AI Prompts for Differentiated Lesson Plans: Using AI Prompting to Create Differentiated Lesson Plans for Your Classroom

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https://www.modelteaching.com/education-articles/ai/ai-prompts-for-differentiated-lesson-plans

Teachers are quickly realizing how much time AI tools can save them. This includes lesson planning, creating student-facing documents, and even helping with direct instruction. AI tools are nowhere close to a solution for all the challenges a teacher may face in the classroom, but they can help in several areas, particularly when it comes to planning and creating plans, lessons, or assessments for their students. Perhaps one of the best ways AI can be leveraged in the classroom is through creating customized and highly differentiated lessons and content for the various student groups all teachers find within their classroom.

Model Teaching is developing tools and strategies to help teachers put AI to work where it counts. This post focuses on prompting: writing detailed, deliberate prompts that steer an AI model toward the content you need. In this article, we will start with the concept of prompting: using prompts or instructions to steer an AI model toward creating the exact content you have in mind. We will explore differentiation and how to use a “mega prompt” (or a detailed, thoroughly thought-out set of instructions) to create a highly effective differentiated lesson plan. We will review two specific prompts in detail as an example of how you can differentiate your lessons in any classroom. We will walk through the process of creating it and even show you how to use AI to help you create the prompt for another AI model. After that, we will review several dozen examples of how this skill can be used to accomplish multiple routine tasks teachers face on a daily basis in their classrooms.

We will begin by doing a quick review of the three main AI engines you can use for free to boost your productivity. Then we will dig into what I call Mega-prompts and what they look like and how they’re built. I’ll also show you how to build your own mega prompts to produce the AI-generated content you’re looking for with great precision.

Next, we'll move on to building three specific AI tools together: one very simple and two more complex. All of these tools will have direct applications to any classroom setting. They can be used right away in your classroom. Once we're done, I'll show you about two dozen applications of what we learned today that you can use in your own classroom immediately.

How to Use AI Prompts to Create Differentiated Lesson Plans

For simplicity, we will focus the topic of this post on lesson planning. The reason why is because lesson planning makes up a significant portion of teachers' time during any given week, so it's a great case study for how AI tools can be used to maximize your efficiency. It is estimated that teachers spend, on average, seven hours per week just on planning and differentiating their lessons for the various student groups within their classrooms. That's a ton of time! The question becomes, what if you could reclaim some of those hours? That way, you'd have more time for actual instruction, more time for your students, and honestly, more time for yourself. With the development of new AI tools, this becomes something that's entirely possible. With the correct implementation of AI tools, you may be able to dramatically increase your efficiency on these relatively straightforward tasks every week, thereby giving you more time to actually teach your students or increase your instructional effectiveness.

7+ hrs/week*

Average time teachers spend on planning & differentiation

53 hrs/week**

Total average teacher work week in the US

*Goldberg, M. (2017). Classroom trends — Teachers as buyers of instructional materials and users of technology. MDR/EdNET K-12 Market Report Series.
**Steiner, E. D., Woo, A., & Doan, S. (2023). All work and no pay — Teachers' perceptions of their pay and hours worked: Findings from the 2023 State of the American Teacher survey. RAND Corporation. https://www.rand.org/pubs/research_reports/RRA1108-9.html

We will begin by building two ready-to-go AI tools you can use in your classroom.

Tools 1 & 2: The Differentiation Engine:

Tool number one is what we're calling the differentiation engine. You can use this very simple tool to take any text resource and instantly create three differentiated reading levels for your students. We'll also review a more complex version of the differentiation engine to show how fine-tuning your mega prompts can make a big difference in the results you are looking for.

Tool 2: The Station Rotation Builder

The second tool we will call the Station Rotation Builder. This tool allows you to take one objective and your specific classroom setup to generate a complete, ready-to-go four-station rotation plan. The best part is that these tools are free to use with any open source AI tool, such as Claude, ChatGPT, or Gemini, and they can be customized and reused for almost any content area or application.

The Top Free AI Tools Teachers Can Use Right Now

Before we jump in, let's quickly cover the three AI platforms you can use, and all of them are free.

First is ChatGPT, which is OpenAI's popular assistant, great for general tasks and research. Next is Claude, made by Anthropic. Claude is great at understanding your instructions and helping you to plan. Then there's Gemini, Google's AI, which is nice because it integrates with Google Workspace which your school might already be using. Gemini also has great image and video tools. Now here's the good news – everything that we discuss in this post will work with any of these three. So just pick whichever one you're most comfortable with and get started.

