Part 1: Introduction to Games

Students play a variety of digital and nondigital games. They reflect on how games are structured, identify the formal and dramatic elements of games, and consider the features that make games successful and fun to play. Students are introduced to the software they will use to create their games, and then use this software to create a simple game.

Length
5 50-minute sessions

Activity 1A: Elements and Features of Games

Students play and browse through various games, identifying and discussing game elements and the features that make them fun to play. Students are introduced to the weekly critique assignment.

Sequence

1A.1: **What's in a Game?**	Students are introduced to the unit and discuss the appeal of different games. In teams, students play and write a short description of a game.
1A.2: **Defining Game Elements and Features**	Students form new teams and discuss the games they played. Students develop a list of common elements in the games and highlight the features that make particular games distinctive. The class discusses the formal and dramatic elements of games.
1A.3: **The Weekly Critique**	Students are introduced to the weekly critique assignment, in which they play and critique a game on their own each week.

Materials Needed

- **Handout 1: Unit 2 Overview**
- **Handout 2: Unit 2 Journal Assignments**
- **Handout 3: Instructions for *What's in a Game?***
- Several types of games for students to play (see *Advance Preparation*)
- Optional: Board games, card games, and video games that students bring in (see *Advance Preparation* at the beginning of the unit)
- **Handout 4: Elements of Games**
- **Handout 5: Weekly Critique**
- **Assessment Checklist 1: Weekly Critique**

> **Note:** Give students extra copies of Handout 5 and Assessment Checklist 1 so that they can complete one handout and one assessment each week.

- Optional: List of links to online video games (see *Advance Preparation*)

Advance Preparation

- Before Activity 1A.1, select several games (board games, card games, physical-skill games, and video games) for students to play in class. Make sure that there are enough games for teams of three or four students to each play a game. Choose games that vary in theme, objectives, genre, and platform. Ideally, the games selected should represent a variety of game types. It's okay to use games that students are familiar with, as well as games they may not be familiar with. For unfamiliar games, try to choose ones that students will be able to learn fairly quickly. (See *Media & Resources* for game suggestions.)

> **Note:** A sample analysis of one level of *Super Mario Galaxy* for Nintendo Wii is provided in this activity.

- In Activity 1A.3, students are introduced to the weekly critique assignment, in which they play and critique a game on their own each week. Students may choose board games, card games, physical-skill games, or video games. You may want to provide students with a list of links to online video games. See *Media & Resources* for suggestions.

RESOURCES

1A.1: What's in a Game?

1. Introduce the unit.

Distribute **Handout 1: Unit 2 Overview**. Explain to students that in this unit they will learn about the principles of game design. Tell them that for the unit project they will come up with their own idea for a simple video game and then use game design software to create that game.

Tell students that as they design their games, they will focus on creating the most fun and satisfying experience they can for players.

2. Have students reflect on a favorite game.

Distribute **Handout 2: Journal Assignments.** Tell students that to get them thinking about the player experience, they will reflect on a game they have already played. Have students complete **Journal 1.**

Journal 1

Think of one of your favorite games. It could be a video game, a board game, a sport, or any other kind of game that you played when you were younger or that you like to play now. Write a paragraph that describes the game's "player experience":

- As a player, what do you do in the game? (Are you moving around, using your reflexes, using your imagination?)
- What do you experience that makes the game fun?
- How do you feel when you are playing the game?

Be descriptive! Focus your writing on how you *feel* when you play the game rather than on the specific rules or procedures of the game.

Look through your paragraph description and circle key words and phrases that define the experience of playing this game. Which aspects of this experience, if any, do you want to recreate in your video game for the unit project?

3. Have students share attributes of their games' "player experience."

Have volunteers share some of the words and phrases they circled in their journals. Create a class list of attributes of the playing experience of students' favorite games.

Students may come up with some of the following descriptive words and phrases to describe their game-playing experiences:

- Exciting
- Challenging
- Escape—allows me to be immersed in the game world
- Allows me to be someone else
- Uses quick reflexes
- Requires strategy
- Allows for creativity
- Always something new
- Allows me to interact with other players
- Makes me think

Teacher's Notes: Discussing Aspects of Player Experience

Focus the discussion on aspects of the player experience, rather than on other game attributes that students like. For example, if a student says he likes a particular game because it has cool special effects, ask that student to describe how the special effects affect his playing experience.

