makes it easy to explore the new frontiers.

- The Free movement option in the *Blocksmith Builder* allows all of these games to be played in VR. However, some positions of objects and workings of game mechanics may need to be changed in order for the game to work in VR. For example, in the *Frog Game*, the collectible objects need to be close to the ground since the VR player's free teleport ability moves them directly through the trigger, rather than entering it. Whenever something doesn't work in a game, for VR or otherwise, the best first step is to make a few changes and see if it still occurs. You can generally determine the problem after making a few tweaks.

Note: if your learners are eager to continue their classic video game experience, look for the optional extensions in the online curriculum to extend the day's lesson.

Frog Game	Squashing Slugs	Setup Battle Royale Game
• Select the Highway Template	• Load the Create a Crop Experience and Remix	• Battle Royale!
• Change the Player's Size and Movement to be like a Frog	• Change the Animation Settings on the Crop and then Tag It	• Open your Scavenger Hunt Game
• Make Cars that Drive on the Highway and Respawn the Player	• Add the Crop to a Spawner and Duplicate the Spawner	• Obstacles and Buildings
• Add Flies you can Collect	• Duplicate the Crop Spawner	• Rising Tide
• Create Non-moving Obstacles	• Create a Tagged and Anchored Fence	• Optional Extensions
• Add Game Won and Game Over Scenes	• Design a Garden Pest	• Save and Submit your Experience
• Create a Scoreboard	• Add Spawners that Launch Slugs	
• Make a Countdown Timer	• Make a Handheld Hammer to Remove Pests	
• Complete your Game with Extra Opponents	• End the Game with a Text Box that Shows Scores	
• Optional Extensions	• Optional Extensions	
• Save and Submit your Experience	• Save and Submit your Experience	

Group Discussion

WRAP-UP

Once everyone has saved and submitted their work, gather together to wrap-up the day. Ask volunteers to share what they learned and what they want to remember for the next day.

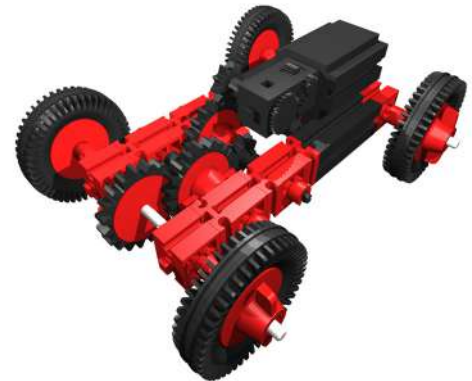*Image captured from Blocksmith's Classic Games Quest online curriculum*

Need a Custom Solution?

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Brick LAB

STEAM ENRICHMENT

DISCOVER

DRONES