

Name(s) _____ Period _____ Date _____



Project Guide - Flyer Game

Overview

In this project, you'll use what you have learned to make a flyer game. There's a sample flyer game in Code Studio.

Before you jump into programming your scene, you need to plan! Let's use our handy Problem-Solving Process to help us! You can refer back to the [Problem Solving Process and Programming handout](#) to help you with the steps!

Define

Play the sample game a few times. You can make your game just like this one, or change it to fit your preferences. Fill out the chart below with what you want to keep the same about each of the requirements listed and what you want to change about the requirements.

Requirements	Example Game	Things to Keep the Same	Things to Change
At least 4 sprites	Flyer (player), coin (target), rocks (obstacles)		
Player controls	Up key to fly up, floating left and right with left and right keys. Player falls when not pressing anything		
Other sprite controls	Obstacles loop across the screen. Target moves to a random location.		
Sprite interactions	Target moves to a random location. Obstacles push player.		
Other Features			

Prepare

What parts of programming this game are you not sure how to do yet?

Sprites: You need at least 4 sprites. The sample game has the player (flybot), two obstacles (rocks) and the target (coin). If you plan on using different sprites, fill out the chart below with what you want to use for your player, obstacle, and target, and where you will find the images.

Sprite	Sample	Your Choice	Image/Animation Source
Player	flybot		
Obstacle (2)	rocks		
Target	coin		

Background: What do you want the background to look like? Draw a picture, and describe the shapes you will use to make it.



Player Controls: Fill in the chart below to plan how you are going to use conditionals to control your player sprite's movement.

Condition (example: up key)	Action (example: move player sprite up the screen)

Other Sprite Controls: Fill in the chart below to plan how the other sprites are going to move and how you are going to use conditionals to control your sprites' movement.

Sprites	Movement	Condition (example: $x < 0$)	Action (example: reset x to right side of screen)
Obstacles			
Target			

Sprite Interactions: Fill in the chart below to plan how each of the sprites are going to interact with each other.

Sprite	Interactions	Result
Player		
Obstacles		
Target		

Variables: Fill in the chart below with any variables you plan to use during the game.

Variable Label	Description

Try

Once your teacher has approved your design, go to Code Studio to create your game.

Check your program to make sure it has everything it needs.

Reflect

Answer at least three of the reflection questions below:

1. Compare your program to the defined problem ... Were you successful in solving all aspects of the problem? How do you know?
2. Ask a classmate to try your program ... Are there places where they struggle or show confusion?
3. Ask a classmate to read your code ... Is your code and documentation clear and accurate?
4. Try to "break" your program ... Did you find types of interaction or input that you could handle better?
5. Are there any changes or improvements you can make to this program or another like it in the future?