



STEM Course for 001 Game Creator:

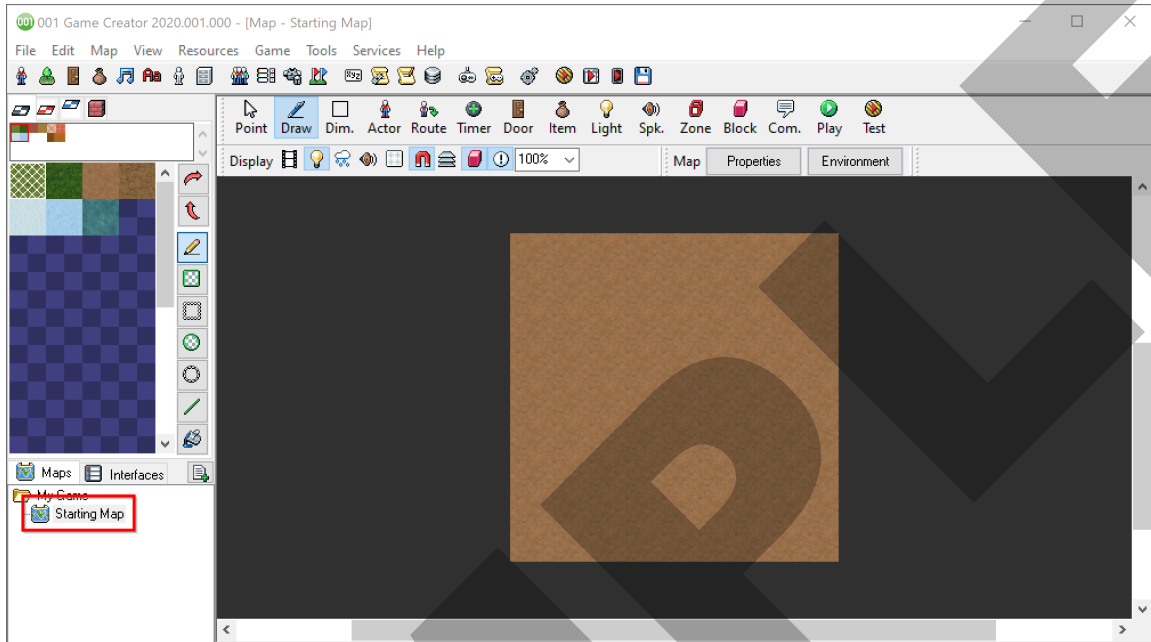
001 Basics










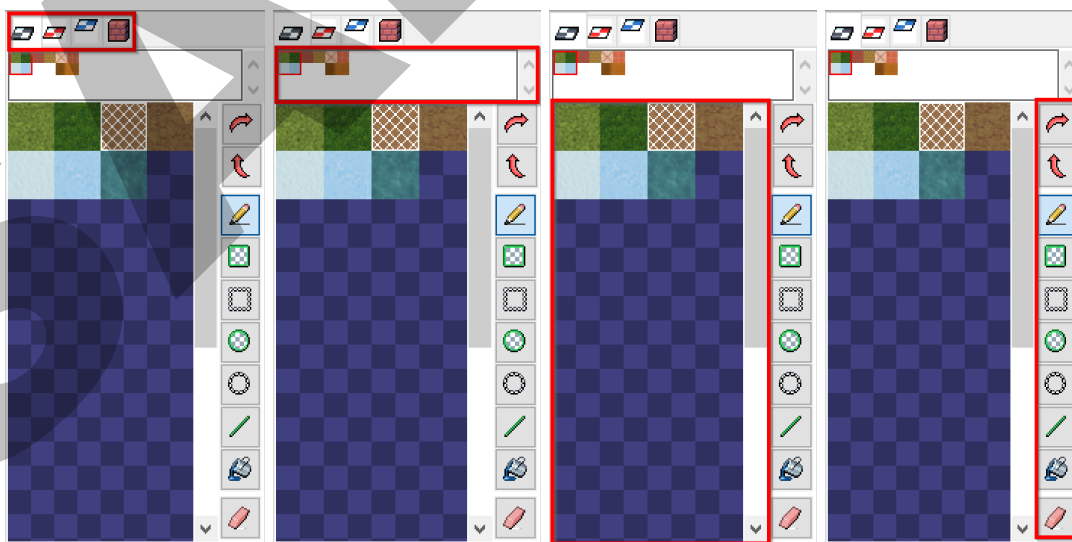
SoftWeir Inc.
Version 1.0

2.2 – Drawing Maps with Tile-Sets











To follow along, you can open up the **My Game** project that we created in Section 1. Then click the **Starting Map** in the bottom-left corner of the window to open the map.

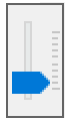


By default, the  **Draw** tool should be selected. This will bring up the **Tile-Set Picker** on the left side of the window. From here, you can choose a  **Floor Tile**,  **Lower Object**,  **Upper Object** or  **Wall Tile**. Next, select the  **Tile-Set** in the box below. You can hover your cursor over the  **Tile-Set** to get a full view of it. Then select which **Tile** you would like to place on the map. Finally, select which **Tile Brush** you would like to use (from the right of the **Tile-Set Picker**), and set if you would like the **Tile** to be flipped or not.



Here is a quick explanation of what each of the **Tile Brushes** and **Tile Options** do.

