

Game Task Deliverable: The Amplifier

1. The Core Concept: Positive Feedback Loops

Definition: A process where the output of a system acts as an input, amplifying the original change, often leading to exponential growth or decline.

Key Learning: Players will understand that consistent input can drive powerful growth, but also that unchecked growth can lead to system collapse, and that positive feedback often requires sustained input to continue.

2. Game Idea: The Amplifier

Objective: Manage an 'Echo Strength' (ES) by tapping, aiming to reach a target range while avoiding critical overload.

Core Loop:

- Initial State: A central 'Orb' is displayed, starting with a base Echo Strength (ES = 1).
- Player Input: Player taps the Orb.
- Amplification: Each tap multiplies the current ES by a fixed amplification factor (e.g., 1.2x).
- Feedback: The Orb grows larger and brighter as ES increases, with visible ES value and escalating sound effects.

3. Win/Fail Conditions (Teaching Through Consequences)

WIN Condition: Controlled Amplification

- Goal: Reach a specific Target ES Range (e.g., 100-150 ES) and then stop tapping.
- Teaching: Demonstrates that positive feedback requires control to achieve a stable outcome.

Player Flow:

- Tap to increase ES.
- Upon reaching Target Range, a notification and chime appear.
- Player stops tapping, leading to SUCCESS message: 'You skillfully managed the echo.'

FAIL Condition 1: Uncontrolled Cascade (Overload)

- Goal: Avoid exceeding a Critical Threshold (e.g., 200 ES).
- Teaching: Unchecked positive feedback can lead to collapse.
- Orb shatters, followed by FAILURE message: 'CRITICAL OVERLOAD!'

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FAIL Condition 2: Insufficient Input (Decay - Optional)

- Goal: Maintain consistent input.
- Teaching: Some feedback loops need continuous input.
- If tapping stops too long, ES decays. Below threshold = FAILURE: 'THE ECHO FADED.'

4. Visual & Interaction Style

Minimalist & Clean: Central Orb and its numerical/visual feedback dominate the UI.

Dynamic Visuals:

- Orb size and brightness increase with ES.
- Warning cues like pulsing or color shift near critical ES.

Sound Design:

- Ascending tones with each tap.
- Positive chime at Target Range.
- Shattering sound on overload.
- Fading tone on decay.