EAIE
Esports as Accelerator for Social Inclusive Education

LESSON

BLOCK-BUILT GAME DESIGN CHALLENGE

AUTHOR

SERGIO ELVIRA PEREZ

CODEARTS SOLUTIONS

BLOCK-BUILT GAME DESIGN CHALLENGE

This challenge introduces game design through accessible block-based development tools such as Scratch or Stencyl. Students create a simple 2D game or playable level without needing advanced programming, allowing them to focus on mechanics, player interaction, iteration and the structure of an interactive product.

Subject and level

Introductory VET learners in game design, multimedia or digital production. It is particularly useful early in a course because students can produce a functional result quickly while building confidence before moving into text-based programming.

Connection to curriculum

The activity connects game-design theory with practical production. It reinforces mechanics, interaction, testing, project planning and presentation, while introducing the iterative workflow used to develop and refine playable digital products.

Didactic and pedagogic considerations

Block-snapping reduces the initial programming barrier and allows learners to concentrate on design decisions. Project-based learning, a clear deadline, group collaboration and self-assessment support rapid experimentation while keeping the focus on producing a small but complete playable experience.

Time estimate

3 hours

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Group size

15-25 students

Overall introduction to exercise

Students design and build a compact 2D game using Scratch or Stencyl. The objective is not visual complexity but a clear game loop with understandable rules, a controllable player and a defined success or failure condition. Learners test their own work and then exchange it with classmates for feedback.

By producing a complete interactive object within one session, students experience the full creative cycle: idea, implementation, testing, revision and presentation. The exercise is designed to build motivation and show that game development can begin with manageable tools and progressively more complex skills.

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Exercise as presented to the students

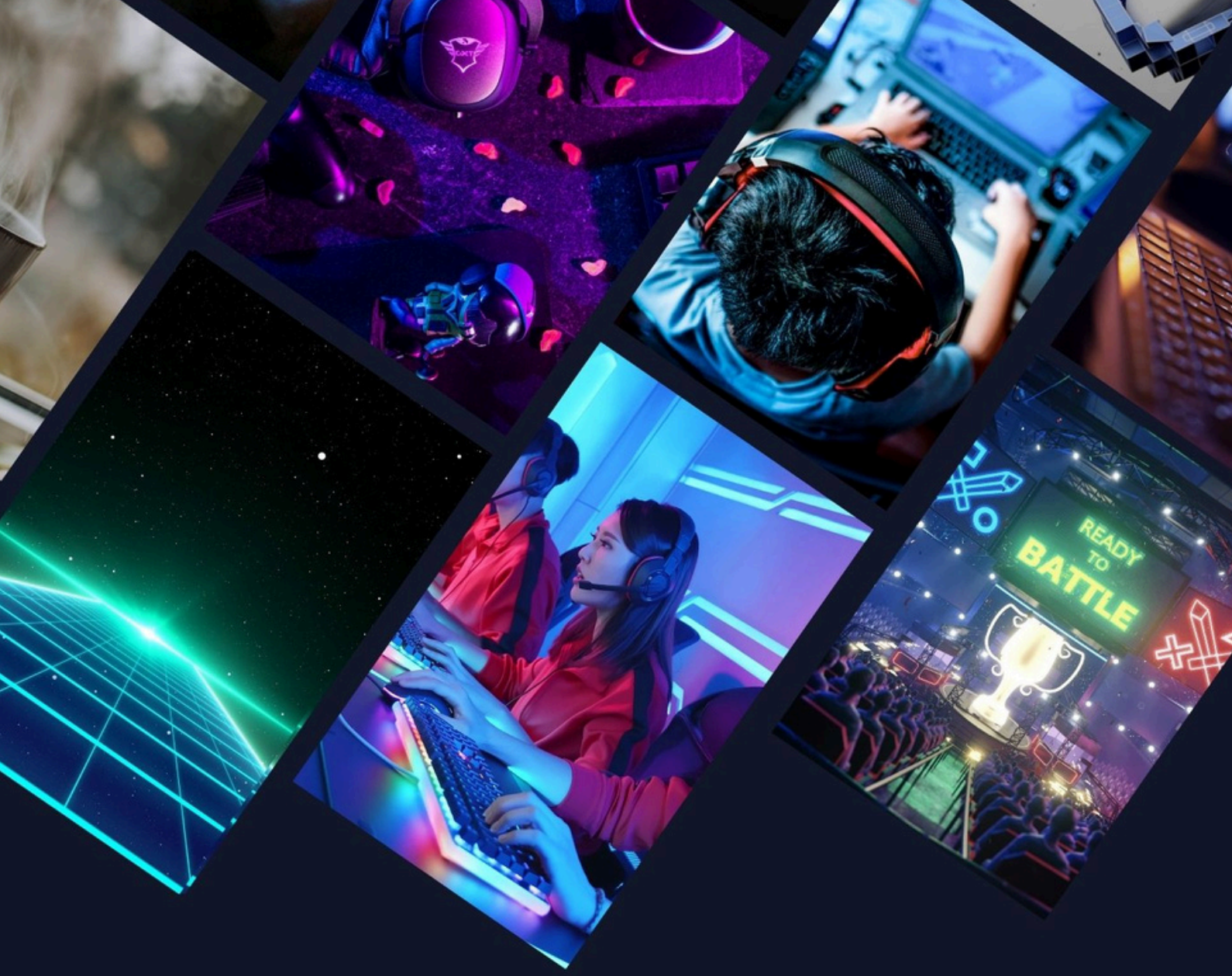
The teacher introduces the task by showing a very small 2D game and identifying its essential parts: objective, player action, obstacle or challenge, feedback and end condition. Students are then divided into small groups and given a simple brief: create one playable screen or level in Scratch or Stencyl within the available session time.

During the planning stage, each group defines its core mechanic on a one-page sheet. They decide what the player can do, what makes the activity challenging and how the game communicates success or failure. The teacher checks that each concept is small enough to complete and encourages teams to remove unnecessary features before development begins.

Students build the game using block-based logic. They create movement, collision or scoring behaviours and test each element as soon as it is added. Because text-based programming is not required, the focus remains on cause and effect: what the player does, how the system responds and whether the mechanic is understandable without explanation.

Halfway through the session, groups exchange computers for a five-minute playtest. Testers are asked not to request instructions; instead, they note what they understood naturally, where they became confused and whether the main mechanic felt responsive. Teams then use this feedback to make a focused second version rather than adding more features.

At the end, every group demonstrates its game and briefly explains one design decision, one problem solved and one improvement made after testing. Assessment considers functionality, clarity of the core mechanic, creativity, teamwork and time management. The completed games provide a concrete foundation for later lessons in programming, game engines and more complex interactive production.



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