Lesson Plan for Beginning Game Creation, Terrain Lesson

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Learning Outcomes:

1. The students will be able to explain the need for terrain in both 2D and 3D worlds.
2. The students will be able to create a new terrain and perform manipulations.

Concepts:

What is terrain?

Why is terrain important?

How do you make terrain?

How do you manipulate terrain?

Student Assessment:

Create your own terrain

Learner Knowledge & Materials:

Students must be familiar with the Unity 3D Engine user interface and be able to navigate the scene view tools. Unity is the only required material for this lesson.

Instruction:

1. Introduce the concept of terrain
   a. Outdoor levels
   b. Section of land that simulates an external landscape
      i. Mountains, plains, swamps, etc.
   c. Terrains have a transform—position, scale and rotation
   d. Terrain importance—Unity navigation, common presence in games, designer market
2. Creating and resizing terrain
   a. Hierarchy menu -> 3D objects -> Terrain
   b. Resizing via terrain resolution
      i. 100 units x 100 units for demo purposes
3. Brush Tools
   a. Manipulating individual tools and introducing options:
      i. Raise/Lower
      ii. Smooth Height
      iii. Set Height
      iv. Paint Holes
      v. Paint Texture
      vi. Stamp Terrain

Assessment:

Students will be given time to complete a terrain assignment, where they must:

1. Create a new scene and add a terrain game object.
2. Resize the terrain resolution to 100 units x 100 units.
3. Manipulate the terrain using at least three different brush tools.

The assignment will be due on Canvas by the end of the week.