Where appropriate, probe to have students expand on their descriptive terms. For example, if students describe a game as "fun," ask them to give details about what they mean by *fun*, how they define *fun*, and what they were doing during the game that made it feel fun.

Tell students that when they design their own game, they should keep in mind what makes their favorite games fun to play, as well as what kinds of playing experiences they don't like.

4. Introduce the *What's in a Game?* activity.
Tell students that another important part of game design is understanding how games are structured. Explain that students will play a game, explore its structure, and compare it to games that their classmates play.

Divide the class into small teams. Distribute **Handout 3: Instructions for *What's in a Game?*** and review it with students.

5. Have teams play their assigned game.

Assign each team one of the games you've selected. Give students a few minutes to familiarize themselves with the rules of the game and how to play it.

Tell students that they will have 10 minutes to play their assigned game.

> **Note:** Some games work best with just one or two players. If the number of players on a team is greater than the recommended number of players for the game, have teams choose one or two students to play the game while the rest of the team observes.

6. Have students write a description of their game.

Tell students to imagine that they are describing the game to someone who has never seen or heard of it—or any game similar to it.

Have students individually write a paragraph that describes the game and how it is played. Explain that they will later form new teams and compare each other's game descriptions.

7. Optional: Have team members share their paragraphs and revise as needed.

Have students share their paragraphs with their current team and then revise them, based on the feedback they receive.

Handout 1:
Unit 2 Overview

Think about all the different kinds of games that you like to play. What is it that makes them fun? Do you like fast-paced games where you need to use quick reflexes? Do you like games in which you need to think strategically and anticipate your competitor's next move? Do you like games that tell a story? Games that allow you to take on another identity or explore an alternate universe? And have you ever wondered who came up with the idea for your favorite game—or how that person structured the game to make it functional, challenging, and fun to play?

In this unit, you'll learn to think like a game designer. You'll determine how different types of games are structured, and you'll learn principles and strategies for designing games. For your unit project, you'll work as part of a team to design and create a simple video game.

Your work in this unit will revolve around the following questions:

- *Why do people play video games?*
- *What are the principles of good game design?*
- *How do game-play mechanics and visual elements interact to create an engaging and compelling game?*
- *What kind of game do I want to create?*

Unit Project

For the unit project, you'll take on the role of a designer for a video game company. Your task is to come up with an idea for a simple new video game. You'll work with a team to develop the theme of the game, its rules, and the mood and look of the game. Your team will design the user interface for the game and produce game art. You'll use game development software to create the actual game. At the end of the unit, you'll present your game to your classmates.

What You Will Do in This Unit

Play games. Play different games, identify common game elements and features that distinguish games from one another, and discuss the kinds of games you like to play and why you like to play them.

Critique games. Play, describe, analyze, and critique a game on your own each week.

Reverse-design a video game. Work as part of a team to analyze a video game by "pulling apart" its different components to find out how the parts were put together by the original game designer.

Choose an idea for a new game. With your team, develop an idea for a new video game.

Describe your game. Write a short treatment for your video game idea and present it to your classmates.

Complete a design document. Describe specific elements and features of your game.

Create user interface wireframes. Draw sketches of different game screens that show how players will interact with the game.

Create game art. Create art to use in your video game, or create concept art for the game.

Create your game. Use game development software to create your game.

Test your game with your classmates. Partner with another team to give and receive feedback on each other's games.

Revise your game. Use peer feedback to revise your game.

Present your game. Share your game with an audience.

Portfolio Requirements

You will keep a portfolio of work throughout the unit that includes the following items:

- Video game treatment
- Game design document
- Game interface wireframes
- Game art
- Completed video game

Vocabulary Used in This Unit

Camera viewpoint: The angle from which the game world is depicted on a video game screen.

Dramatic elements: Components of games that are designed to engage players, such as story and characters.

Formal elements: Components that make up a game, such as game objectives and rules.

Game design document: A written piece that outlines the essential elements of a game, including game objectives, rules, intended audience, storyline, and unique selling points.

Game platform: The device on which a game is played. Examples of game platforms are consoles, personal computers, and hand-held portable devices.

Game world: The physical world in which the game takes place. For example, a game world might consist of physical locations in a game, such as geographic places; landscape features, such as bodies of water; and environmental features, such as buildings. In puzzle or abstract games, the game world may consist of such items as grids, geometrics objects, and numbers or letters.

