Setting up the Crystal Switch Mechanic 2D

Some notes:
The blocks do not care what they are called or if they are nested in other GameObjects. They just listen to the switch for a change.

All blocks in a scene will be affected by the switch that governs them. Doesn't matter if they are on screen or not.

Creating a Switch

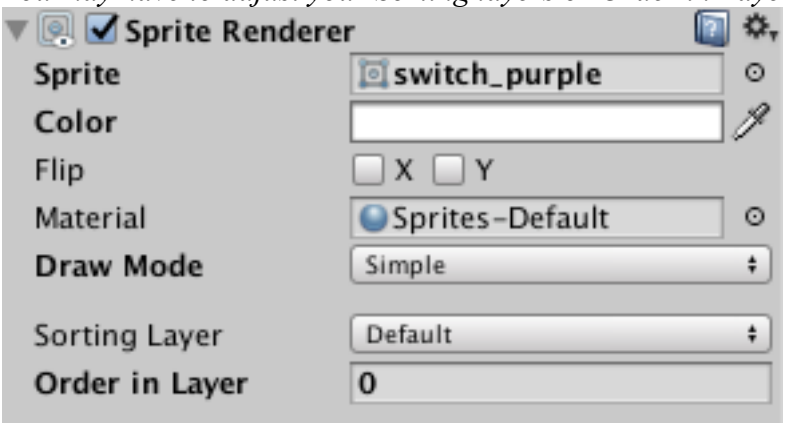
Create an empty *GameObject* in the hierarchy and give it a name. I chose "*CrystalSwitch*" for the purpose of this guide. The name is unimportant.

Attach the `CrystalSwitch.cs` file to Switch GameObject.
The script will auto-add all the required components.

Configuring the Switch

SpriteRenderer
In the *SpriteRenderer* component, drag a sprite to the sprite field. Or you could use and icon if you do not want the image displayed.

You may have to adjust your Sorting layers or Order in Layer if things do not show up.



BoxCollider2D
The *BoxCollider2D* will auto-check "Is Trigger" to be true from the script.
You can safely collapse this component, unless you need to edit the colliders shape or boundaries.

Crystal Switch Script

On/Off Sprites
For the purpose of this guide I named the variables the colors of the switches.

In this case Blue and Purple.

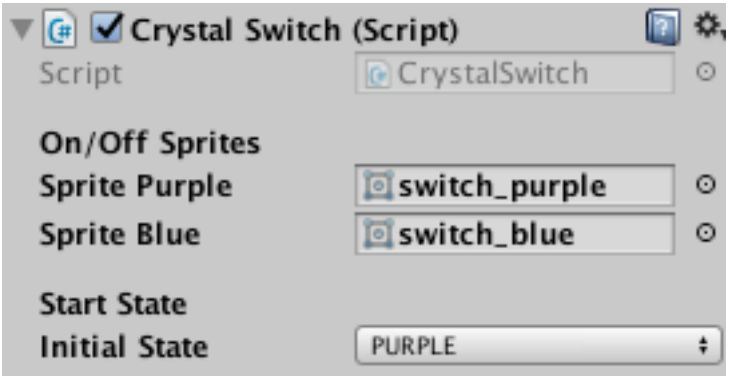
Drag a sprite you want to be your "Purple State" to the ***Sprite Purple*** field.

Drag a blue one to the "***Sprite Blue***" field.

Start State
What "color" should be active?

Active means the blocks are in the "up" state and their **box colliders are on**.

You can change the color names in the scripts' enum. Just be sure to use refactoring.



What's going on?

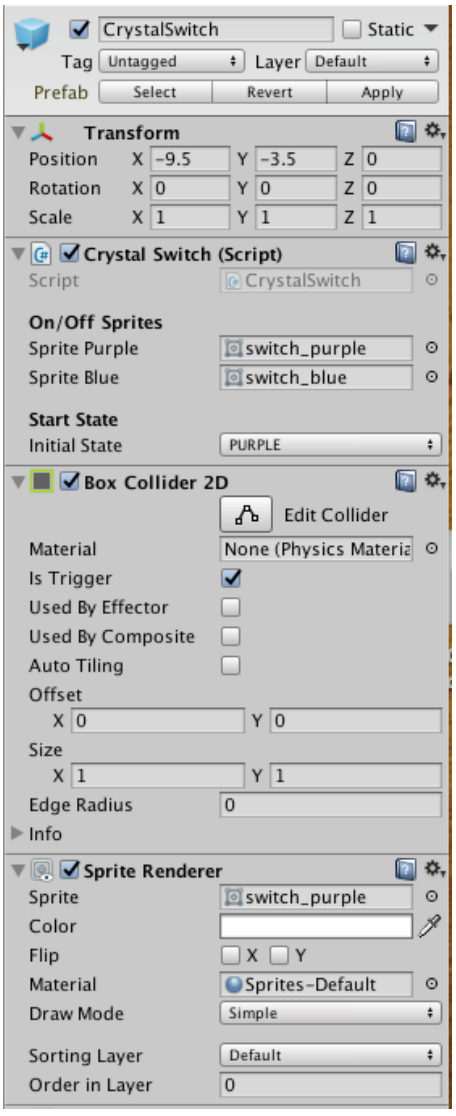
Currently the switch is looking for collision from a GameObject with the "**Player**" tag.

