# Create a Playable Game

| LEARNING GOAL & SCALE: Standard | |
|---|---|
| **4** | Student will be successful in level 3 and: <br> Create a final game with advanced features such as a working inventory system, customizable characters, and multiple player choices. |
| **3** | Student will: <br> Design and create a playable game. (standard 27.0) <br> ✓ Use a number of computer tools to enhance and ease game programming and artistry. <br> ✓ Use a game engine to create a playable game. <br> ✓ Use animated objects. <br> ✓ Integrate sound and/or music to enhance the game. <br> ✓ Test and debug to game completion. |
| **2** | Student will: <br> Define storyboard, test case, architecture chart. <br> Understand the basic requirements involved throughout the game design process. |
| **1** | With help from the teacher, the student has partial success with the current content. |
| **0** | Even with help, the student has no success with the current content. |

**Work Scenario:** You have been hired by an indie studio to create a game.  The company is giving you specific parameters/requirements but is flexible on design.
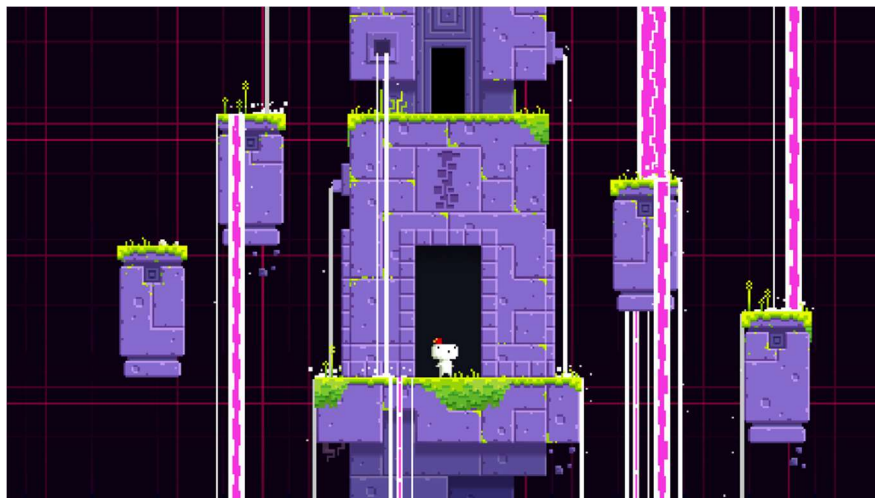
## Requirements for your new job:

- Title screen, at least 2 functional levels, and a credit screen.
- Use Unity Engine
- Cohesive design with a central theme that is clearly recognized
- Must use tile sets
- At least two animated objects (enemy & player – can add additional)
- Sound (background music or sounds based on events happening in the game)
- Working game with no major bugs or fatal errors
- MUST BE EXE BUILD FOLDER – NO PROJECT FILES

### Resources

"TileVania" assets folder * Open Game Art Assets * Sound FX * Free Sound

**\*GRADES WILL BE BASED ON MEETING ALL REQUIREMENTS, DESIGN/STYLE, FUNCTIONALITY, AND ENTERTAINMENT VALUE SO MAKE IT INTERESTING! THE VIDEO PROVIDES EVERYTHING YOU NEED TO CREATE A GAME BUT THE LEVEL DESIGN SHOULD BE YOUR OWN, UNIQUE & CREATIVE\***

## How Do I Begin?

The series provided is just under 6 hours of videos but will take double that while pausing/rewinding/following along. MANAGE YOUR TIME WELL. You are being given 9 class periods (roughly 13.5 hrs) – this will be enough time to finish but only if you work **EVERY SINGLE DAY PROVIDED**. **It is better to finish early and add additional features than to procrastinate and run the risk of not finishing. It adds up to around 4 videos each day – don't do less and assume you will be okay.**

- Tutorial – Udemy (kirkj@pcsb.org & Techhigh1). Start with video #179.
- After you watch #179 think about overall design/theme ideas. Assets are provided but I encourage you to find or create some of your own in addition to the ones they provide.
- Create a list of videos with times – MAKE A PLAN for each day.
- Complete all tutorials to add code and meet all requirements
- Test, test, test and debug as you go – don't wait until the end.
- Turn into EXE ENTIRE BUILD FOLDER and upload to OneDrive

**TileVania Asset Instructions & Tutorial Information**

1. Download from OneDrive ["TileVania" assets folder](#) (click entire folder/asset pack then "Download").
2. Once completely downloaded – click "show in folder" or go to downloads to see. Click "Extract All" and choose a save location – DO NOT MAKE THIS LOCATION IN YOUR UNITY GAME BUILD FOLDER. Choose your documents or a flashdrive in a separate location. I usually choose to make a folder called "GameName_Assets" and drop everything in one place.
3. Once extracted you can drag and drop these assets into your game.
4. Standard assets **contain 2d-extras & Crossplatform** if they do not drag/drop properly you can go to "Assets" in Unity – Import Package – Custom Package – then find the location where they are saved.
5. Organize every asset you bring in by use of folders.

**Cinemachine** (DO NOT DOWNLOAD FROM ASSET STORE):
In Unity go to "Windows" – Package Manager – Cinemachine – Install

**In video 203:** He duplicates levels – to do this press "Ctrl" and drag level with your mouse then you can right click and rename.

**Tips on design!**

- **USE TILESETS** – stay away from large one-piece pictures whenever possible.
- Characters, enemies, rewards, and game world objects should all relate to a central theme.
- Removing white backgrounds/boxes around assets makes a big difference in the overall look.

**Bad Design:**



Why is it bad design? White box around player, tiled background is one picture which doesn't make sense with platforms & other objects, platforms floating in air randomly, random boxes on right side.

**Good Design:**



Why is it good design? Camera zoom/follow on character to make level longer to get through. Central theme of a castle is followed- player is in a hallway in a castle, walls all relate to that by being stone, central color scheme, etc.