

# Lesson 23: Mini-Project - Flyer Game

## Overview

**Question of the Day:** How can the new types of collisions and modeling movement be used to create a game?

Students use what they have learned about simulating gravity and the different types of collisions to create simple flyer games. After looking at a sample flyer game, students brainstorm what sort of flyer games they would like, then use a structured process to program the game in Code Studio.

## Purpose

This lesson is a chance for students to get more creative with what they have learned. Encourage students to spend time on parts of the activity that interest them, as long as they meet the requirements of the assignment.

## Assessment Opportunities

Use the project rubric attached to this lesson to assess student mastery of learning goals of this unit.

## Standards

Full Course Alignment

**CSTA K-12 Computer Science Standards (2017)**

- **AP** - Algorithms & Programming

## Agenda

**Lesson Modifications**

**Warm Up (5 minutes)**

**Activity (35 minutes)**

**Wrap up (5 minutes)**

**Share Out and Journal 3-2-1**

## Links

**Heads Up!** Please make a copy of any documents you plan to share with students.

For the teachers

- **CSD Unit 3 - Interactive Animations and Games** - Slides

For the students

- **Flyer Game** - Rubric
- **Flyer Game** - Project Guide

## Teaching Guide

## Lesson Modifications



**Attention, teachers!** If you are teaching virtually or in a socially-distanced classroom, please **click here** to access modifications that can be used during this lesson.

## Warm Up (5 minutes)

### Review

Ask students to think of all of the things that they have learned how to do in the unit so far, and display their answers to the class. This is a good time to check in on any concepts that have been challenging for students.

### *Remarks*

You've already learned all of the sprite interactions and types of movement that we will cover this unit. Today you'll have a chance to put them all together to make a flyer game.

**Question of the Day:** How can the new types of collisions and modeling movement be used to create a game?

## Activity (35 minutes)

**Distribute:** (Optional) pass out copies of the project guide. Students can use this sheet to plan out the Flyer Game they create at the end of this lesson, but the planning can also be completed on scratch paper.

**Transition** Send students to Code Studio.

 1

Intro to Flyer Game

 2

Make Your Sprites

 3-5

Player Controls

3

4

5

 6

Sprite Movement

 7

Sprite Interactions

 8

Review Your Game

## Wrap up (5 minutes)

### Share Out and Journal 3-2-1

**Share:** Allow students time to play each other's flying games. Ask them to focus not just on the new behavior that they added but also the code they used to create it.

**Journal:** Have students write and reflect about the following prompts.

- What are three things you saw in someone else's game that you really liked?
- What are two improvements you'd make to your game if you had more time?
- What's one piece of advice you'd give to someone making this type of game?

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