

# VR Game Builder <sup>Part 1</sup>

Grades

4-7

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\*Requires accounts with CoSpaces Edu Pro and Tinkercad



Difficulty **3**



3-45 minutes



small group

**Tags:** Game Design, Design Thinking, STEAM, Prototyping

## App/Tech Tools

CoSpaces Edu Pro accounts, Tinkercad account, MERGE Cube (optional), MERGE Headset, device (phone/tablet)

## Materials

### Learning Objectives

- Use tools or technology to explore and create patterns and relationships, and test conjectures.
- Develop, demonstrate, and apply mathematical understanding through play, inquiry, and problem solving.
- Construct a first version of the product or a prototype, as appropriate, making changes to tools, materials, and procedures as needed

## Activity

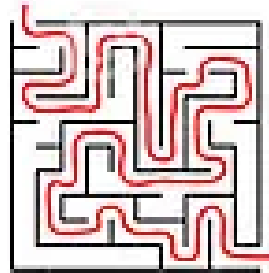
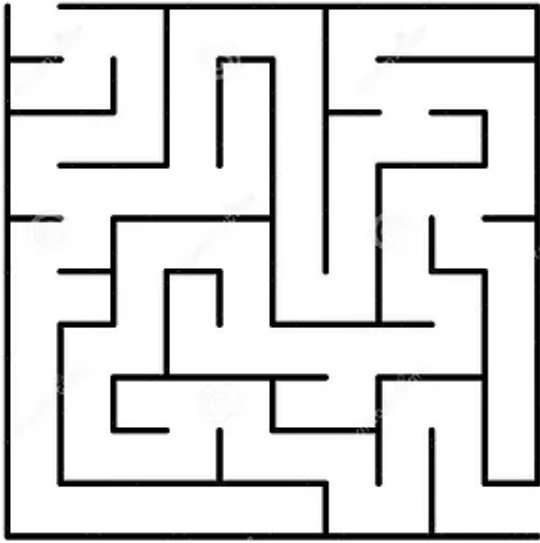
This is a 2 Part lesson that will take your students through the steps to build their first VR game. Part 1 will teach them the basics of movement and variables. Part 2 will look at lists and event handlers. By the end of the two lessons students will have a variety of tools they can draw from to take their game in multiple creative directions. These lessons integrate Language Arts, Math, Computer Science and Art.

1. Start by having students open their CoSpaces account, they will be learning the basics of movement in these instructional videos below:

VR Game



2. Next ask students to design their own maze using a paper and pencil.



3. Students can then proceed to their CoSpaces account and build their maze, following the videos below:

Building a Maze



Coding Robot Movement



4. Next, the students will be building a room with a key that will open a door. To create this, the students will be learning about coding and variables. The students can proceed to watch the instructional video below on how to create the scene and code it.



5. Next, the students will add a room with multiple keys using the video explaining how to use variables in coding below:



## Extension Idea

- The Students will be creating their own 3D key in Tinkercad to use in their scene. They could also create other objects to place into their game. Have students log into their Tinkercad account then proceed to the video below to build the key to bring into CoSpaces:



## Suggested Questions

- Could you hide the key around the room to make it more difficult to find?
- The key does not have to be a flat picture; could you create a key in Tinkercad or find one on Google Poly and bring it into the scene?
- What items can you bring into the room to make it look more like a room? Examples: paintings, desks, chairs, etc
- What other ways can you enter the room? Can you use another object or click on a certain object to activate the door?

