

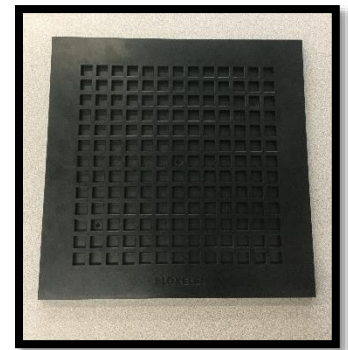
## Using Bloxels in the Classroom

### Introduction and Getting Started: What are Bloxels?

**With Bloxels, you can use the concept of game design to tell stories!**

#### **Bloxels Grid Board**

Each Bloxels set consists of a 13 x 13 grid board, bags of various colored blocks, and the Bloxels Builder app. You will need an app to turn your blocks into a game. The app can run on an iOS device, an Android device, or a Kindle. They are working on developing an app for Chromebooks.



#### **Blocks**

The colored blocks are used to create room layouts, characters, backgrounds, and other elements for your game.

These blocks are placed inside the grid to create individual room layouts for your



game, which enables students to use their creativity. Games can consist of just one room layout, or multiple rooms can be placed next to each other to create a larger game layout. Each game can consist of up to 169 room layouts.

In addition to creating rooms, students can create their own art assets such as characters and backgrounds using the grid and colored blocks. Terrain, hazards, coins, enemies, and power-ups are examples of game elements that students can modify and create into their own personal art assets. Students can add specific story blocks to begin the game, create checkpoints, describe game elements, and bring the story to a conclusion.

#### **Bloxels Builder App**

Once your room layout is designed, use the Bloxels Builder app to capture the board and make your design come to life! The app allows students to transform their design into a useable game. The app can be used on an android or iOS device, and even with Chromebooks.

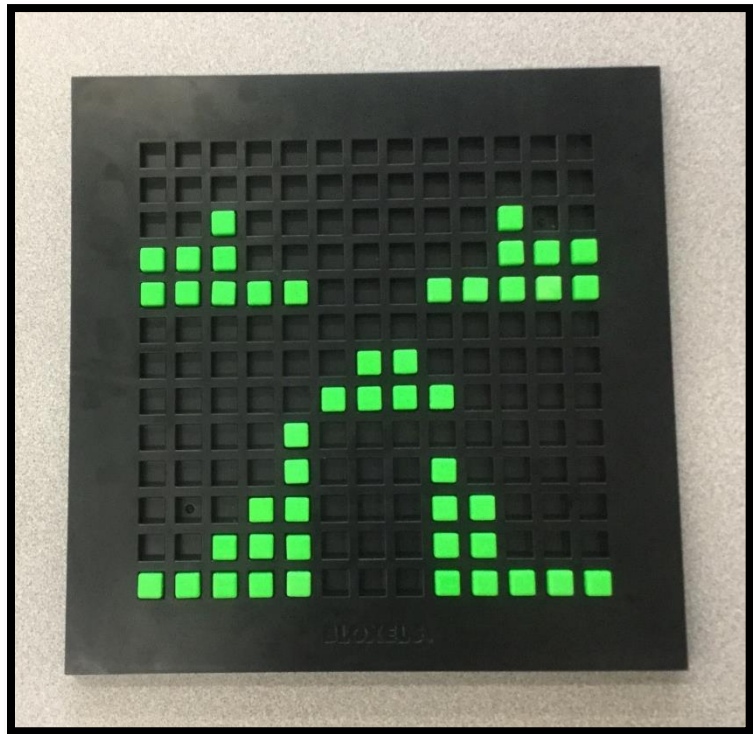


## Creating a Simple Board: The Basics of Using Bloxels

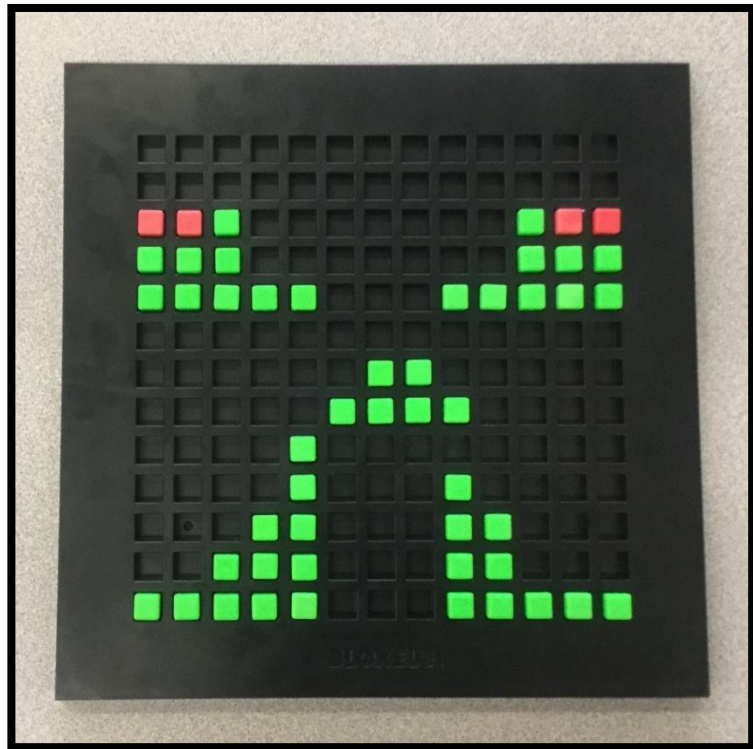
### Create a simple board

To create your board, first you need to think about what you want your game to look like. In our tutorial, we have designed a simple game for you that will illustrate how to use each of the blocks. Build your board to match ours as you learn about what each block does.

