Frog Game

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 installed (optional)

SCHEDULE
• Welcome (10 min)
• Frog Game (45 min)
• Wrap Up (5 min)

OBJECTIVE
Remake a classic arcade video game with a new viewpoint twist.
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 strong comeback with the mobile game Crossyroads. 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 quest and be prepared to help students as they experiment with ambitious amphibians.
Welcome

Welcome back to Blocksmith. Today, students will continue their video game building, this time remaking a classic arcade game. 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, transition to the Frog Game activity.

Frog Game

Have the class log into the online curriculum and load the crossroads template in Blocksmith Builder. Be prepared to help your learners as they work to bring a staple of video games to virtual reality.

General 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 Crossyroads developer did: create a fantastic version of an old Arcade game that it takes players by storm, one that even won the prestigious Apple Design Award. 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 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 students are eager to continue their classic video game experience, look for the optional extensions in the online curriculum to extend the day’s lesson.
WRAP UP

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