RLP-GAMEB · RLP Video Game Design B — Playtesting, Levels, Launch and the Capstone

Unit 2: Level Design, Accessibility and Player Experience

Practice Workbook. The same problems, in the same order, as the Practice sections of the online lessons.

Name _____ Period _____

Lesson 2.1 — How Levels Teach: Pacing, Flow and Guidance

FLUENCY

1. Name the four steps designers use to teach a mechanic through a level, in order.

2. Define flow, name who described it, and say what happens when challenge is too hard or too easy.

3. Match each guidance technique to its example: sightline/landmark, leading lines, contrast, breadcrumbs, gating. Examples: (a) a row of coins that shows where a jump lands; (b) a locked door seen before its key; (c) a tall tower visible from the start; (d) the brightest object on screen; (e) a pipe running toward the exit.

APPLICATION

4. Explain how the opening of *Super Mario Bros.* (1985) teaches the player to move right and to jump, using the lesson.

5. Sketch (describe in words) a sawtooth difficulty curve for a five-section level, and say where you would place a reward.

6. A level has spikes below a jump that players cannot see before they leap. Name the problem and give two fixes.

7. Apply the lesson's death test: a tester dies at a moving saw and says "I have no idea what killed me." What does that tell you, and what would you change?

8. Name the three motivations the lesson says keep players going, and one level feature that feeds each.

REVIEW

9. Review (Lesson 1.1): would you test a level's intensity pacing with a paper or a digital prototype first? Explain.

Lesson 2.2 — Build: A Tile-Based Level with Checkpoints and a Following Camera

FLUENCY

1. What are a TileMapLayer and a TileSet, and which node from older Godot versions should you not use?
2. Convert to pixels with 32-pixel tiles: (a) a 3-tile ledge; (b) a 4-tile gap; (c) a 7-tile gap.
3. What is an autoload, and why does the checkpoint need one?

APPLICATION

4. A new character has jump velocity −420 px/s, gravity 980 px/s² and speed 250 px/s. The jump lasts about 0.86 s. How far does it travel sideways? With 32-pixel tiles, is a 6-tile gap comfortable, near the limit or impossible? A 7-tile gap?

5. Your level is 120 tiles wide and 20 tiles tall with 32-pixel tiles, starting at (0, 0). What should the Camera2D's four limits be?

6. Code reading: the player's *_ready()* checks *if GameState.has_checkpoint:* before moving. What would happen at the very start of the game if that check were removed?

7. Where should you place a checkpoint in a level that has a long easy walk followed by a hard jump section? Explain.

8. Using the lesson's mood advice, how should background tiles differ from the ground tiles, and why?

REVIEW

9. Review (Lesson 2.1): your tile level has a 5-tile gap (160 px) near the jump limit. Where in the introduce-test-twist-challenge sequence does it belong?

Lesson 2.3 — Accessibility Audit: Designing for More Players

FLUENCY

1. Name the four areas of the accessibility audit and one barrier in each.
2. Give the photosensitivity threshold the lesson uses and its source.
3. Define situational disability and give two examples.

APPLICATION

4. A power-up effect flashes the whole screen every 0.25 seconds for two seconds. Does it meet the threshold? What if it flashed every 0.5 seconds?

5. Write one specific, feasible fix for each barrier: (a) a boss fight requires holding a button for 10 seconds; (b) an alarm warns only by sound that a guard is behind you; (c) the current goal is shown once and never again.

6. A classmate says adding subtitles and remappable controls will make your hard game too easy. Answer using the lesson.

7. Describe how to self-audit your own level fairly, including the constraints you would simulate, and one limit of this method.

8. In which group do the Game Accessibility Guidelines' cheapest recommendations sit, and why add them early?

REVIEW

9. Review (Lesson 1.4): an audit finds that nobody notices the exit sign in greyscale. Is this a functionality bug or a usability issue, and why?

Lesson 2.4 — Build: Accessibility Options — Remapping, Game Speed and Readable Text

FLUENCY

1. What do these do: *Engine.time_scale*, *ConfigFile*, *user://*, *InputMap*?
2. Give the WCAG contrast ratios the lesson cites for body text and large text, and how WCAG defines large text.
3. Name three typography choices that make game text readable.

APPLICATION

4. At Engine.time_scale 0.6, how long in real seconds is a 4-second timed window? A 3-second window?

5. The speed slider is at 0.85. What does *"Game speed: %d%%" % roundi(value * 100.0)* display? Why are there two percent signs?

6. The text size is 24. What is the minimum line height WCAG's text-spacing benchmark suggests, and what size must text reach without loss of content under the resize-text criterion?

7. Code reading: after a player remaps jump with the lesson's button, their gamepad no longer jumps. Which line causes it, and what would a fuller version do?

8. Write a feature note for the game-speed option: the barrier it removes, who benefits (including a situational use) and how you tested it.

REVIEW

9. Review (Lesson 2.3): which audit area does each option address: remapping, game speed, text size?

Unit 2 checkpoint

1. What is the first step in teaching a mechanic through a level?
   A. Test it with a hard challenge
   B. Introduce it somewhere safe
   C. Twist it with another mechanic
   D. Explain it in a text box
2. True or false: Good difficulty curves rise steadily with no drops, keeping intensity at its maximum.
3. A locked door seen before its key tells the player what to look for. This technique is...
   A. Breadcrumbs
   B. Gating
   C. Contrast
   D. Parallax
4. With 32-pixel tiles, a 5-tile gap is _____ px wide and a level 80 tiles wide needs a camera right limit of _____ px.
5. Why does the checkpoint live in the GameState autoload?
   A. Autoloads draw faster
   B. An autoload survives scene reloads; the player's variables do not
   C. Tiles need autoloads
   D. The camera reads it
6. True or false: In Godot 4.3 and later, TileMapLayer replaces the deprecated TileMap node.

7. Enemies and friends differ only by color. The best fix is...
   A. Brighter colors
   B. A distinct shape or symbol as well as color
   C. A tutorial
   D. Remove the friends
8. WCAG's threshold allows no more than _____ flashes in any one-second period.
9. True or false: The 21st Century Communications and Video Accessibility Act requires in-game voice and text chat to be accessible to people with disabilities.
10. At Engine.time_scale 0.5, a 5-second window lasts _____ real seconds.
11. Which subtitle setting best follows the lesson's typography rules?
    A. Thin script font in all capitals
    B. Clear sans-serif in mixed case with an outline or panel behind it
    C. A different color for every word
    D. Very small text so it fits on one line

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