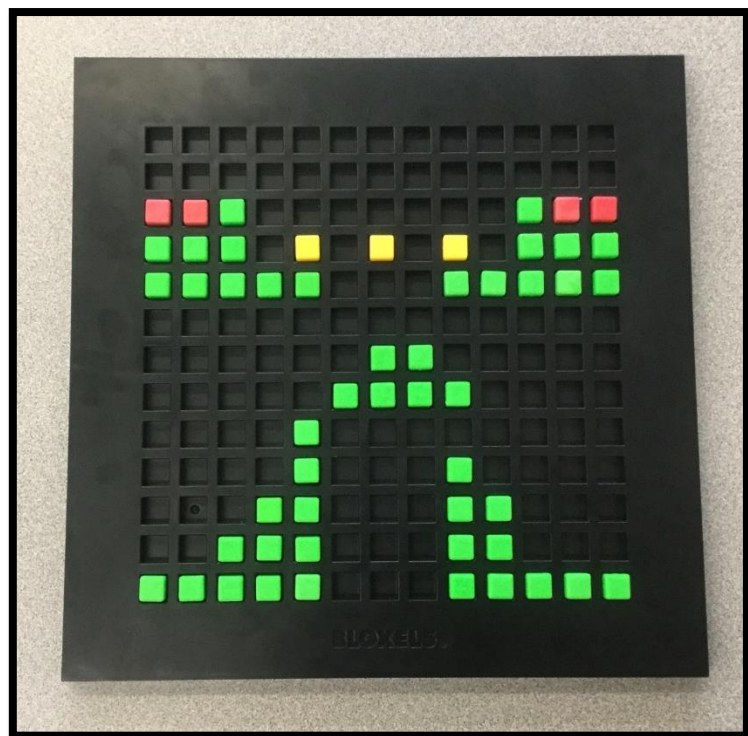
**Green Blocks:** These are TERRAIN blocks. Your character will be able to run and jump on these blocks. You will most likely use many green blocks in your game design.



