EAIE
Esports as Accelerator for Social Inclusive Education

LESSON

UNREAL LEVEL DESIGN MISSION

AUTHOR

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CODEARTS SOLUTIONS

UNREAL LEVEL DESIGN MISSION

Unreal Level Design Mission challenges students to create a functional 3D blockout in Unreal Engine 5 using professional level-design principles. Learners plan, construct, test and revise a playable space while relating classroom theory to workflows used in the games industry.

Subject and level

VET learners in game development or 3D multimedia who have introductory experience with Unreal Engine 5 and basic knowledge of level design, player flow and Blueprint-based interaction.

Connection to curriculum

The exercise reinforces level design, project planning, spatial composition, Blueprint interaction, testing and presentation. It also develops the ability to analyse whether a level supports intended player behaviour and to revise a design based on playtesting evidence.

Didactic and pedagogic considerations

Practice is structured around a clear blockout objective rather than visual polish. Students work from references, build quickly with simple geometry and test frequently. Peer playtesting and self-assessment encourage them to evaluate player flow instead of becoming attached to the first version of the space.

Time estimate

4 hours

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Group size

12-20 students

Overall introduction to exercise

Students create a small 3D level blockout in Unreal Engine 5, using simple geometry and basic Blueprint functionality where needed. The level must have a recognisable start, objective and route, and it must be possible for another student to navigate it without verbal guidance.

The exercise models the early production workflow used in professional studios: reference, paper plan, blockout, playtest and iteration. Visual decoration is intentionally secondary so that learners focus on scale, navigation, sightlines, pacing and the relationship between space and gameplay.

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Exercise as presented to the students

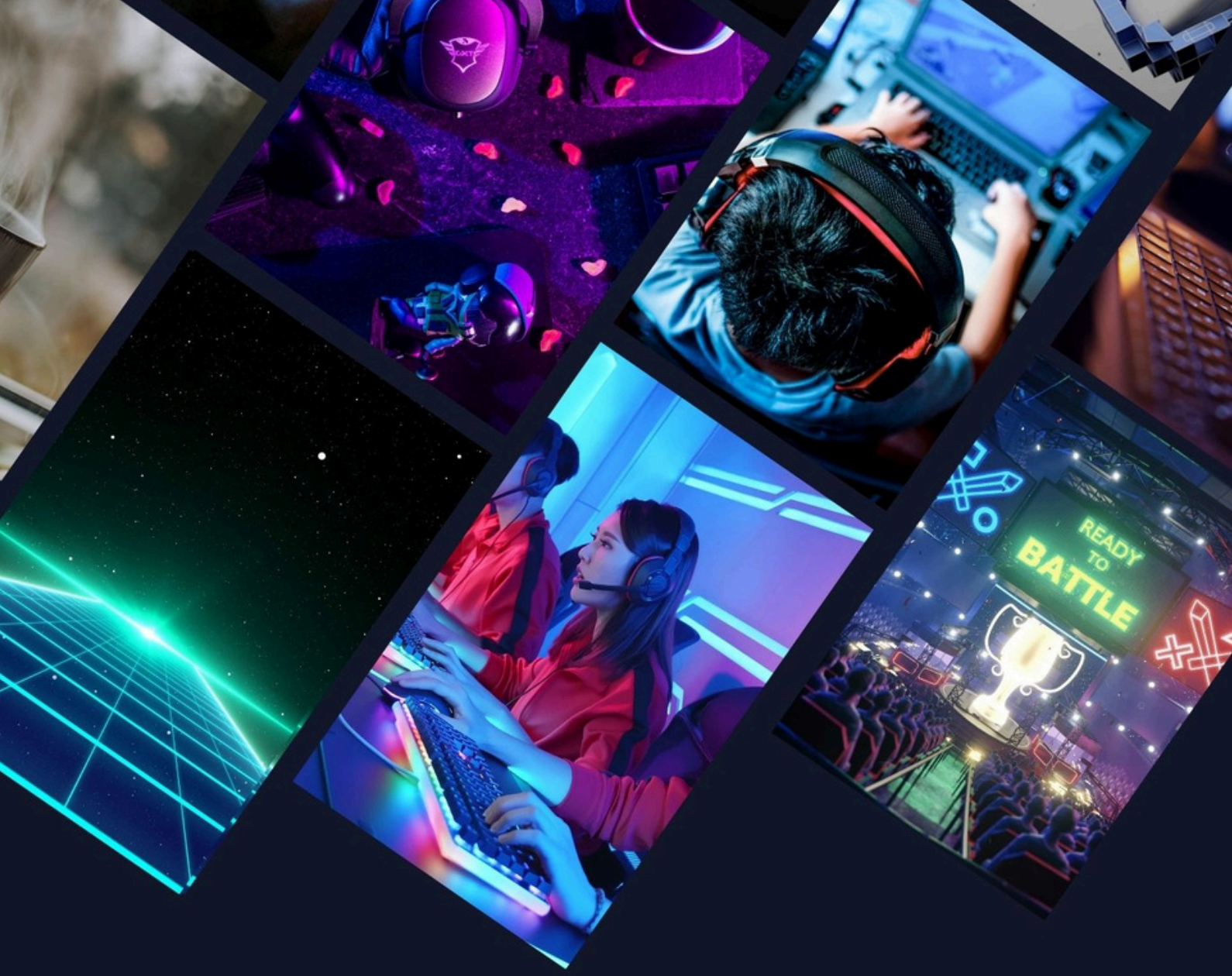
The teacher begins by showing examples of professional level blockouts and asks students to identify how routes, landmarks and obstacles guide the player before final art is added. Each student or pair then chooses a simple level brief and sketches a top-down plan containing a start point, objective, main route and at least one optional space.

Students open Unreal Engine 5 and recreate the plan using basic geometry. They check scale with a standard character and test movement regularly rather than building the entire environment first. The teacher reviews early blockouts and asks students to justify corridor width, elevation changes and the placement of key landmarks.

A second phase introduces simple Blueprint functionality, such as a trigger, moving door or objective marker. The intention is not to build a complex game system but to make the space respond to the player and support the planned flow. Students document one Blueprint interaction and test that it can be triggered reliably.

Pairs then exchange levels for a silent playtest. The tester is given only the objective and is observed while navigating. The designer notes hesitation, missed routes and moments where the player becomes disoriented. No verbal hints are allowed because the purpose is to evaluate whether the level itself communicates effectively.

Students revise the blockout based on the test and finish with a short presentation comparing the original plan with the final level. They explain one spatial decision they changed and why. Assessment focuses on functionality, player flow, appropriate scale, use of level-design principles, problem-solving and the ability to evaluate the work through testing.



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