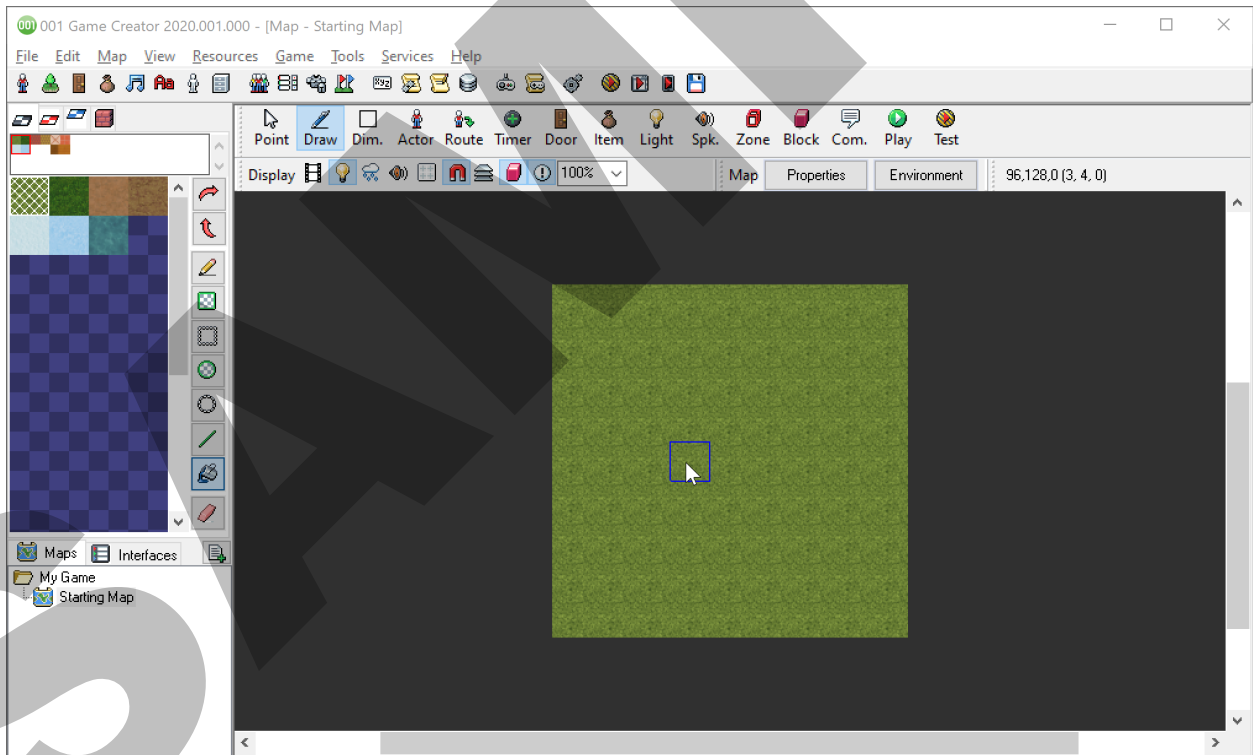
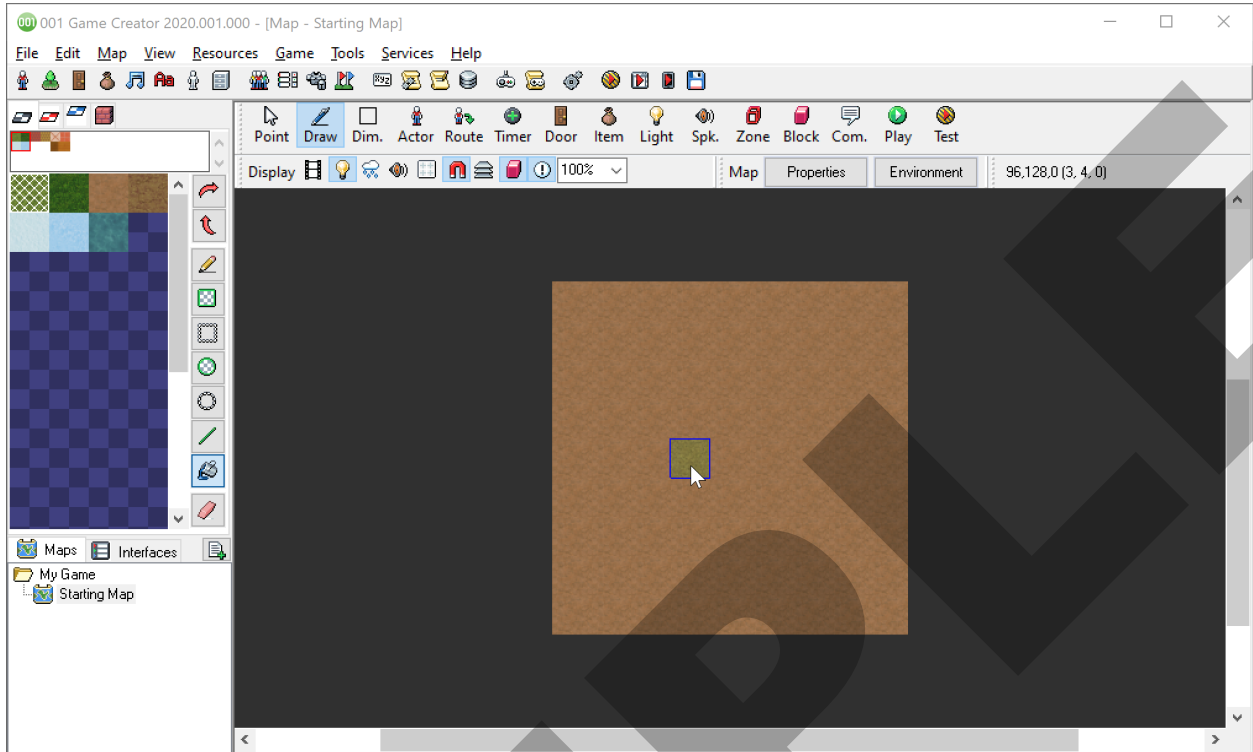
-  **Flip Horizontally:** Flips the selected tile horizontally.
-  **Flip Vertically:** Flips the selected tile vertically.
-  **Pencil:** Places a single tile on the map with the selected tile.
-  **Filled Rectangle:** Draws a filled rectangle with the selected tile.
-  **Rectangle:** Draws a hollow rectangle with the selected tile.
-  **Filled Circle:** Draws a filled circle with the selected tile.
-  **Circle:** Draws a hollow circle with the selected tile.
-  **Line:** Draws a line with the selected tile.
-  **Fill:** Fills an entire area with the selected tile.
-  **Erase:** Removes tiles of the selected **Tile Type**.