Manual interface: The controls that players manipulate physically, such as a joystick or keys on a computer keyboard.

Play-test: The process of playing a prototype of a game and providing feedback on how functional, playable, and engaging the game is.

Power-up: Something, such as an object, that gives a video game character a boost of strength, power, wealth, or speed.

Prototype: A working model of a game idea.

Visual interface: The display shown on a video game screen that gives a player the information needed to play and make decisions during the game, such as the number of lives remaining, location within the game world, and links to other menus.

Wireframe: A sketch of the visual interface of one screen in a video game.

Handout 2:
Unit 2 Journal Assignments

Journal 1

Think of one of your favorite games. It could be a video game, a board game, a sport, or any other kind of game that you played when you were younger or that you like to play now. Write a paragraph that describes the game's "player experience":

- As a player, what do you do in the game? (Are you moving around, using your reflexes, using your imagination?)
- What do you experience that makes the game fun?
- How do you feel when you are playing the game?

Be descriptive! Focus your writing on how you *feel* when you play the game rather than on the specific rules or procedures of the game.

Look through your paragraph description and circle key words and phrases that define the experience of playing this game. Which aspects of this experience, if any, do you want to recreate in your video game for the unit project?

Journal 2

List three of your favorite games. Name the objective, or objectives, of each game. Are there any similarities in these games?

Based on the games' objectives, try to define the type of game that has the most appeal for you. What do you think that indicates about your personality, interests, or skills?

Journal 3

Think about all the games that you have played, analyzed, or seen in this class and at home. Which game's interface do you like the most? Why? Describe how the interface affects your enjoyment of a game.

Think about an idea you have for a new video game that you'd like to design. What kind of interface would work best for this game? Why?

Journal 4

Game ideas can come from lots of different places. Complete the following prompts and use your responses to help you generate ideas to use as the basis for a new game.

- My favorite sports or games that I played outside when I was younger were . . .
- My favorite indoor games (board games, etc.) that I played when I was younger were . . .
- Right now, my favorite non-video games are . . .
- My favorite video games are . . .
- My favorite movies are . . .
- A TV show that I like is . . .
- A reality TV show that I like is . . .
- One of the best books I ever read was . . .
- One of the most fun things I ever did was . . .
  (This could be any experience you had, such as being in a play, winning a basketball game against a tough opponent, or going on a trip.)

Look through your list. Do any of the games or experiences that you've already had lend themselves to ideas for a new video game? Brainstorm two ideas for games, based on any of the prompts you answered above or a totally new idea. Be sure to keep in mind the limits of the game development software you're using, and focus on ideas that are simple enough to complete in the time that you have available.

Each of your ideas should answer two basic questions from the perspective of a player:

- Who are you?
- What do you do (or what are you trying to do) during the game?

Journal 5

- What was challenging about building and play-testing your game?
- What is one piece of feedback you got from your play-testers that was helpful?
- What is one change you want to make to the game based on the feedback you got from your play-testers?

Journal 6

- What was your favorite part of the video game design and creation process? What did you especially enjoy about it?
- What was the most challenging part of the video game design and creation process? What did you find especially challenging about it?
- What did you learn about the principles of game design during this unit?
- What did you learn about the role that art and graphics play in creating a successful video game?
- What did you learn about the process of creating a game?
- What would you do differently if you were to do this project again?

Handout 3:
Instructions for *What's in a Game?*

What is a game? What elements are common to all games? What features make games distinctive? To help you define what a game is, you and your team will play a game and then compare its elements and features with other games played by your classmates.

First, your teacher will assign your team a game. You'll then complete the steps listed below.

Step 1: Familiarize Yourself with the Game

Decide which team members will play the game. If your team has more members than are needed to play the game, have some team members observe while others play.

Take a few minutes to become familiar with the rules and procedures of the game. Make sure that all the players understand how the game works.

Step 2: Play the Game

Play the game for 10 minutes. It's okay if you don't finish it. Play long enough to get a sense of the playing experience—what you do as a player, what you're trying to accomplish, and how it feels to play the game.

Step 3: Write a Paragraph About the Game

Imagine that you need to describe the game to someone who has never played it or any game like it. Each team member should write a paragraph that gives a basic description of the game and how it is played.

Step 4: Compare Games: Share and Listen

Form a new team with three other students, each of whom played a different game. In your new team, share your game description, and listen to descriptions of other games.

