



Game Design 2: Level Design and Difficulty

Keeping players in flow with pacing, difficulty curves and levels that teach

NAME _____

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CLASS _____

Flow, Difficulty Curves and Levels That Teach

Psychologist Mihaly Csikszentmihalyi described **flow**: the state of deep, focused enjoyment that happens when the **challenge** of a task matches a person's **skill**. When challenge is far above skill, players feel **anxiety** (frustration, and they may quit). When challenge is far below skill, they feel **boredom**. Players get better as they play, so the challenge has to rise too, keeping them in the **flow channel** between anxiety and boredom.

A **difficulty curve** shows challenge over the course of a level or game. Instead of a straight ramp, many games use a **sawtooth** shape: **tension** builds to a peak (a hard room or a boss), then drops for a **release** (a safe area, a reward, a story moment), then builds again to a slightly higher peak. This rhythm of intense and calm moments is called **pacing**.

Good levels teach without a wall of text. A common pattern for each new mechanic: **introduce** it somewhere safe, let players **practice** it with low risk, **combine** it with mechanics they already know, then **test** whether they have mastered it.

1 Flow Check

For each player, circle the state they are most likely in.

a. Sam is new to platform games. In the first level, Sam falls into the same pit 12 times, then puts the controller down.

A. Flow **B.** Anxiety **C.** Boredom

b. Priya has finished the game twice. On a replay she clears every level without taking damage and starts checking her phone.

A. Flow **B.** Anxiety **C.** Boredom

c. Leo misses a tricky jump a few times, figures out the timing, and keeps saying "one more try" without noticing an hour has passed.

A. Flow **B.** Anxiety **C.** Boredom

d. Choose Sam **or** Priya. Describe one change to the level that would move that player toward flow, and explain why it works using **challenge** and **skill**.



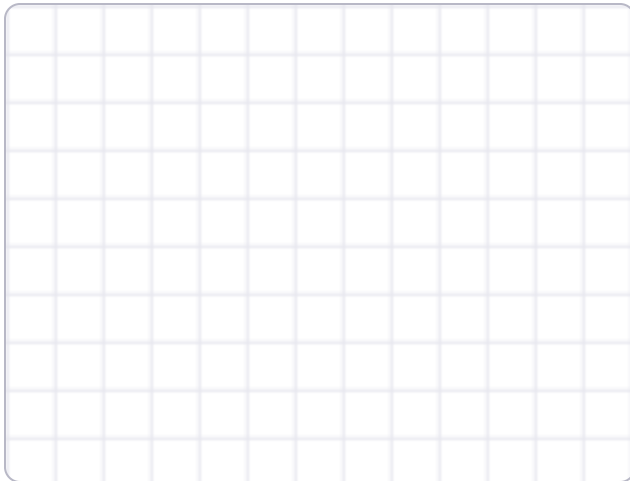
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2 Read a Difficulty Curve

A designer rated the challenge of each section of a level from 1 (easy) to 10 (hardest).

Section	1	2	3	4	5	6	7	8	9	10
Challenge	2	3	5	2	4	6	3	5	7	10

a. Plot challenge (up) against section (across).
Connect the points.



b. Which sections are **release** points?

c. List the three peak values (the value just before each release, plus the last section). Is this a **sawtooth** curve? Explain.

d. What is the average challenge across all 10 sections?

e. Playtesters say the boss in section 10 feels unfair. Find the **biggest increase** in challenge between two neighboring sections, then suggest one fix to the curve.

3 Teach a Mechanic Through Level Design

A new mechanic, the **wall jump**, lets the player bounce off a wall to climb higher. Here are four rooms in random order.

a. In the **Step** column, write **Introduce**, **Practice**, **Combine** or **Test** for each room.

Room	Description	Step
A	A tall shaft with spikes at the bottom and moving platforms. You must wall jump quickly between them.	
B	One short wall with a coin on top. If you fall, you land safely on the floor.	
C	Wall jump up a shaft while dodging the patrolling enemies you met in World 1.	
D	Three short walls in a row. Missing a jump just drops you back a few steps.	