Wall Height: Changes the height of the wall. Each notch on the selector represents **One Tile** in height. This is only visible when you are placing a wall tile.

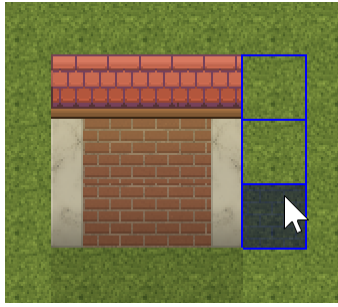
*(Note: If some of these options are missing such as **Erase** or **Fill** try resizing the 001 game creator window to be larger)*

Once you have selected which **Tile** you want to place on the map, and which **Tile Brush** you want to use, you can left-click on the map to place that tile. When using the rectangle and circle tile brushes click and drag to create the desired shape.

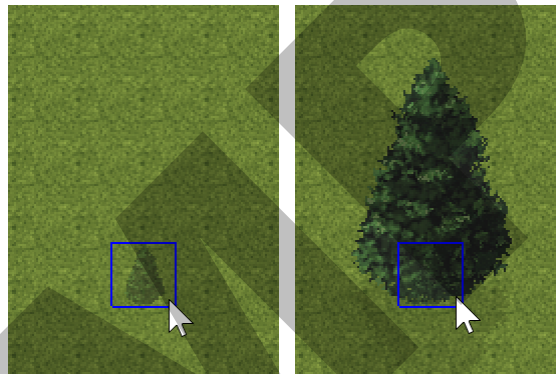


*(Note: You can only overwrite a tile if you have the correct **Tile Layer** tab selected! If your brush contains a  **Lower Object** tile it can only overwrite another tile of that type!)*

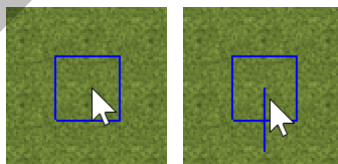
When placing **Wall Tiles** the cursor will change to show you how tall the wall is.



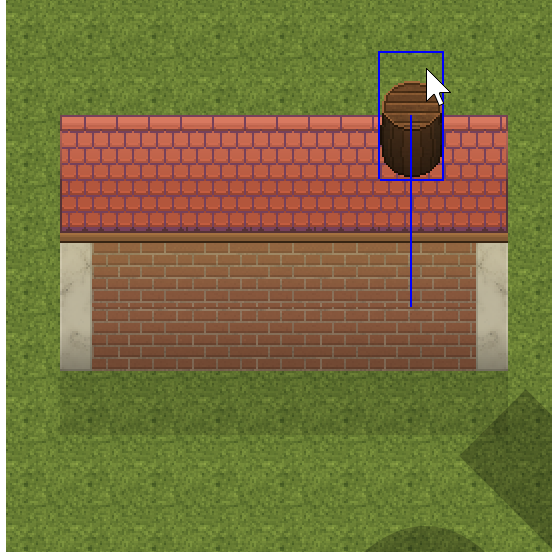
You may also notice that some tiles, specifically the foliage located in the **Environment Tile-Set** under **Lower Objects**, are single tiles that span multiple tiles when placed. This can be useful for objects that are commonly placed on top of each other, or overlap. These tiles still only take up a **Single Tile** in your **Tile-Set**.



You can also change what **Map Layer** the tile is being placed on. To do this, you can either press the **Page Up/Page Down** keys, or hold the **Ctrl** key while **Scrolling the Mouse Wheel**. The cursor on the map, displaying which tile you have selected, will change depending on which **Map Layer** you're currently on. The bottom of the line represents the X/Y position where the tile is located. The longer the line is, the higher the Z position.