Step 5: Identify Common Elements and Unique Features

Draw a rectangle on a sheet of paper. Write each game's name in an inside corner of the rectangle. In the middle of the rectangle, list elements common to all of the games. Outside each corner of the rectangle, list game elements or features unique to each game. Your rectangle will look like this:

Unique Features of Game 1

- Unique feature #1
- Unique feature #2
- Unique feature #3
- Etc.

Unique Features of Game 2

- Unique feature #1
- Unique feature #2
- Unique feature #3
- Etc.

Name of Game 1   **Name of Game 2**

(Elements Common to All Games)

- Common element #1
- Common element #2
- Common element #2
- Etc.

Name of Game 3   **Name of Game 4**

Unique Features of Game 3

- Unique feature #1
- Unique feature #2
- Unique feature #3
- Etc.

Unique Features of Game 4

- Unique feature #1
- Unique feature #2
- Unique feature #3
- Etc.

1A.2: Defining Game Elements and Features

1. Form new teams.
Create new teams of four, comprising students who played different games during Activity 1A.1.

2. Have team members share their game descriptions.
Explain that students should listen to the different game descriptions and take note of the similarities and differences among the various games.

3. Have students identify common elements and unique features.
Give teams sheets of chart paper and have them draw a rectangle. Have students label each inside corner of the rectangle with the name of one game (as shown on Handout 3).

> **Note:** Depending on your class size, you may have a team with more (or fewer) than four students. In that case, have the team draw a shape that corresponds to the number of team members—i.e., a triangle for a three-member team or a pentagon for a five-member team.

Tell teams to identify the elements that are common to all of the games played and to record those elements inside their rectangle. Have students record each game's unique features on the corresponding outside corner of the rectangle (as shown on Handout 3).

4. Discuss common elements and unique features of games.
Have each team share with the class its list of common game elements. Then have teams share some of their games' unique features.

Teacher's Notes: Common Elements and Unique Features

Students' lists may include the following elements and features.

Common Elements

- Involve players
- Have rules
- Have an objective—players are trying to achieve something
- There are challenges/obstacles/conflicts that make it difficult for players to achieve their objective
- Players compete against each other or against the game system
- Players have resources that they use to meet their objectives
- Include some degree of randomness or chance
- Involve decision-making on the part of players

Unique Features

- Game platforms vary—for example, the platform could be a board game, card game, or video game; within video games, platforms include computer-based games, hand-held games, and console games
- Specific objectives vary—for example, players in the game might:
  - race to the end
  - chase or evade someone or something
  - solve a puzzle
  - build or destroy something
  - collect items
- Some games may involve a story and/or characters
- Some games rely on luck or chance, while others use strategy
- The player configuration varies: how many players, who competes against whom
- Competitive vs. cooperative: Most games are competitive, but some might involve collaboration instead of having a victory condition

Teacher's Notes: Discussing Video Games vs. Traditional Games

One obvious difference that students may notice is that some games are video games while others are not. Tell students that although they will develop an idea for their own new video game in this unit, they will also play and analyze other types of games, such as board games, card games, and physical-skill games.

Ask students why they think analyzing traditional games may help them become good video game designers. Point out that all games have some common elements that make them fun to play. Explain that when developing a video game, it's tempting to concentrate on special effects and graphics, but the core of any successful video game rests on game-play mechanics that are functional and fun to play.

5. Introduce the terms *formal elements* and *dramatic elements*.
Tell students that some of the common elements and unique features they identified comprise games' *formal* and *dramatic elements.*

Distribute **Handout 4: Elements of Games**. Tell students that they will use this handout to structure their work for the whole unit. When they reverse-design a game in Part 2, they will "unpack" the formal and dramatic elements of the game. Similarly, when they design their own game, they will determine and design its formal and dramatic elements.

6. Analyze the formal and dramatic elements of one game.

Choose one of the games that students played, and use it as an example to point out different game elements. As a class, go through each element listed on Handout 4 and ask students to apply the definitions given to the sample game.