You can add more tags or change the tag, or have no tag at all, by editing the

`OnTrigger2D` method in the `CyrstalSwitch.cs`

```
private void OnTriggerEnter2D(Collider2D other) {

        if (other.gameObject.CompareTag("Player")) {
            SwapStates();
            TriggerEvent(EVENT_CRYSTAL_SWITCH_NOTIFICATION);
            //add soundfx here if you want.
        }
}
```



Setting up the Blocks

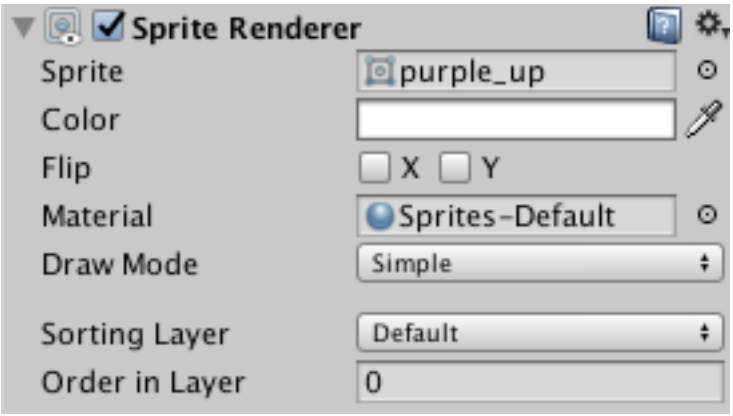
Create an empty *GameObject* name it Purple Block. **The name is unimportant.**

Drag the `CrystalBlock.cs` to the GameObject. The script will auto-add the appropriate required components.

Configure the Block

SpriteRenderer
In the *SpriteRenderer* component, drag a sprite that corresponds to your block to the sprite field. Or you could use and icon if you do not want the image displayed.

You may have to adjust your Sorting layers or Order in Layer if things do not show up.



You may already know you want the "*Purple*" blocks to be active when you start the game, you should choose the "up" sprite. Though it is not necessary, either the up or down sprite will do. It is your choice **how you want to see it in the editor**.

BoxCollider2D
The *BoxCollider2D* is turned **on** and **off** by the script. Ensure that "Is Trigger" is **NOT** checked. (Unless your game calls for it).

You can safely collapse this component if you do not need to edit the colliders shape or boundaries.

Crystal Block Script
BLOCK SETUP
Select what color block this is. This will let the block know if it should activate or deactivate when the same color switch is active.

The script is smart enough to know that if this is a “blue” block and you have “purple” as the start state, blue will start in the deactivated state when the game is played.

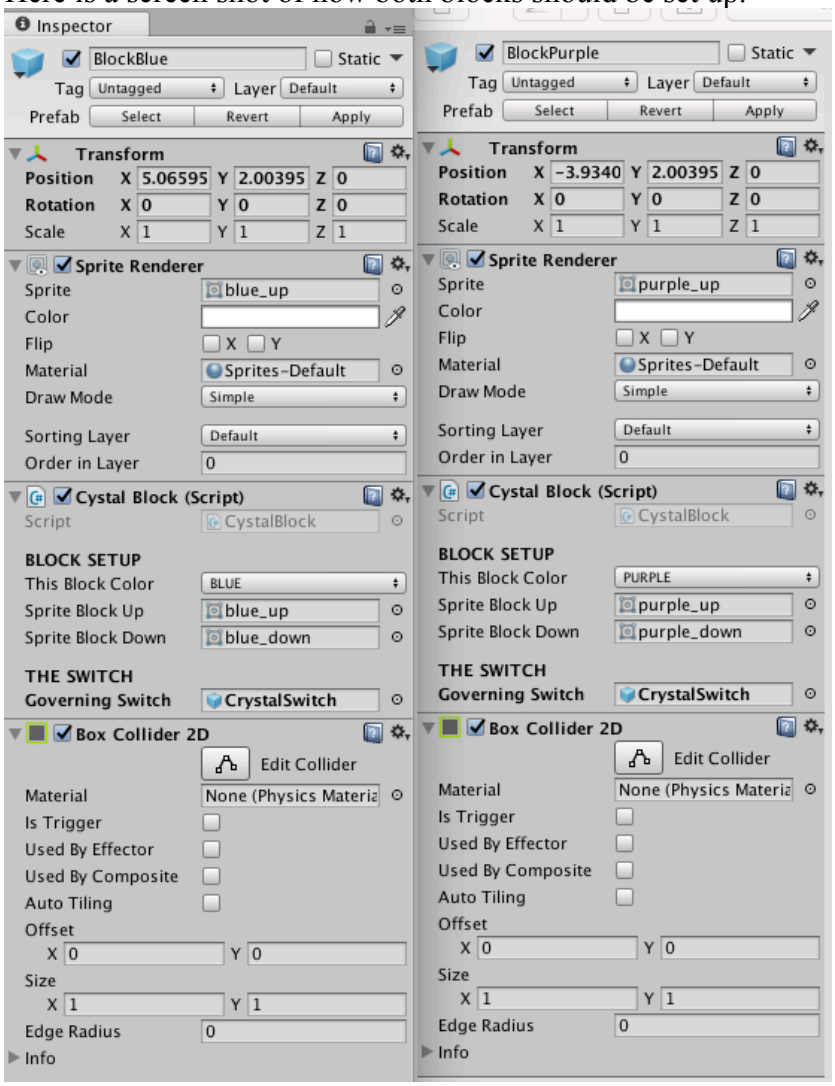
Chose what sprites should be displayed in the **up** and **down** states.

THE SWITCH
Drag the “**Switch**” *GameObject* to the “*Governing Switch*” field. This lets the block know which switch to listen for changes to.

Drag this completed block *GameObject* to the prefabs folder for later reuse.

Repeat these steps for the other color block.

Here is a screen shot of how both blocks should be set up.



Now that your prefabs and switch is setup, you can now duplicate the blocks and create your barriers!

Here is an example Hierarchy.

I put all my Purple blocks in a purple block *GameObject* and blue in a blue *GameObject*. It isn't necessary. I did it for organization.