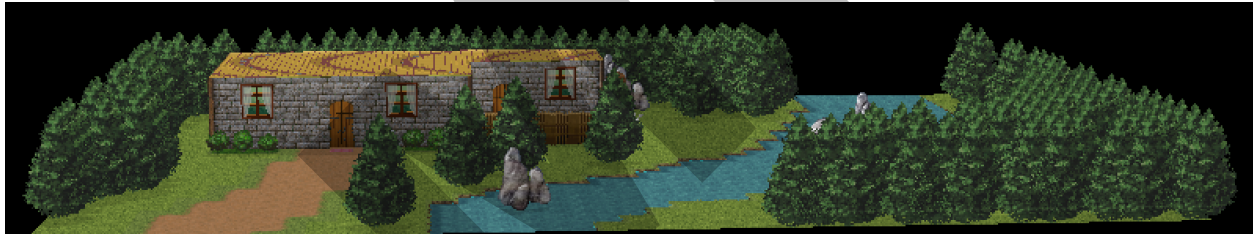


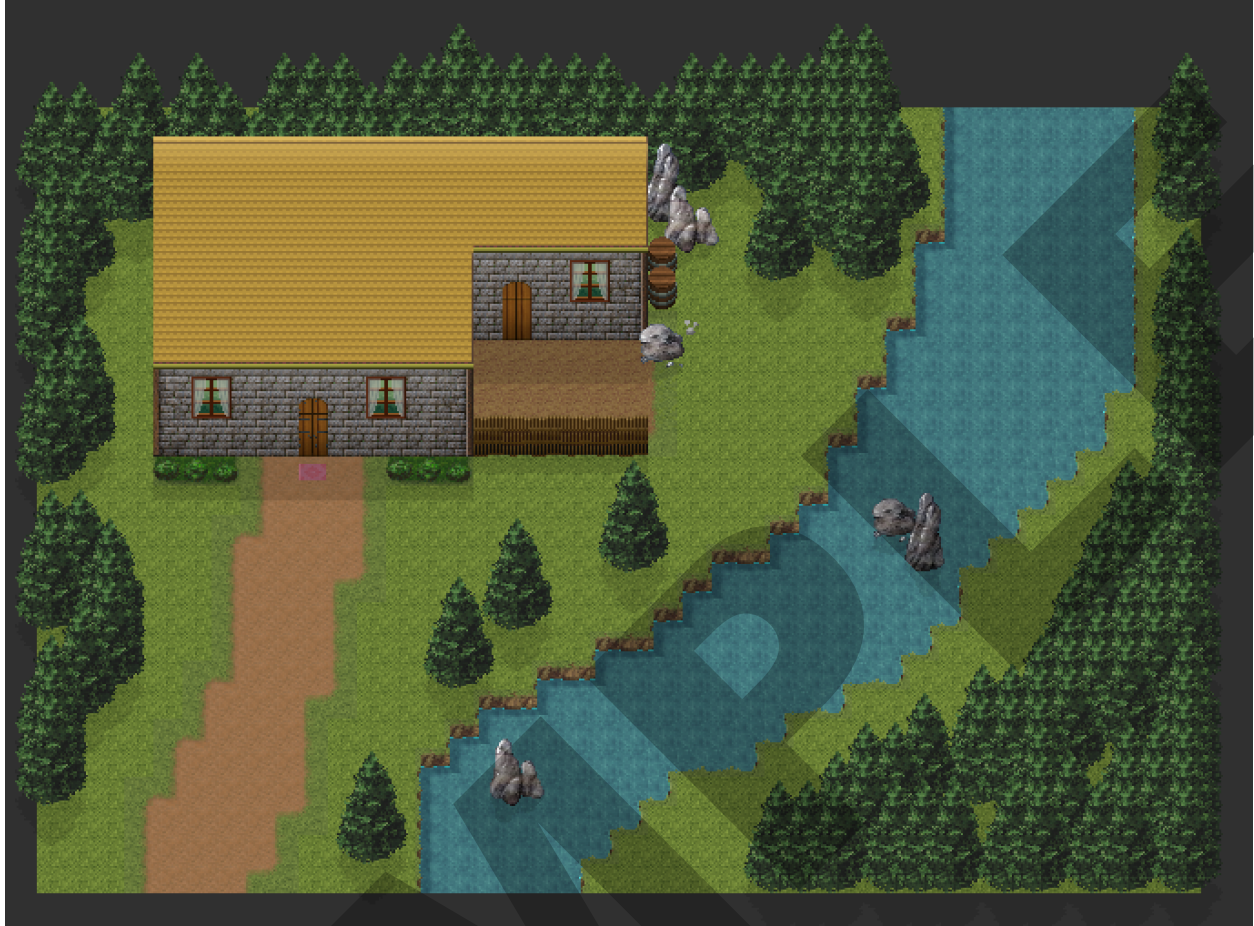
You can use this to place objects on top of each other, to build platforms, or add depth to your 2D games. This is especially useful when placing objects on a wall or stacking certain lower objects. In this example, you can place a barrel on top of a wall by placing it on a higher **Map Layer**.