> **Teacher's Notes: Sample Game Analysis of *Super Mario Galaxy* for Nintendo Wii, Honeyhive Galaxy, "Bee Mario Takes Flight" Level**
>
> *Formal Elements*
>
> **Players:** *Super Mario Galaxy* can be played by one or two players. Two players can play the game cooperatively, with one player controlling the character Mario and the other player collecting star bits and shooting them at enemies.
>
> **Objectives:** The objective of this level is to find the Power Star while avoiding enemies and collecting coins and star bits.
>
> **Rules:** There are many rules. Here are some examples:
>
> - If Mario is damaged three times by enemies, he "dies" and the player loses one life.
> - The Star Pointer (controlled by pointing the Wii remote) can collect star bits by pointing at them.
> - Every time 50 star bits have been collected on a level, the player gets an extra life.
> - When Mario is wearing a bee suit, he can "fly" for a certain amount of time before he needs to recharge.
>
> **Resources:**
>
> - Players collect star bits to shoot at enemies.
> - Coins can be used to restore Mario's health if he has been damaged. Like star bits, if enough coins are collected on a certain level, the player gets an extra life.
> - "One up" mushrooms also give the player an extra life. There are several different power-ups throughout the game. In the Honeyhive Galaxy, there is a mushroom that gives Mario a bee suit, which allows him to fly and climb special walls.
>
> **Conflict:** Various types of conflicts present obstacles that prevent players from achieving their objectives, for example:
>
> - Opponents, in the form of enemies that try to hurt or kill Mario, such as Goombas and Piranaha flowers
> - Physical obstacles, such as large boulders that roll on the ground or walls that Mario must find a way over

Players must also solve dilemmas. For example, in this level the player must figure out how to use the powers of the bee suit to help Mario reach the Queen Bee.

Dramatic Elements

Challenge: Players encounter a variety of challenging tasks, such as figuring out how to:

- defeat or avoid enemies
- move among obstacles to reach a goal
- use Mario's powers to solve a puzzle or problem

Players stay engaged with the game because the challenges can vary greatly from galaxy to galaxy. However, the game isn't too difficult for novice gamers.

Play: The game is playful and enjoyable because of its wide variety of environments and challenges. This unending variety encourages the player to keep playing after completing a galaxy level because he or she can look forward to new surprises.

The game play is innovative as well. For example, the game takes advantage of the Wii remote by creating a new "spin" move in which the player must twist the remote in a certain way. Many of the challenges (such as using the bee suit to climb a wall) are also fun to play and watch.

Premise and Story: The premise is that Princess Peach has been kidnapped by the evil Bowser. Mario's goal is to find and rescue the princess. The story provides the background and the rationale for the tasks that Mario performs during the game. However, the story is more of a background element than a prominent feature of the game—the storyline doesn't change based on game play.

Characters: The primary character, and the role taken on by the player, is Mario. Mario is a simple character without an extensive backstory. He is motivated by his drive to save the princess. Other characters in the game serve mainly to provide the player with information, rather than to enrich the experience of the game.

7. Discuss game objectives.

Point out to students that the game objective is one of the most important defining aspects of a video game. Tell students to keep this in mind as they design their own game.

Review the list of objectives given on Handout 4 and ask students to name examples of video games (or non-video games) that illustrate each objective. Ask students whether they can think of any games that have an objective not included in the list.

> **Teacher's Notes: Objectives and Genres**
>
> Video games are often classified by genre, such as action games or puzzle games. Games within the same genre often have similar objectives, since objectives define the essence of the game. If you would like to use genres to help students differentiate particular games, refer to **Appendix B: Video Game Genres.**

Have students reflect on game objectives by completing Journal 2.

Journal 2

List three of your favorite games. Name the objective, or objectives, of each game. Are there any similarities in these games?

Based on the games' objectives, try to define the type of game that has the most appeal for you. What do you think that indicates about your personality, interests, or skills?

Note: This point in the unit is a good place to have students complete Design Challenge #1. See **Appendix C: Game Design Challenges.**

Handout 4:
Elements of Games

A *game* is an activity or form of play that has structure, boundaries, and rules. Understanding the elements of games can help you design a game that is engaging and fun to play. Game elements include *formal elements*—the components that structure the game—and *dramatic elements*—the ways in which a game attracts and engages players.

Formal Elements of Games

Players

For a game to be a game, there must be someone who plays it! Games vary in the number of players, the roles that players take on, and the *player interaction patterns*—for example:

- A single player vs. the game
- Player vs. player
- Multiple players vs. the game

In cooperative games, players work together instead of competing against each other.

New Super Mario Bros. Wii can be played in single-player mode or in multiplayer mode as shown here.
Screenshot from *New Super Mario Bros. Wii* by Nintendo.

Objectives

What is the player trying to do or accomplish during the game? The objective of the game defines what the game is about.