**Red Blocks:** These are HAZARD blocks. The hazard blocks will cause significant harm to your character.

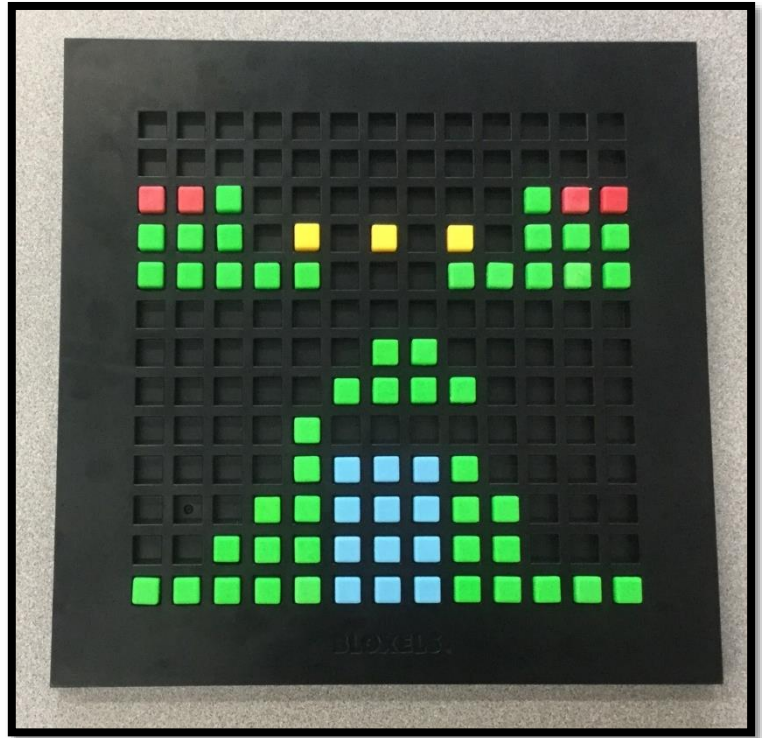


**Yellow Blocks:** These are COIN blocks. The coin blocks will allow the character to earn money or points.

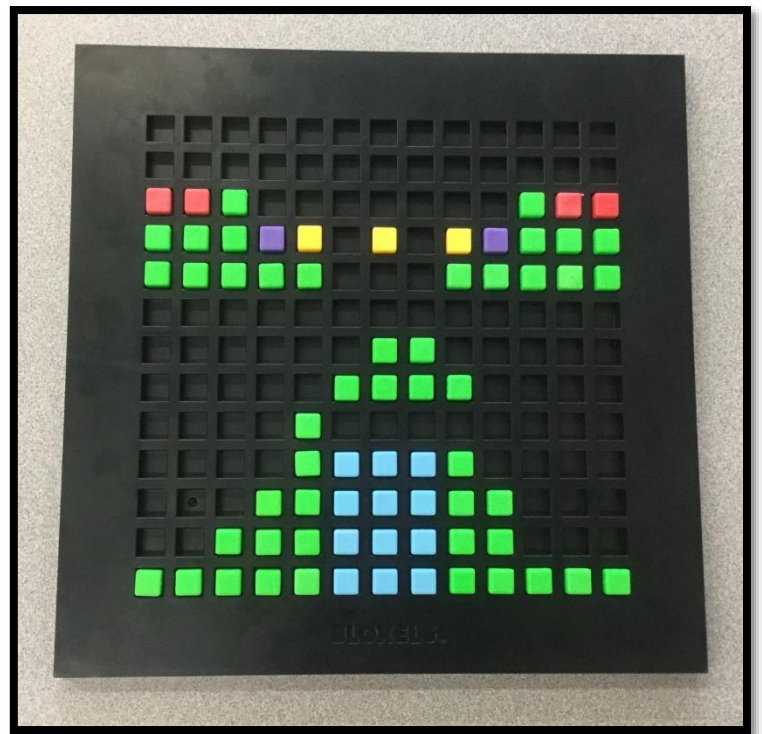




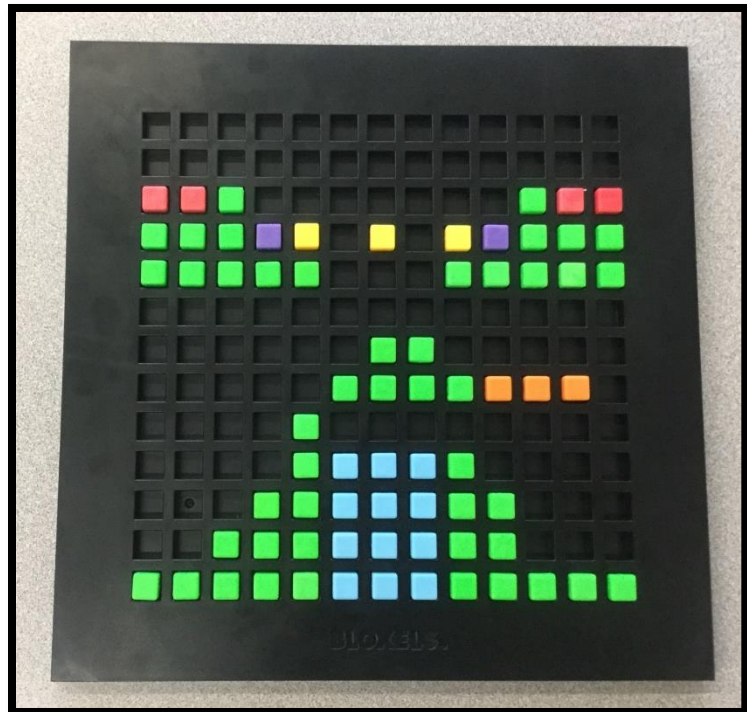
**Blue Blocks:** These are WATER blocks. Your character will be able to swim in the water, however swimming through the water is slower than running and jumping on the terrain blocks.



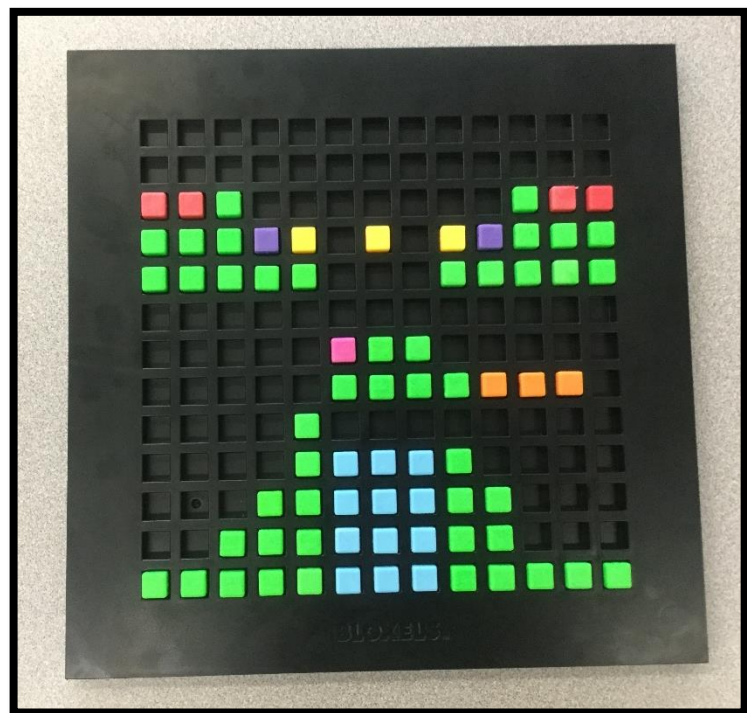
**Purple Blocks:** These are ENEMY blocks. Enemies can walk or fly, and more advanced enemies even can think for themselves.



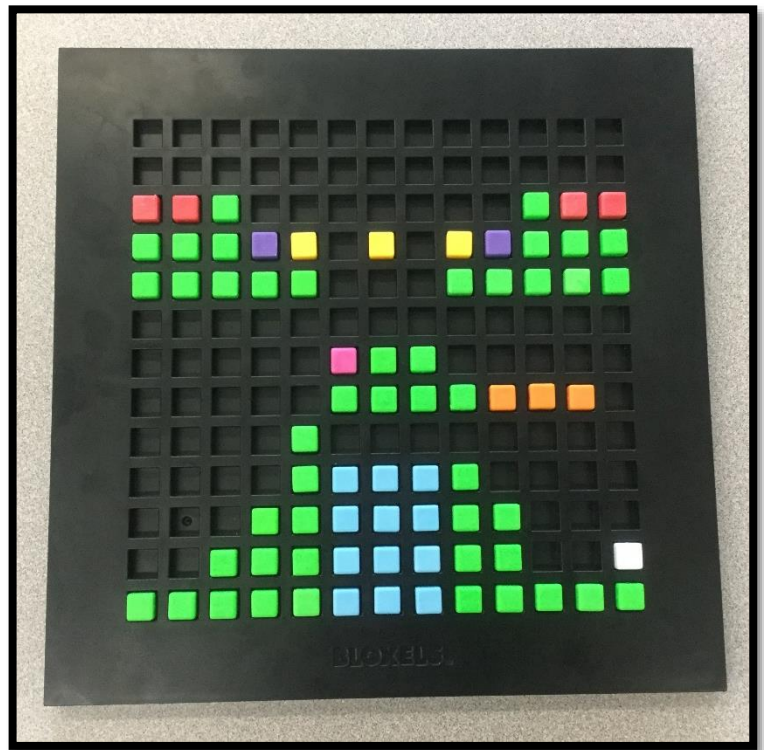
**Orange Blocks:** These are EXPLODING blocks. These can be used if you want areas in your game that are blocked off and can only be accessed after the blocks are exploded.



**Pink Blocks:** These are POWER UP blocks. These help your character earn more life or earn items that will help them move faster throughout the game such as a jet pack.