Even though this template uses 2D graphics, it still handles objects in a 3D space. What this means is, the player on the map doesn't just move along the X and Y axis, but can also move up and down the Z axis as well. When an **Actor** moves on the Z axis in the **Standard 45°** camera view, the actor will move upwards on the screen.


This is best shown when converting your map into a 3D view.





As you can see from the images above, the 2D map exists in a 3D space but is displayed to the player in a 2D view without **Perspective**. The trees don't lay flat on the ground but stand upright. This also goes for the house which is actually multiple tiles tall, and the windows that are actually stuck to the walls!

A few quick tips to help you while drawing your maps:

- You can select several **Tiles** at once in the **Tile-Set Picker** by left-clicking and holding while moving your cursor over more than one tile. This is useful when placing objects that span multiple tiles!
- If you right-click the map with the draw tool selected, it will turn your brush into the **Tile** you have your mouse over. It will only select the tile for the **Tile Layer** that you have selected and will ignore tiles of any other type. If no tile is present it will automatically switch your brush to the **Erase** brush.
- You can right-click and hold to select multiple **Tiles** on the map, similar to the first tip.
- If you can't figure out which layer the tile you placed is on, use the  **Visualize Layer** option to find it!



STEM Course for 001 Game Creator:

001 Basics Workbook



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Version 1.0

1.2 Exercise – Workspace Icon Match

Match the various workspace icons on the left to the words on the right!



Sprites

Maps

Players and Party Members

Tile-Sets

Controls


Test Game

2.2 Exercise – Map Planning

Draw a rough sketch of what you want your map to look like. It's recommended to take a look at the tiles available to you to get an idea of what objects you can place on the map.