Here are some common objectives in video games:

- **Arrange or align:** Arrange your game pieces in a particular configuration (such as in *Tetris* or *Bejeweled*)
- **Capture:** Take or destroy something belonging to an opponent (for example, terrain or units) while avoiding being captured
- **Chase:** Catch an opponent and/or avoid being caught yourself
- **Collect:** Acquire units or objects
- **Construct:** Build, maintain, or manage objects
- **Explore:** Explore game areas (this is usually combined with a more competitive objective)
- **Race to the finish:** Reach a goal—physical or conceptual—before other players reach it, or before time runs out
- **Rescue or escape:** Get someone or something to safety
- **Solve a puzzle:** Find a solution to a puzzle or problem more quickly or more accurately than a competitor

In *Bejeweled*, the objective is to arrange jewels so that three or more of the same jewel are lined up in a row. Screenshot of *Bejeweled 2* by Popcap.

Rules

Rules tell players what they can and cannot do in a game.
There are different kinds of rules in games. A rule might tell you . . .

- **What something means:** For example, a rule in the game of poker is that a *flush* consists of five cards of the same suit and that it is worth more than a *straight*, which consists of five cards in consecutive order.
- **What you can't do:** For example, one rule in *Madden Football* is that you can't throw the ball when you are past the line of scrimmage.
- **What happens if you do "X":** For example, in *You Don't Know Jack*, if a player answers a question incorrectly, the other players get a chance to answer.

Resources

Resources are tools that players use to play the game and accomplish their objectives. In video games, resources might include the following:

- **Lives:** Some video games—including the earliest games, such as *Space Invaders*—give players a certain number of times they can "die" before the game is over. In many games, you can earn more lives if you do something well.
- **Power-ups:** These are generally objects that give your character some kind of boost of strength, power, wealth, or speed. For example, in *Jak* and *Daxter*, a type of power source called *blue eco* allows players to move faster than normal.
- **Inventory:** Some games allow players to collect objects (that are not power-ups), such as weapons and ammunition.
- **Currency:** In some games, players have money, gold, or another item that can be used to trade or purchase other resources.
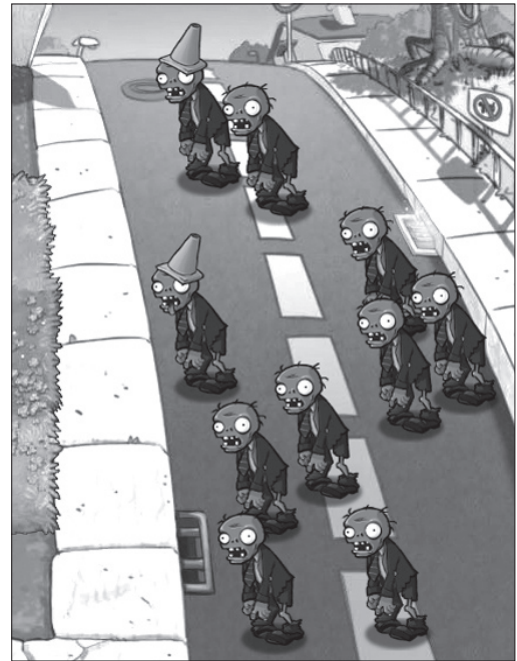
Conflict

Conflicts are built into games in order to make it difficult for players to accomplish their objective. Conflicts provide a sense of competition and play.

Think of the game of basketball. What's the objective? To shoot the ball into the other team's hoop and score points. If the other team had no defenders, it would be easy for players to accomplish their objective. It would also be a boring game to play.

Some common sources of conflict:

- **Obstacles:** Obstacles can be physical, such as a barrier blocking an entrance, or they can involve mental skills, such as a riddle you must solve or a code you must figure out in order to open a gate.
- **Opponents:** In multi-player games, opponents are players you compete against. In single-player games, there can be non-player characters that are opponents as well, such as enemies that you have to avoid.
- **Dilemmas:** Decisions that players must make in a game can provide conflict, such as deciding whether or not to fold during a poker game.
- **Time:** In some games, you work against the clock to reach a goal. The time pressure makes the game challenging and adds a level of tension.

In the game *Plants vs. Zombies*, zombies are a source of conflict.
Screenshot from *Plants vs. Zombies* by Popcap.