**White Blocks:** These are the STORY blocks. These blocks allow you to add text throughout the game. They are also used as checkpoints throughout the game, or as the end to the game.





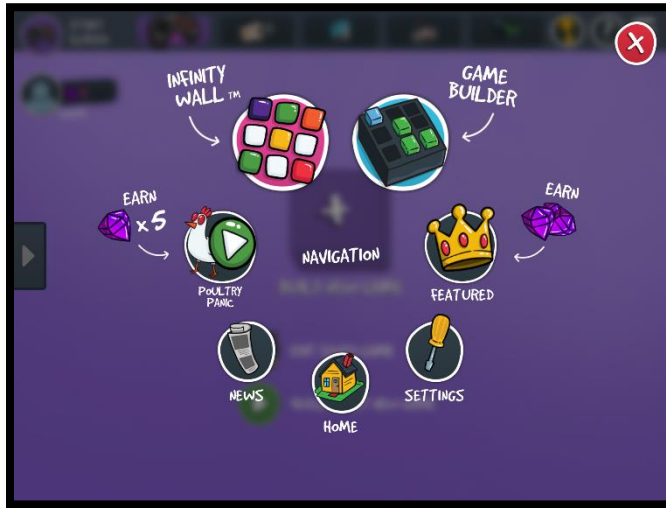
## Using the Bloxels Builder App

### Importing your Board into the Bloxels Builder App

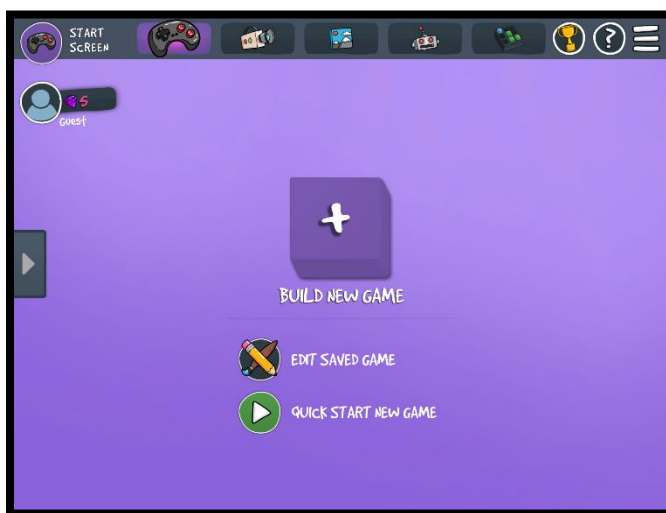
Now that your board is complete, it is time to begin the transformation from a design to a game.



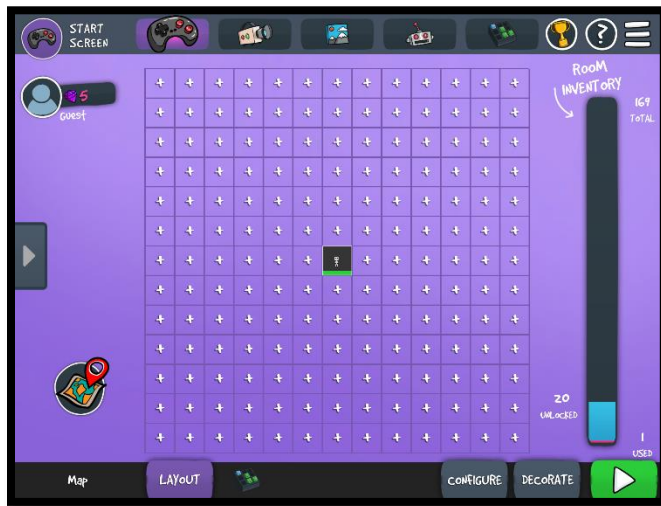
Open the Bloxels Builder App



When the Navigation screen opens, click the Red Circle with the white X in the upper right corner to close it.



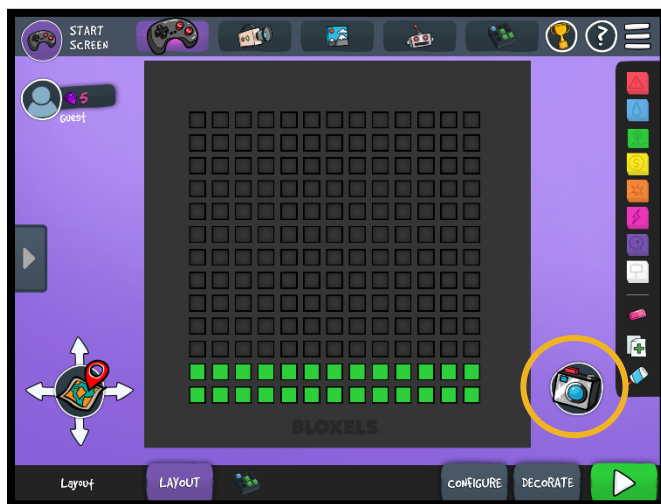
From the STRAT screen that opens, choose Build New Game



There will be a grid that opens with a black square in the middle.

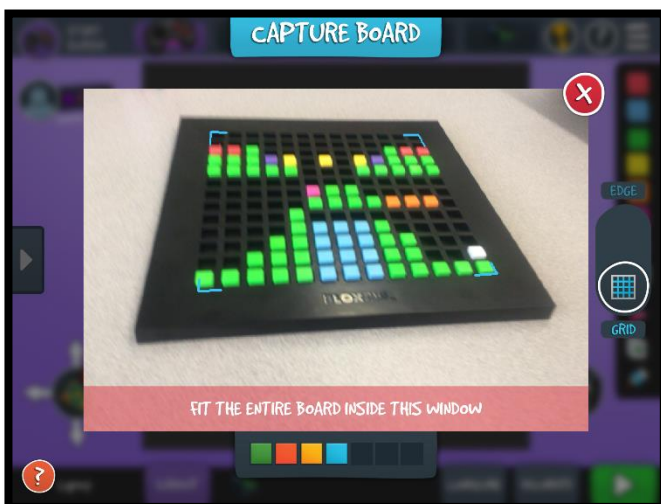
Choose the black square. This will be where your board is inserted for this game.

