Unit 0: What's in a Game?

Game Title: N/A

Game Type: N/A

Driving Question:
- What types of games can we create, and what are the elements of a well-designed game?

Summary:
- Students will learn about the components of games in general, explore the different genres of games (especially on the app store) that can be created with GameSalad, analyze the various elements of a game (rules, victory conditions, story, characters, etc.) and will understand the importance of planning and storyboarding in the game development process.

Unit 1: Your First Game

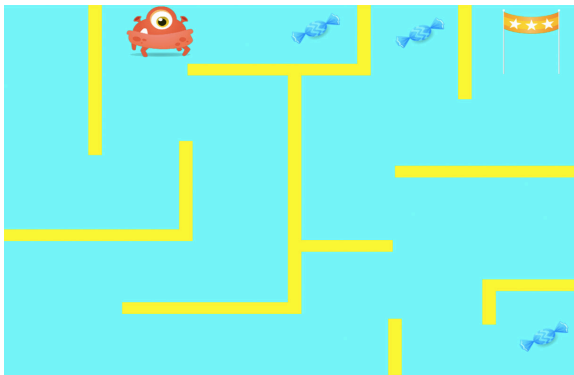Game Title: Monster Maze

Game Type: Top-Down Maze

Driving Question:
- How can we use GameSalad to create a simple game?

Summary:
- Students will become familiar with the GameSalad interface, syntax and features to create a simple "Monster Maze" game.

Monster Maze Screenshot:

Monster Maze Assets:

Unit 2: Enemies & Projectiles

Game Title: Good Tank, Bad Tank

Game Type: Shooter (vs computer)

Driving Question:

- How do enemies affect game play?

Summary:

- Students will build upon the skills learned in their first game to create a game where enemies add complexity and challenges to their game. The "Good Tank, Bad Tank" game will introduce a number of more sophisticated game development topics including object spawning, attribute constraints and basic AI-driven enemies.

Good Tank, Bad Tank Screenshot:
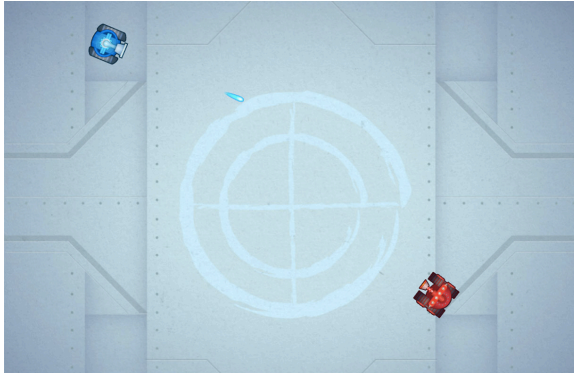
Good Tank, Bad Tank Assets:

Unit 3: User Controls

Game Title: Fruit Fall

Game Type: Kaboom

Driving Question:

- How can we create multiple control options for the same game so that users can play the game on various devices?
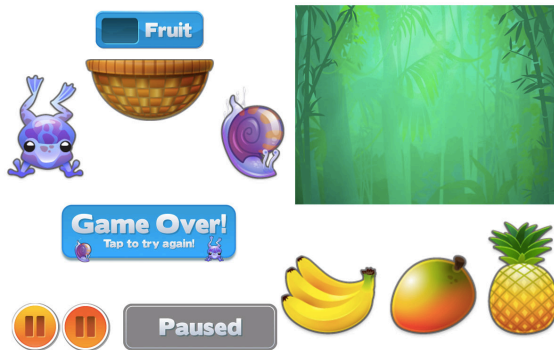
Summary:

- Students will create a "catch the falling fruit" game with keyboard controls, then optimize it for various devices using mouse controls, touch events, and the accelerometer. While its game mechanics appear simple, this lesson introduces the concept of object-oriented programming through random object spawners, introduces students to the design challenges of implementing logic and behaviors that take place off-screen, and focuses heavily on user interface design across multiple device platforms (and the affordances each device offer).

Fruit Fall Screenshot:

Fruit Fall Assets:

Unit 4: Platformer Game

Game Title: Salad Run

Game Type: Endless Runner (Mario)

Driving Question:

- How can we create interesting levels in a platformer game that follows a character on the screen?

Summary:

- Students will create a side scrolling platformer game to utilize the camera controls. This unit introduces physics simulation, particle systems, animation control and a variety of platform game mechanics such as running, jumping, object collection and player progression.

Salad Run Screenshot:

Salad Run Assets:

Unit 5: Conditional Execution
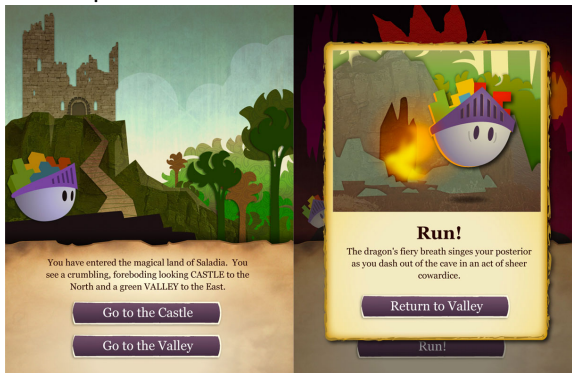
Game Title: Once Upon a Salad

Game Type: CYOA

Driving Question:

- How can we use conditional statements and branching to create a choose-your-own-adventure game?

Summary:

- Students will utilize conditional execution, attributes, and if/else logic to create a choose-your-own-adventure game. This unit also introduces non-linear storytelling and multidimensional arrays (GameSalad's table feature).

Once Upon a Salad Screenshot 1:

Once Upon a Salad Screenshot 2:
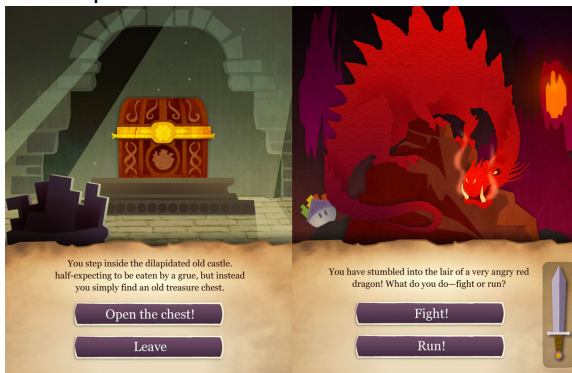
Unit 6: Educational Game

Game Title: Student Choice
Game Type: Student Choice
Driving Question:

- How can we use GameSalad to create a fun educational game that teaches/reinforces learning objectives?

Summary:

- Students will collaborate with another class (preferably elementary students) to create an educational game that reinforces concepts with which they need help. This project also introduces the client-developer relationship and utilizing feedback in the game development process.

Unit 7: Capstone Game

Game Title: Student Choice
Game Type: Student Choice
Driving Question:

- How can we work in a game development team to design and create an original, multi-level game?

Summary:

- Students will work in development teams of 2-4 to conceptualize, plan, create, test and revise an advanced, fully functional game that incorporates all skills used in previous units. This capstone project aligns with the 2016 ISTE student standards and will demonstrate each student as:
  - Empowered Learner
  - Digital Citizen
  - Knowledge Constructor
  - Innovative Designer
  - Computational Thinker
  - Creative Communicator
  - Global Collaborator