Dramatic Elements of Games

The formal elements are what make a game a game. Dramatic elements are what make a game *fun*. A game's dramatic elements engage players and get them emotionally invested.

Challenge

In games, *challenge* refers to tasks that are satisfying to complete because they require the "right" amount of hard work. Challenges are tasks that engage you and make you want to continue playing so that you feel satisfaction and a sense of accomplishment.

Here are some points to keep in mind about challenge in games:

- If a game is too challenging, players can get frustrated—but if a game is too easy, players can get bored.
- The "right" amount of hard work depends on the specific player's skills and interests. For example, a child who is just learning to count might be satisfied with the challenge presented in the game *Chutes and Ladders*, while an adult who has mastered that skill would find it boring.
- When you design your game, you should have a target audience in mind so that you have a sense of how challenging your game should be.

Play

A main reason that people play games is because the simple act of *playing* something is fun. The word *play* often refers to activities that people choose to take part in for their own enjoyment (as opposed to *work*, which is something they have to do).

If you have watched small children playing, you may have seen them laughing with delight as they freely explore and experiment with objects, sounds, and activities. To really engage players in your game means structuring your game so that players feel a sense of play. You want players to feel that reaching the objective is fun, not work!

Premise and Story

Many games have a premise and story that provides context for the game and gives the player a purpose. There are different ways to approach the use of premise in a game, for example:

- Some games have an elaborate premise that provides drama for the player. For example, in *Diablo*, the player is a wandering warrior who has been asked by the townspeople of Tristram to help them rid the world of Diablo, the Lord of Terror.
- In other games, the premise is less developed. For example, the premise of *Space Invaders* is that you are protecting an unnamed planet from attacking aliens.
- In many puzzle games and other abstract games, there is no premise—at least none that is obvious to the player.

In most Mario series games, including *Super Mario Galaxy,* the basic premise is very simple: Princess Peach has been captured by Bowser, and Mario must save her.
Screenshot from *Super Mario Galaxy* by Nintendo.

Characters

Game designers aim to have players identify with a character in a game so that players become invested in the story and its outcome. Early video game characters were completely defined by the way they looked. Today, as games gain more sophisticated narratives, many characters have well-developed backstories that make the game a richer experience.

Activity 1A.3: The Weekly Critique

Distribute **Handout 5: Weekly Critique** and **Assessment Checklist 1: Weekly Critique.**

Explain that students will play games on their own (or with other classmates) outside of class each week and write a critique of each game they play, using the questions on Handout 5. Explain that after each critique, students should fill out the Student Comments portion of the Assessment Checklist.

Point out the different kinds of games recommended for critique on Handout 5—board games, card games, physical-skill games, and video games. If you created one, provide students with the list of links to online video games.

Discuss the different components of the critique on Handout 5: description, analysis and interpretation, and critique.

> **Note:** The critique is loosely based on the Feldman method of art criticism. For more information about the Feldman method, see *D/M/A Foundations in Visual Arts, Unit 1: Getting to Know You.*

Teacher's Notes: Weekly Critique

If students have taken *Foundations in Media and Digital Design: Animation and Game Design, Unit 1: The Animated World*, they should have experience with weekly critiques. If students need additional support, critique one game together as a class. A sample critique of *Plants vs. Zombies* is included in the teacher's version of Handout 5.

Logistics
If students do not have access to video games outside of class, you can have them play games during class. Note that playing games in class will add additional time to the unit.

Students can work together to play games for the weekly critique (especially board games, which usually require more than one player), but each student should write his or her own critique.

Critique Check-Ins
Schedule one or two check-ins during the unit in which students can discuss their critiques. Collect and review students' written critiques and assessments after each check-in.

Handout 5:
Weekly Critique

Choose a game to watch, analyze, and critique on your own each week.

Choose Games

Choose a game to play. You can play:

- board games
- card games
- physical-skill games (such as basketball or tag)
- video games

Critiquing a variety of games will help you see how different game elements work together to create a satisfying game, and how various types of games are similar and different.

At least three of the games you critique should be video games. Try to play games from different genres (for example, you might play a racing game, a role-playing game, and a *platform game*—a game in which characters jump on and over objects and platforms, such as the *Super Mario* game series).

Play the game for at least 15 minutes (if it's a multi-player game, play it with classmates, family members, or friends). Ideally, you will play at least one full level of the game (for a video game) or one round (for a board game or card game).

