## Overview

This unit aims to immerse 14-year-old students in the fundamentals of video game development and design. Students will explore the history of video games, learn the steps involved in game creation, and acquire essential skills to develop a simple video game using accessible software.

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## Term 1: Foundations of Video Game Development

#### Week 1: Introduction to Video Games

- **Lesson Objectives:**
  - Understand the definition and importance of video games in culture.
  - Explore the evolution of video games from the 1970s to the present.
- **Activities:**
  - Class discussion on favorite video games.
  - Presentation on the history of video games.
  - Watch short documentaries highlighting major advancements in gaming.

#### Week 2: Game Genres and Mechanics

- **Lesson Objectives:**
  - Identify different game genres (platformers, RPGs, shooters, etc.)
  - Understand basic game mechanics and their importance in gameplay.
- **Activities:**
  - Genre breakdown presentations.
  - Group activity: brainstorm and categorize games into genres.

#### Week 3: The Game Design Process

- **Lesson Objectives:**
  - Introduce the game development cycle: concept, design, development, testing, and launch.
- **Activities:**
  - Create a flowchart of the game development process.
  - Discuss the roles in a game development team (game designer, programmer, artist, etc.).

#### Week 4: Storytelling and World-Building

- **Lesson Objectives:**
  - Understand the significance of narrative and world-building in games.
- **Activities:**
  - Analyze the story and setting of a popular game.
  - Group project: create an outline for an original game story and setting.

#### Week 5: Introduction to Game Development Software

- **Lesson Objectives:**
  - Familiarize students with game development software (e.g., Unity, Unreal Engine, Godot, or GameMaker).
- **Activities:**
  - Guided installation and setup of the chosen software.

- Explore the software interface through a basic tutorial.

#### Week 6: Basic Programming Concepts

- **Lesson Objectives:**
  - Introduce basic programming concepts relevant to game development (variables, loops, conditionals).
- **Activities:**
  - Interactive coding exercises using block-based coding (Scratch) or simplified scripting in chosen software.

#### Week 7: Game Art and Design Principles

- **Lesson Objectives:**
  - Understand the basics of game art and the principles of design (color, contrast, balance).
- **Activities:**
  - Analyze art styles from various games.
  - Hands-on project: create a simple character or environment design.

#### Week 8: Prototyping and Playtesting

- **Lesson Objectives:**
  - Introduce the concept of prototypes and the importance of playtesting.
- **Activities:**
  - Create a simple prototype using the game development software.
  - Conduct peer playtesting sessions and gather feedback.

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### Term 2: Game Development Project

#### Week 9: Final Game Concept and Planning

- **Lesson Objectives:**
  - Finalize game concept based on feedback collected during playtesting.
- **Activities:**
  - Write a game design document outlining gameplay mechanics, story, and visual style.

#### Week 10: Development Phase 1 – Building the Game

- **Lesson Objectives:**
  - Start developing the game using the chosen software based on the design document.
- **Activities:**
  - Implement basic gameplay mechanics.
  - Create initial levels or environments.

#### Week 11: Development Phase 2 – Art and Sound

- **Lesson Objectives:**
  - Integrate art assets and sound into the game.
- **Activities:**
  - Import and apply graphics created by students.
  - Explore royalty-free sound effects and music.

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#### Week 12: Testing and Iteration

- **Lesson Objectives:**
  - Conduct thorough testing of the game and iterate based on feedback.
- **Activities:**
  - Organize playtest sessions with peers and gather constructive feedback.
  - Make necessary adjustments to improve gameplay.

#### Week 13: Polish and Finalize Game

- **Lesson Objectives:**
  - Finalize game for presentation, focusing on bugs, aesthetics, and overall experience.
- **Activities:**
  - Debugging sessions.
  - Prepare for final presentations.

#### Week 14: Game Showcase and Reflection

- **Lesson Objectives:**
  - Present final projects and reflect on the learning experience.
- **Activities:**
  - Game showcase event where students present their games to peers, teachers, and possibly parents.
  - Reflect on feedback and the overall experience of creating a game.

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## Assessment

- **Participation:** Engagement during discussions, group work, and hands-on activities.
- **Projects:** Assess the game design document, prototype, and final game based on creativity, adherence to the design process, and execution.
- **Presentations:** Evaluation of the game showcase presentation for clarity, creativity, and communication skills.

## Resources

- **Software:** Unity, Godot, or GameMaker
- **Books/Articles:** Suggested reading materials on game design principles.
- **Videos/Documentaries:** Various resources for history and industry insights.

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This unit plan provides a framework for students to gain hands-on experience in video game development while fostering teamwork, creativity, and critical thinking.