# The PBNJ: AI Prompting Workflow for Differentiated Lesson Planning

# STEP 1: SET THE PERSONA (P)

Tell the AI to act like a helpful, critical friend for lesson planning. It will offer suggestions and point out elements you might have overlooked in your differentiation strategy

#### STEP 2: BREAK GLASS (B)

Break through your initial worry about lesson planning and get started! Input a few minimal or rough ideas. It doesn't have to be perfect – just give the AI a rough idea of what you are working on.

#### STEP 3: NAME YOUR PLAN (N)

Use the AI's initial response to stimulate your thinking and build confidence. Draft a first version of the lesson—just jot down the basics. If you feel insecure about a certain aspect, ask the AI for help.

### STEP 4: JAM WITH AI (J)

Engage in a step-by-step back-andforth to build your lesson. Take control and be in charge – you know much more about your class than a bot! AI will act like a critical friend – give suggestions and ask questions. Focus on what resonates for you but be open to learning and improvement. **Reflection in Action:** What kind of help do I need right now? How can I set up this AI conversation to get the most constructive feedback?

**Sample Prompt:** "In a moment, I will give you some info about a lesson I'm planning. I would like you to act as my critical friend while I plan a differentiated lesson. Please challenge my assumptions, suggest alternatives, and help me identify what I might be missing, especially for students with diverse learning needs."

**Reflection in Action:** Do I feel confident about this lesson? Do I have a good sense of what I want students to know, do, or understand at the end? What do I know about my students' diverse needs right now?

**Sample Prompt:** "I want my 5th graders to learn the inputs and outputs of photosynthesis. I have several ELL students, two with ADHD, and a few who are already reading at high school level. I am worried about keeping everyone engaged. Where should I start?"

**Reflection in Action:** Have I taught this kind of lesson before? Was I successful? What did I learn? When I think about teaching this lesson, what am I worried about? What potential problems might arise?

**Sample Prompt:** "Based on your suggestions, here is my draft: Start with a visual diagram, use hands-on plant investigation in small groups, provide sentence frames for ELL students, and offer choice in either redoing a mild or spicy diagram of input/output. What am I missing for differentiation?"

**Reflection in Action:** Am I overwhelmed by the output? Can I ignore what isn't useful and only focus on what resonates for me? Can I incorporate ideas that may be new to me? Am I open to improvement?

**Sample Prompt:** "For my student with Autism, large groups are overwhelming. How can I modify this lesson to work for everyone?" OR "My advanced learners finish early and get bored. I only have 45 minutes and limited lab materials. What adjustments can I make?" OR "How can I prevent this lesson from becoming chaotic while still meeting everyone's needs?"

From Faith, L., Zaugg, T., Stolys, N., Szabo, M., Haghi, F., Badlis, C., & Olmedo, S. L. (2025). Persona, Break Glass, Name Plan, Jam (PBNJ): A New AI Workflow for Planning and Problem Solving. AI, 6(12), 310. https://doi.org/10.3390/ai6120310

## AI Prompting Workflow for Differentiated Lesson Planning – Rationale

## STEP 1: SET THE PERSONA

In Step 1, "Persona," you will give the AI a specific role to play. Telling the AI to act like a "critical friend" helps set the tone for the conversation. It encourages the AI to challenge your ideas, ask questions, and suggest alternatives rather than just agreeing with you. This makes the interaction feel more like co-planning with a colleague and helps you learn new things.

## STEP 2: BREAK GLASS

Teachers are often tired at the end of a day and may feel overwhelmed by the prospect of lesson planning. Even if you're using AI, you may not know how to get started or worry that you need input every single detail in order to generate a useful lesson. This can create stress, pressure, and writer's block... and it isn't necessary! In Step 2, "Break Glass," you break through these challenges and get started. Instead of frontloading everything, you begin with a short, simple prompt that names the topic, grade, and one or two key details. Think of it like "breaking the glass in case of emergency" — it's a quick, low-pressure way to generate a starting point. The goal isn't to produce a perfect lesson right away, but to give the AI a general idea of what you're working on. The AI will probably respond with a ton of ideas.

## STEP 3: NAME YOUR PLAN

The AI will give you a lot of ideas in response to your Break Glass prompt. In Step 3, you start to steer the process even more by choosing a few interesting parts of the output and naming your plan. It is important that YOU decide the direction of the lesson, because YOU know what's happening in your classroom. The goal is to be fully in charge of the direction of the planning, so your lesson feels human, feasible, and coherent and not alien, disjointed, and odd.

## STEP 4: JAM WITH AI

Step 4 is where the real learning happens. You may find that going back-and-forth with the AI — like "jamming" with a bandmate — is the most useful part of the process. By asking small questions, considering gaps, refining ideas, and sharing concerns, you can gradually shape lessons to fit your classroom, your students, and your teaching style. Jam sessions are not about accepting everything the AI suggests. They're about making choices: keep what works, ignore what doesn't, and adapt ideas so they make sense in your classroom. Used this way, the AI acts like a critical friend — pointing out blind spots, suggesting alternatives, and nudging you to notice opportunities for improvement — and you remain in control.

From Faith, L., Zaugg, T., Stolys, N., Szabo, M., Haghi, F., Badlis, C., & Olmedo, S. L. (2025). Persona, Break Glass, Name Plan, Jam (PBNJ): A New AI Workflow for Planning and Problem Solving. AI, 6(12), 310. https://doi.org/10.3390/ai6120310