Describe, Analyze, Critique

Fill out the charts below for each game. You can include drawings as well as text—for example, you might sketch a character or an obstacle from the game.

THE GAME	
Name of the game	*Plants vs. Zombies*
Kind of game (for example, board game or video game)	*Video game*
Portion of the game that you played (for example, "the first level of the game" or "two rounds of the game")	*Levels 1-1 to 1-5*
Date and time you played the game	
Who you played the game with (if it's a multi-player game)	*Single-player game*

DESCRIPTION	
What is the objective of the game?	*To protect your house from zombies by planting plants that kill the zombies on the front lawn of the house.*
Describe two or more rules of the game.	*Specific amounts of sunshine can be used to buy plants (e.g., 50 units of sunshine for sunflowers, 100 units for peashooters).* *Only one plant can be planted per square of lawn.* *After a plant has been bought, it takes a certain amount of time to "recharge" before it can be purchased again.* *Zombies need to be hit by a certain number of peas from a peashooter before they die. If the zombies are protected by something they are wearing (such as traffic cones on their heads), the number of peas needed to kill the zombie increases.*
What does the *game world* (the physical environment of the game) look like?	*The game takes place on a green lawn, edged by lawnmowers on the west (house) side, a fence on the north side, and stones or a pathway on the east and south sides. There are between one and five strips of lawn, depending on the level, each of which has nine squares. The zombies attack from the east, moving west over the lawn. The house isn't seen in the game unless the zombies succeed in getting into it.*

ANALYSIS AND INTERPRETATION	
What resources can the player use to help reach the goal? What obstacles get in the way of reaching the goal?	*Resources: The player uses sunshine—which falls from the sky and is produced by sunflowers—as a form of currency to buy plants, such as peashooters and cherry bombs, which kill zombies (currency is also used to buy sunflowers).* *Obstacles: Zombies are constantly attacking the lawn; some zombies have properties (such as traffic cones on their heads) that make them more difficult to kill.*
Describe the style that artists have used to create the game world, and how it contributes to the mood of the game.	*The game world and characters are rendered in a simplified, cartoonish style, with bright colors and simple shapes. The style contributes to the game's humorous mood. For example, the eyes of the zombies are comically large.*
For a video game, describe an aspect of the game in which the game artists use the elements of art and principles of design to create a mood or create an engaging world for the player.	*The artists use contrast and color to create a mood by using bright primary colors for the plants and lawn and darker grays and blacks for the zombies. This makes the zombies seem menacing and clearly indicates that they are the "bad guys."*

CRITIQUE	
Did the game have the appropriate level of challenge (not too easy and not too hard)? If so, how did the game makers use game elements to create the right degree of challenge? If not, what aspects of the game weren't challenging enough or were too challenging?	*The game has an appropriate level of challenge. The game makers created this level of challenge by including fewer elements in the first few levels of the game (for example, starting out with only one strip of lawn, one kind of plant, and very few zombies), and gradually introducing more elements as the player begins to get a sense of how the game works.*
Was the game fun to play? Why or why not?	*The game is fun to play because the concept of the game is engaging, the game is funny and well-designed, the levels are relatively short and therefore immediately rewarding, and at the end of each level the player is introduced to a new element (such as a new plant), so there's always something new to look forward to.*
Describe one thing you would change about the game and why.	*One possible answer is that there could be more plants available for players in the early levels of the game, to make the game more interesting for players who quickly pick up on the concept of the game.*

Assessment Checklist 1:
Weekly Critique

Use this checklist to help you plan and assess each of your weekly critiques. Your teacher will use this checklist to help evaluate your work.

Requirements	Percentage of Total Grade	Comments	
Description		**Student Comments**	**Teacher Comments**
Clearly describes the objective of the game.	**10%**		
Describes at least two rules of the game.	**10%**		
Clearly describes the world of the game.	**10%**		
Analysis and Interpretation			
Clearly describes resources players can use to reach the goal, and obstacles that get in the way of the goal.	**15%**		
Describes the style in which the game is rendered and how it contributes to the game's mood.	**10%**		
Demonstrates understanding of the elements of art and principles of design by describing how they are used to create a mood or an engaging world.	**10%**		

Critique

Provides convincing evidence for why the game did or did not have the appropriate level of challenge for players.	**15%**		
Identifies reasons that the game was or was not fun to play.	**10%**		
Identifies convincing reasons that one element of the game should be changed.	**10%**		
Total	**100%**		