

WEEKLY PLANNER
GREENVILLE SENIOR HIGH ACADEMY OF LAW, FINANCE, AND BUSINESS

Lessons may change

Teacher's Name: Dr. Todd Burnett

Unit Topic: Create a 3D Game

Subject: Game Design & Development

Standard(s) with Synopsis:

F – Game Design Process

Students will apply the game design process by planning, testing, revising, and improving gameplay experiences as they build a playable level.

G – Game Development

Students will create and manipulate game objects, apply collision and physics, use controls and interactive systems, and build gameplay mechanics within a game engine.

E – Professional Knowledge

Students will use critical thinking, creativity, problem-solving, and task-management skills while troubleshooting and developing their Unreal Engine project.

Dates: Sep 28, 2026 - Oct 2, 2026

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
LEARNING TARGET	LEARNING TARGET	LEARNING TARGET	LEARNING TARGET	LEARNING TARGET
I can open, explore, and playtest the Unreal Learning Kit project and identify key assets and gameplay features.	I can explain how collision works and add collision and respawn systems to a level.	I can build a platforming path using static islands, checkpoints, and respawn systems.	I can animate platforms using Sequencer and keyframes.	I can add and customize jump boosts and explain the basic Blueprint logic behind them.
ACTIVATING STRATEGY (10)	ACTIVATING STRATEGY (10)	ACTIVATING STRATEGY (10)	ACTIVATING STRATEGY (10)	ACTIVATING STRATEGY (10)
What makes a game level memorable or interesting to explore?	What would happen if game objects did not have collisions?	What makes a platforming challenge fun instead of frustrating?	How could moving platforms change the difficulty of a level?	What power-ups have you used in games, and how did they change gameplay?
INSTRUCTIONAL DELIVERY	INSTRUCTIONAL DELIVERY	INSTRUCTIONAL DELIVERY	INSTRUCTIONAL DELIVERY	INSTRUCTIONAL DELIVERY
<u>Text (25):</u> Unit overview, project walkthrough, assets, static meshes, Blueprints, navigation, and level goals. Task (30): Download/open project, explore HOC_World, test movement and interactions, and complete playtest reflection. Talk (25):	<u>Text (25):</u> Collision detection, player capsule, collision shapes, performance, and respawn volumes. Task (30): Fix platform collision, duplicate platforms, create a jump path, and add a pain-causing respawn volume. Talk (25):	<u>Text (25):</u> Static islands, player immersion, level difficulty, checkpoints, and Kill Z. Task (30): Build a custom island path, adjust spacing/height, add visual details, checkpoint, and Kill Z. Talk (25): Discuss how spacing and difficulty affect player immersion.	<u>Text (25):</u> Sequencer, Level Sequence, keyframes, transform properties, interpolation, looping, and autoplay. Task (30): Create a Level Sequence and animate three moving islands with looping keyframes and pauses. Talk (25):	<u>Text (25):</u> Jump boost Blueprint, public/private variables, casting, collision events, cooldowns, visibility, and respawn logic. Task (30): Add jump boosts, adjust jump strength/cooldown, test pickups, and record a short gameplay clip. Talk (25):

Discuss first impressions, unreachable areas, and level design choices.	Discuss accuracy versus performance when selecting collision shapes.		Explain how keyframe timing changes platform movement and challenge.	Discuss other possible power-ups and how they could affect level design.
Planned Technology Use: (include estimated time) Unreal Engine, Gameplan – 60–70 min	Planned Technology Use: (include estimated time) Unreal Engine, Gameplan – 60–70 min	Planned Technology Use: (include estimated time) Unreal Engine, Gameplan – 60–70 min	Planned Technology Use: (include estimated time) Unreal Engine, Gameplan – 60–70 min	Planned Technology Use: (include estimated time) Unreal Engine, Gameplan – 60–70 min
REPRESENTATION options for presenting content	REPRESENTATION options for presenting content	REPRESENTATION options for presenting content	REPRESENTATION options for presenting content	REPRESENTATION options for presenting content
Videos, project walkthrough, teacher modeling, navigation examples	Collision diagrams, video demonstrations, Unreal examples	Level examples, teacher modeling, checkpoint demonstration	Sequencer video, glossary, timeline/keyframe examples	Blueprint diagram, video demonstration, variable examples
ENGAGEMENT options for engaging student interest	ENGAGEMENT options for engaging student interest	ENGAGEMENT options for engaging student interest	ENGAGEMENT options for engaging student interest	ENGAGEMENT options for engaging student interest
Hands-on exploration and playtesting	Troubleshooting and platform-building challenge	Student-designed platform path	Moving-platform animation challenge	Power-up customization and gameplay testing
EXPRESSION options for students to demonstrate learning	EXPRESSION options for students to demonstrate learning	EXPRESSION options for students to demonstrate learning	EXPRESSION options for students to demonstrate learning	EXPRESSION options for students to demonstrate learning
Playtest responses and reflection	Working platform challenge	Screenshot/video and reflection	Working animation and reflection	Gameplay recording and written reflection
CULTURAL CONSIDERATIONS	CULTURAL CONSIDERATIONS	CULTURAL CONSIDERATIONS	CULTURAL CONSIDERATIONS	CULTURAL CONSIDERATIONS
Students may make different observations and design choices based on gaming experience.	Encourage multiple solutions to technical problems.	Students may design different levels of challenge and visual styles.	Allow varied movement patterns and creative platform designs.	Students may propose power-ups reflecting different gameplay interests and ideas.
ASSESSMENTS	ASSESSMENTS	ASSESSMENTS	ASSESSMENTS	ASSESSMENTS
Project load check, playtest knowledge check, reflection	Collision fix and jumping path	Static island build, screenshot/video, reflection	Moving island sequence and reflection	Jump boost setup, gameplay recording, reflection