OR - Click on any one of the small plus signs to insert your board in another location. For instance, if you wanted to build a game with multiple rooms, you could click the square in the upper left corner as the starting room for your game.



The LAYOUT screen that opens next allows you to manually build your game. You could choose this option by clicking on a colored square on the right side of the board, then clicking in a square on the board, however we are going to take a picture of our game board instead.

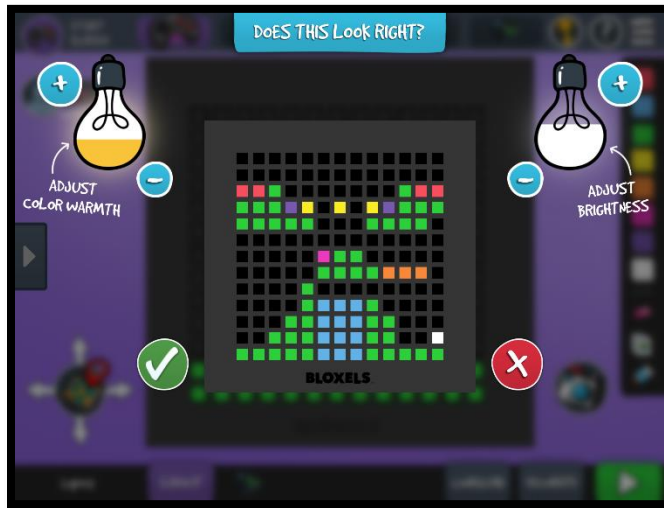
Choose the Camera icon in the lower right corner of the screen to open the camera on your device.



Take a picture of the entire board to import it into the app



Modify your board as needed due to lighting issues.



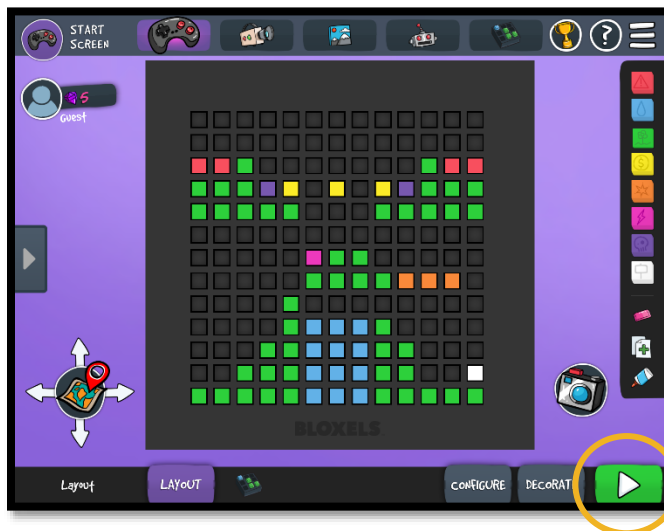
Click the Green Check if the board is correct.

Click the Plus or Minus sign near the Yellow Light Bulb if you need to adjust the block colors to be warmer.

Click the Plus or Minus sign near the White Light Bulb if you need to adjust the block colors to be cooler.

Click the Red X if the board is not close to being correct and then try to retake the photo.

Note that if the board is not entirely correct, you can add or modify blocks at the next screen



The LAYOUT screen features a long menu on the right side which allows you to modify the room.

Click the eraser, then a block to get rid of it.

Click a colored block, then click an empty square to add a new block to your room.

Click a colored block then click an existing block to change its colors and properties.

Once your design has been imported, you are ready to give it a try as a game.

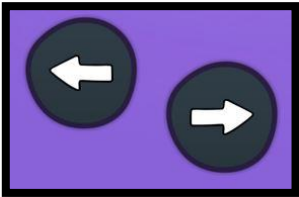
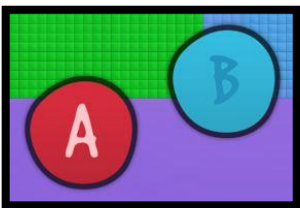
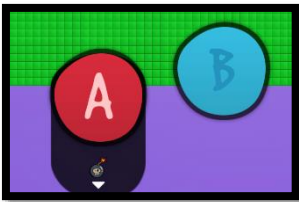
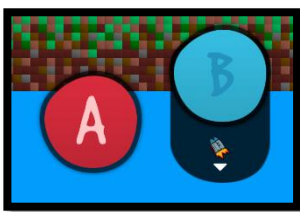
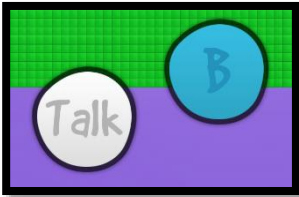
To play your game, click the Green Play button in the lower right corner of the LAYOUT screen.

## Using the Bloxels Builder App

### Moving Within Your Game

When you enter your room layout for the first time after it's been imported into Bloxels Builder, you will be given a generic character to use. For now, we will use this character.