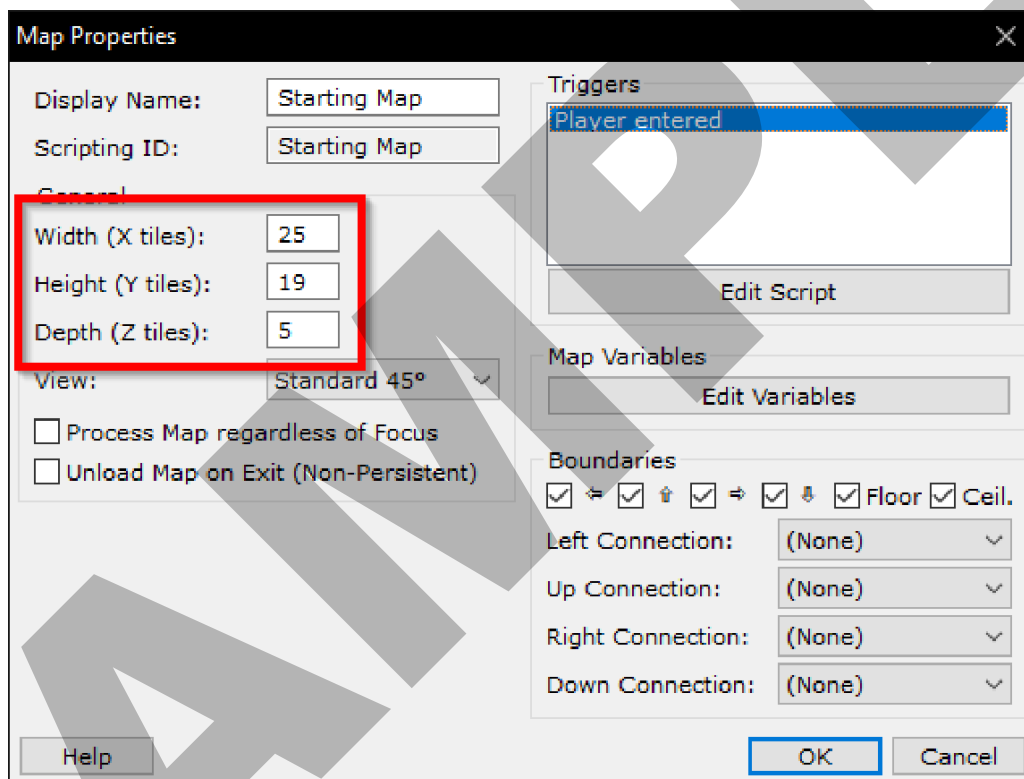


2.2 Assignment – Drawing Your First Map

Now that you have been shown how to draw tiles on a map using the  **Draw** tool, in this exercise you will be creating your first map.

You will be creating your map in the **My Game** project that was created in **Assignment 1.1**. Using your knowledge gained so far, expand the default size of the **Starting Map** and, using **Tiles**, draw on the map. The map should have a **Minimum** size of **25 Tiles Wide** (X Size) and **19 Tiles High** (Y Size) with as many tiles deep (Z Size) as needed (default is **5 Tiles Deep**).

The map dimensions **25x19** will ensure that the map completely fills the default game window size.



Your map can be themed however you like using the **Tile-Sets** provided to you. We will be using this map later on so be sure to leave room for **Actors, Lighting, Items, etc.** You can always increase the size of the map or create a new map later on for future exercises!

2.1 Quiz – Map Tools

Label each of the map tools and provide a very short summary of what it does.



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Pointer Tool – Used to change the position, scale or rotate objects on a map



Pen Tool – Used to place tiles on the map



Dim Tool – Used to increase or decrease the size of the map



Actor Tool – Used to place actors on the map



Actor Route Tool – Used to assign or remove a route from an actor



Timer/Spawn Tool – Used to run scripts at set intervals and/or respawn actors



Door Tool – Provides openings in wall tiles, can be locked with items or passcodes



Item Tool – Places an item or treasure chest on the map



Light Tool – Places a light on the map that can illuminate an area



Speaker Tool – Places a sound source that repeatedly plays a sound effect



Zone Tool – Used to place scriptable areas on the map that actors can interact with



Block Tool – Used to restrict actors from entering an area



Comment Tool – Used to leave developer notes, player can't see



Play Map – Positions player at the set location and plays game



Test Map – Positions player at the set location and plays game with optional script

2.2 Quiz – Map Editor

You will be spending lots of time working with tile-sets and the map editor for the majority of game genres.

Circle the correct answer(s)

1) You can zoom in using **CTRL+Scroll Wheel**.

- a) True
- b) False

2) When creating your map, even though things are being displayed in 2D they are being handled in a 3D space.

- a) True
- b) False

3) The standard view for the **Action-RPG** template is **Top**.

- a) True
- b) False

4)  is used to represent an **Upper Object**.

- a) True
- b) False

5)  The pencil tool can only be used to place a single tile on the map.

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