Lesson 7: Creating the Environment

In this lesson, students will learn how to set up a project for a platform game and add sprites to create their own game environment. They will start by watching a video clip of a platform game and identifying its different elements. Then, they will learn about the importance of planning and organizing the game environment before adding sprites. The teacher will demonstrate how to set up a project in the chosen game development software, import sprite images, and create a tile map using the grid tool. Students will then work in small groups to set up their own projects and create tile maps based on different platform game themes. Finally, they will individually add sprites to their tile maps and be encouraged to be creative in how the sprites interact with each other. The lesson will conclude with a reflection activity and a reminder for students to continue working on their games outside of class.

## **Objectives:**

- Students will be able to set up a project for a platform game.

- Students will be able to create a tile map for their game.

- Students will be able to add sprites to their game.

## **Materials:**

- Computers with internet access

- Game development software (e.g., Scratch, Unity, GameMaker)

- Sprite images (e.g., character, background, objects)

## **Bell-Ringer Activity:**

- Show students a short video clip of a platform game and ask them to identify the different elements they see (e.g., character, background, platforms, enemies).

- Discuss their answers as a class and explain that in today's lesson, they will learn how to set up a project and add sprites to create their own platform game.

## **Introduction:**

- Explain to students that creating a tile map is an important step in setting up a platform game.

- Define a tile map as a grid that can be used to paint with sprites.

- Discuss the importance of planning and organizing the game environment before adding sprites.

- Share examples of popular platform games and discuss the different elements they have in common.

## **Direct Instruction:**

- Demonstrate how to set up a project in the chosen game development software.

- Explain the different components of a project, such as scenes, assets, and scripts.

- Show students how to create a new scene and name it appropriately.

- Guide students through the process of importing sprite images into the project.

- Explain the concept of a sprite sheet and how it can be used to create animations.

- Show students how to create a tile map using the grid tool in the software.

- Demonstrate how to paint the tile map with different sprites to create the game environment.

## **Guided Practice:**

- Divide students into small groups and assign each group a different platform game theme (e.g., jungle, space, underwater).

- In their groups, students should work together to set up a project and create a tile map for their assigned theme.

- Circulate around the classroom to provide assistance and guidance as needed.

- Encourage students to collaborate and share ideas within their groups.

## **Independent Practice:**

- Instruct students to individually add sprites to their tile maps to create the game environment.

- Encourage students to be creative and think about how the sprites can interact with each other (e.g., characters jumping on platforms, enemies moving along a path).

- Remind students to save their progress regularly and test their game as they go.

## **Exit Ticket:**

- Ask students to write a brief reflection on the process of setting up a project and adding sprites.

- Prompt them to consider any challenges they encountered and how they overcame them.

- Collect the exit tickets before the end of the class.

## **Closure:**

- Recap the main points of the lesson, emphasizing the importance of planning and organizing the game environment before adding sprites.

- Encourage students to continue working on their platform games outside of class and explore additional features and functionalities.

- Remind students to save their projects and be prepared to share their progress in the next class.