To move throughout the game, there are a few things to note:

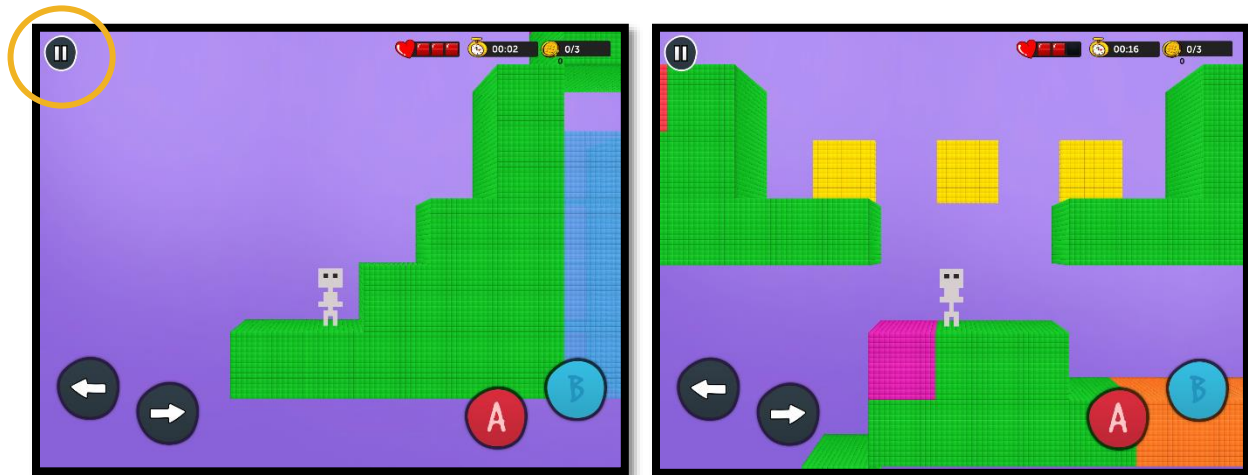
	<p>The arrows allow you to move right and left through the game.</p>		<p>The A button is the Attack button and allows you to shoot at enemies.</p>
	<p>If you want to attack with a Power Up (pink block), you will need to pull down the A button to activate it.</p>		<p>If you want to jump with a Power Up (like flying with the power pack), you will need to hold the B button to jump with the Power Up.</p>
	<p>If you encounter a story block within the game, the A button will become the Talk button. Pressing the Talk button will open the story block so that you can see the text contained within. Depending on the length of the text, you may need to scroll down to read the entire script.</p>		

## Using the Bloxels Builder App

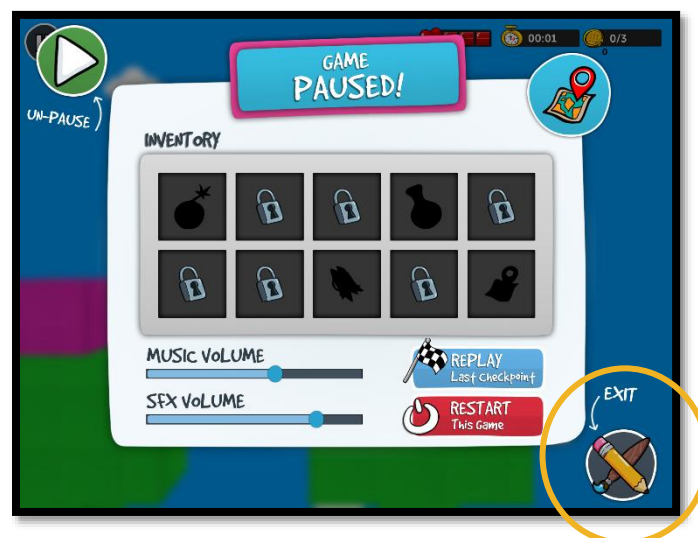
### Trying the Game for the First Time

As you move throughout your room layout for the first time, think about how easy it is to navigate, and whether you need to return to the LAYOUT screen to modify your board. There is no need to take a picture of the board, since you can edit the room with the tools on the right side of the LAYOUT screen.

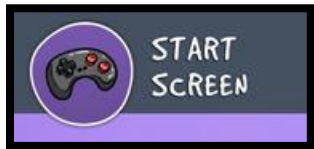
As you move throughout the room, be thinking about if there is a clear beginning and ending to your room, and where it might fall in a sequence of rooms that you design.



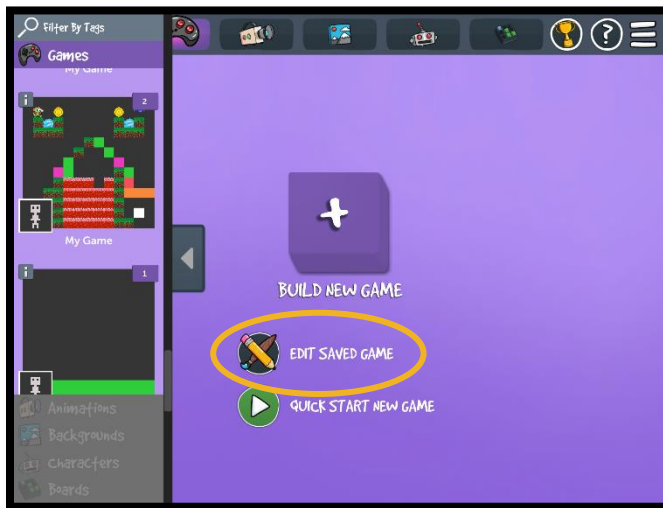
Once you have completed your room, (or if you get stuck in the room due to a poor planning decision) click the pause button in the upper left corner of the screen to pause the game. At this next screen, click the Exit button to return to the LAYOUT screen where you can edit your board.



Occasionally, the Bloxels app will take you to a location where you don't quite know where you are and how to get back to the correct menu. If this is the case, follow these steps:



Click the Start Screen button in the upper right corner



Click Edit Saved Game

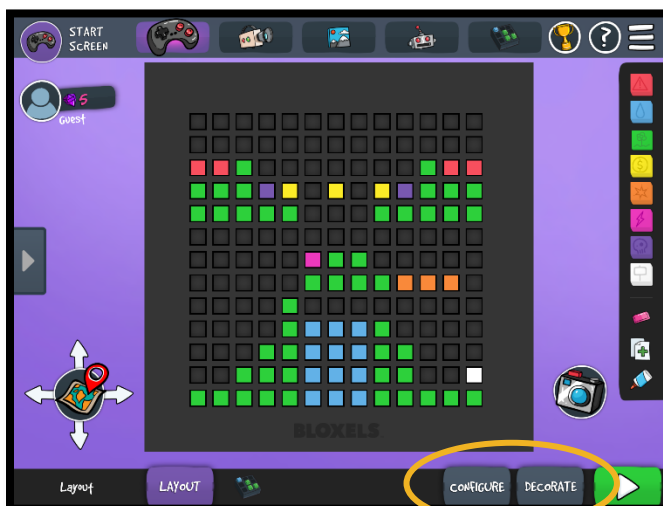
Look for your game in the tray on the left side of the screen

Choose your game by clicking on it and then continue modifying or playing it

## Using the Bloxels Builder App

### Modifying Your Blocks

From the LAYOUT screen, there are some tabs along the bottom of the screen to take note of.



