

Lesson Planning 101

*Class Objectives (4MS)

Objective effectiveness:

- Manageable
- Measurable
- Made First
- Most Important

Input
Prompt

Students will accurately [process/perform/solve] a [type of problem or task] involving [core concept or skill].

Example: "Students will accurately solve a system of linear equations involving matrix operations."

Students will explain [phenomenon/principle] and apply it to [real-world example/simulation/lab activity].

Example: "Students will explain Ohm's Law and apply it to designing a simple circuit in a virtual lab."

By the end of this class, students will be able to [observable action] the concept of [key topic].

Example: "By the end of this class, students will be able to calculate the concept of net force using Newton's Second Law."

AI Integration

*The Hook

Present riddles, jokes, analogies, statistics and graphs to engage students at first glance.

Input
Prompt

"Can you solve this challenge before we start?" [Insert brief, topic-related puzzle/riddle]

Example: "A pendulum swings for 10 seconds. On the Moon, it swings for 27. Why?"

"What do [topic] and [unexpected thing] have in common? Let's find out."

Example: "What do quantum mechanics and a cafeteria lunch line have in common?"

"Would you believe that [shocking/funny statistic]? Let's unpack the math behind it."

Example: "Would you believe your brain uses the same power as a 20-watt lightbulb? Let's explore biological energy use."

*Begin with the End

Base lesson in 4MS:

- Plan from top down
- Plan on "today's mastery"
- Check progress daily
- Activities made specifically to achieve "today's" mastery

Input
Prompt

"How does today's objective connect to the course's major outcomes – and which piece must be locked in today?"

Example: "Which part of fluid dynamics do they need today to handle turbulence later?"

"What can students do by the end of today that they couldn't do when they walked in – and how will I know they can do it?"

Example: "What can students do with loop constructs today that they couldn't write correctly yesterday?"

If students only mastered one thing today related to [topic], what would it be – and how can they prove it?"

Example: "If students only mastered one thing today related to differential equations, what would it be – and how can they prove it?"

Activity Planning 101