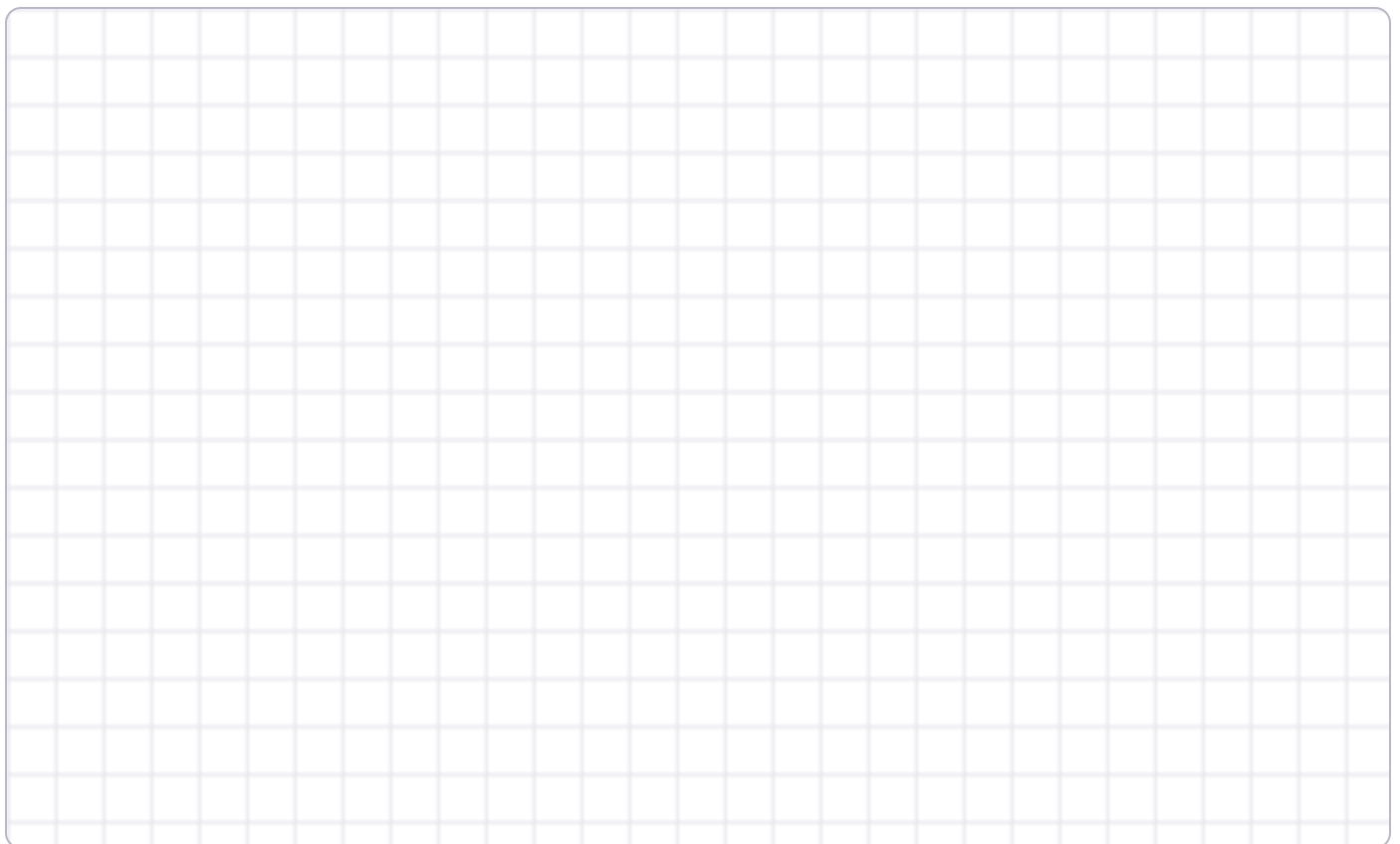


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b. Why should the **introduce** room be safe? Use a term from the reading in your answer.

4 Sketch a Level

A new mechanic, the **dash**, lets the player burst forward up to 4 grid squares in the air, crossing gaps too wide to jump. On the grid, sketch a side view of one level that teaches the dash. Label where each step happens: **I** (introduce), **P** (practice), **C** (combine), **T** (test), and at least one **R** (release).



a. Which mechanic does your **combine** section mix with the dash, and why does that make it harder?

b. Describe the **pacing** of your level: where does tension build, and where is the release?