The first is the CONFIGURE tab. Clicking this tab takes you to the Configurable Blocks screen, which allows you to modify the Pink Power-Up Blocks, the Purple Enemy blocks, and the White Story blocks.

The second is the DECORATE tab. Clicking this tab takes you to the Add Art screen which allows you to modify the Green Terrain blocks, the Blue Water blocks, the Yellow Coin blocks, the Red Hazard blocks, and the Orange Exploding blocks.



## Using the Bloxels Builder App

### Modifying Your Blocks Using the Configure Tab

After clicking the CONFIGURE tab, the room layout will show green arrows pointing to the blocks that can be modified from this screen.

The following blocks can be modified:

Purple- Enemy blocks

Pink- Power-up blocks

White- Story blocks



Clicking on one of the blocks will bring up the associated menu for that type of asset.

In this version of the app, there are only certain items that are unlocked for use.

Click the Green Checkmark, then click SAVE to make the changes to each block.

*More information about unlocking items and adding brains to your enemies to make them act a specific way will be shared in a more advanced workshop.*

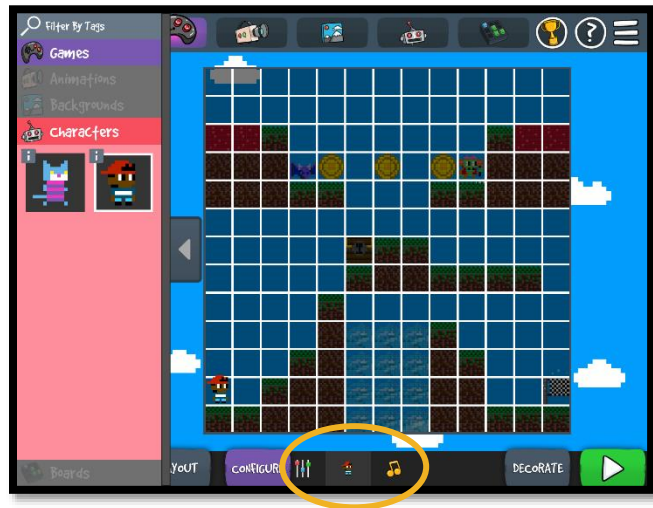


### **Moving Your Character to a new Starting Location**

When you add a character into a room layout, the character automatically is positioned in the lower left corner of the room. You can reposition the starting point of the character from the CONFIGURE tab.

Click the character icon at the bottom of the page in the center of the Configure Blocks screen

Your board will be overlaid with another grid. Click the character in the lower left corner and drag it to a different block within the grid. This will change the starting point of the character once you go back to play your game.



### **Adding Music to your Game**

Next to the character button at the bottom of the screen is a music notes button. Use this to change the music that plays in the background of your game.

Remember, to test your changes, click the green PLAY button in the lower right corner of the screen.

## **Using the Bloxels Builder App**

### **Modifying Your Blocks Using the Decorate Tab**

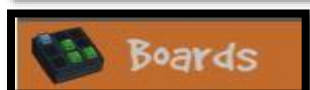
After clicking the DECORATE tab, the room layout will be displayed as solid color blocks. A menu tray will be displayed on the left side with various options for modifying your blocks. ALL blocks can be modified from this screen.



The GAMES tray allows you to choose which of the room layouts you want to modify.

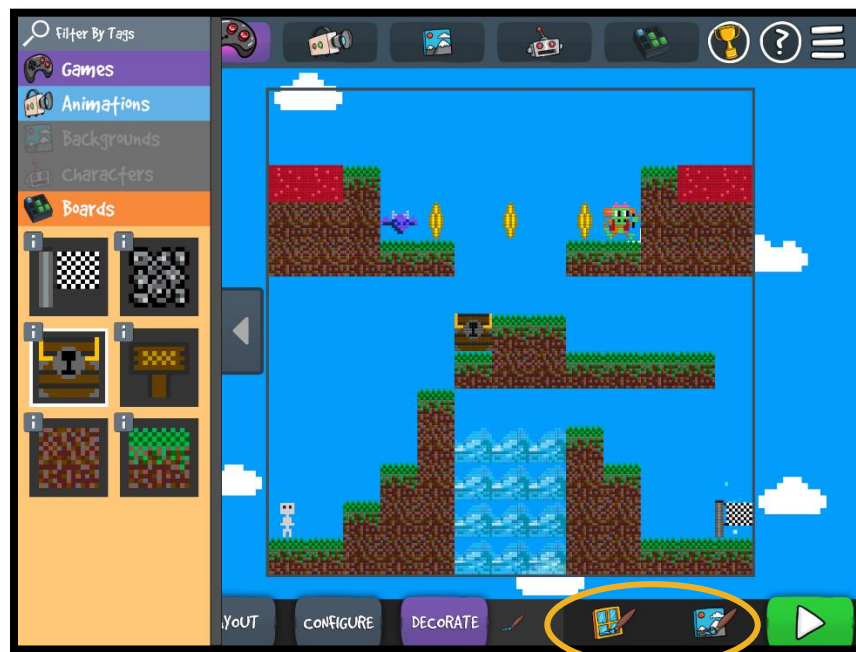
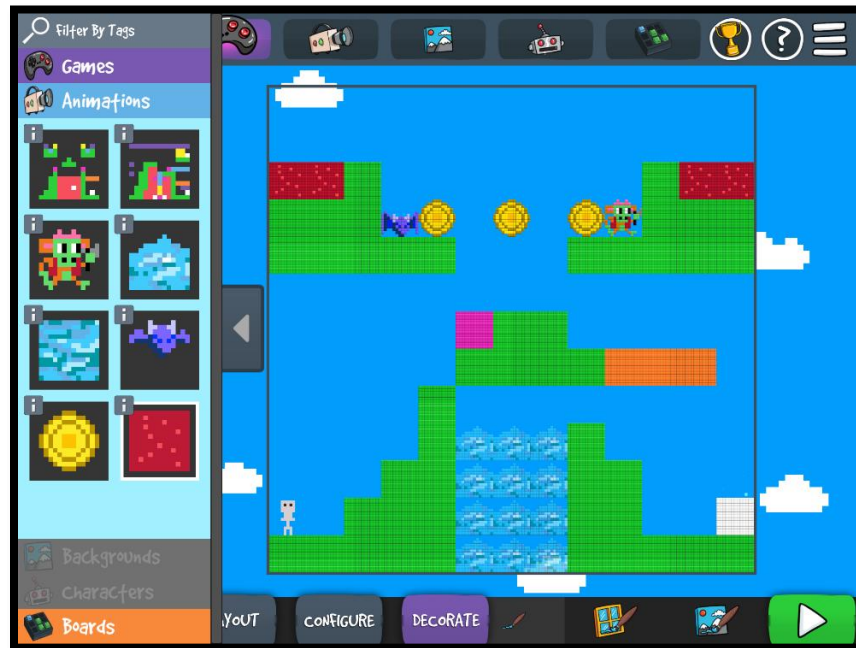


The ANIMATIONS tray allows you to add animated images to your blocks. These can be added to Purple, Yellow, Red, and Blue blocks.



The BOARDS tray allows you to add images to the non-animated blocks in your room. These would be the Green, Pink, Orange, and White blocks.

You will need to modify one block at a time with the animation or non-animated image. Click the art in the tray on the left side of the screen first, then touch the color block on your room layout to change the design of the block. If you make a mistake, simply choose another animation or image from the tray and touch the appropriate block. Continue modifying each block until done, then click the green PLAY button to return to the game to try your changes.



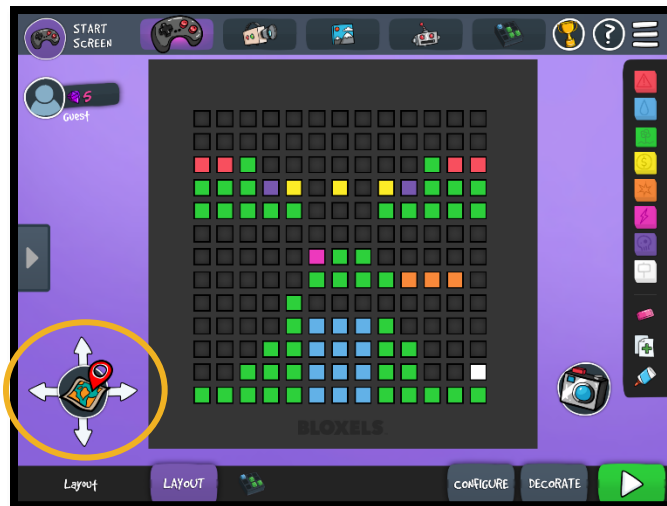
### Adding a Background to Your Game

Currently the only background that is available to use for your game is the sky. Click the painting scenery button on the far left bottom corner next to the green PLAY button in the DECORATE tab to apply the sky background to your game.

The window button which is directly to the left of the painting scenery button can be used to modify the background using the art that is available in the Boards tray on the left side of the screen.

### Using the Bloxels Builder App

#### Adding Another Board to Your Game



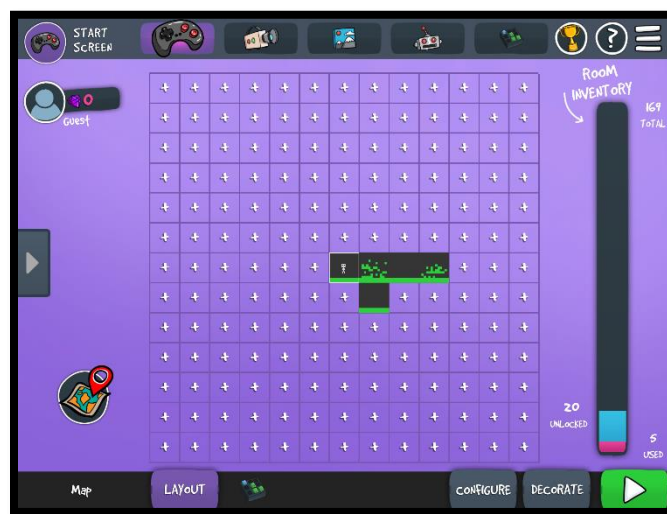
To make your game larger and more challenging, you can add additional rooms.

Return to the Start Screen and choose Edit Saved Game

Choose your game from the tray on the left side of the screen.

OR

Make your way back to the LAYOUT screen and choose the Map icon in the lower left corner of the screen.



This will bring you back to the purple screen with 169 plus signs where you can add additional rooms.

Choose one of the plus signs to the right of your room.

You will be directed to the screen where you can either create your room with the colored blocks or take a picture of a new board.



Return to this screen to determine which room will be the start point. Click the square that will be the starting room to highlight it. Then click Play to try playing through the connected rooms.

## Using the Bloxels Builder App

### Advanced Settings

There are some advanced settings in the menu at the top of all screens. We will be exploring these options in a more advanced workshop.