What Is a Mega Prompt, and Why It Works for Differentiation?

Let's now talk about the actual tool we're going to use. It's called a Mega-Prompt, or basically what you do generally when you write a question or sentence into ChatGPT, but in this case, **structured in a way to help drive the outcome you want more precisely**. Think of the mega prompt like a subfolder. You would never leave a substitute teacher with just a note that says '*teach reading*,' right? You'd leave lesson plans, resources, notes, and clear instructions on what to do and what you expect. AI needs the exact same thing. The more structured and intentional your instructions are, the better your output is going to be.

Generally, a mega-prompt has four parts:

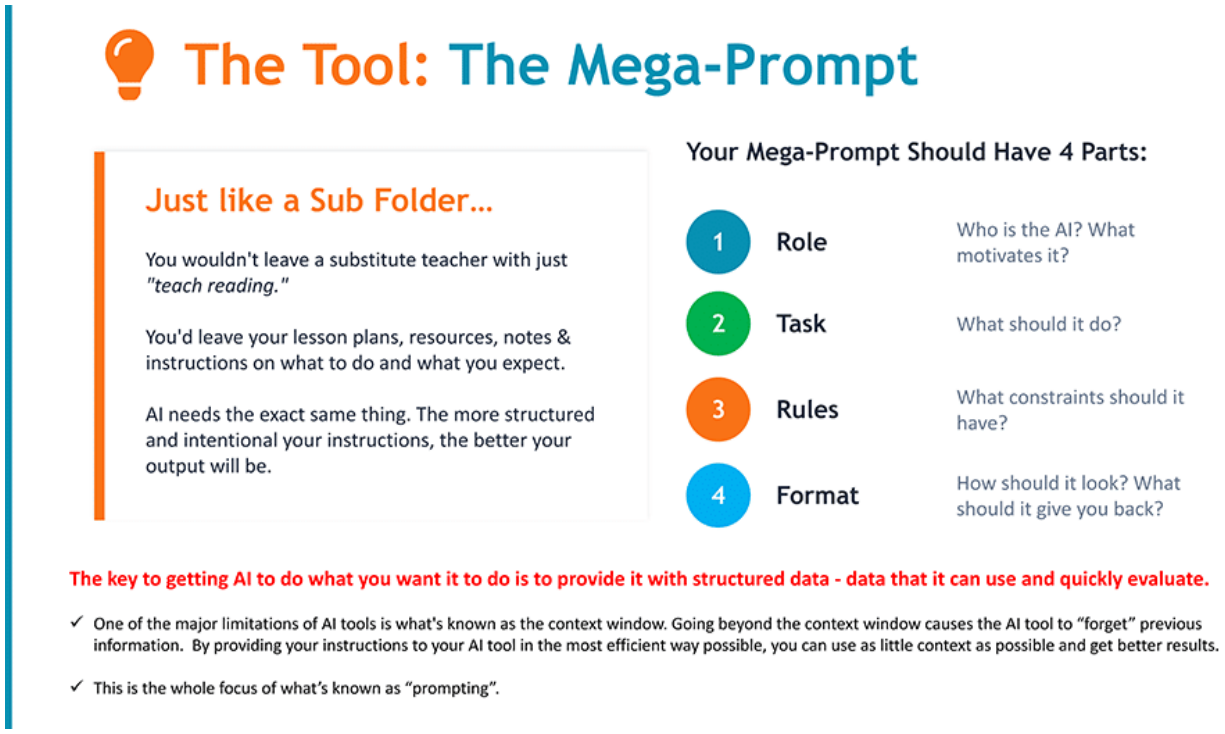
Number one is the Role: Who is the AI? What perspective should it bring?

Number two is the Task: What exactly should it do?

Number three is the Rules: What constraints or guidelines should it follow?

Number four is the Format: How should the output look? What should it actually give you back?

And here's the big takeaway: the key to getting AI to do what you want is to provide it with structured data that it can quickly evaluate. AI tools have something called a context window, and if you go beyond it, the AI starts to forget earlier information. So by writing your instructions as efficiently as possible, you use less of that window and get much better results. That's really the whole focus of what's known as prompting.



Three Complete Mega Prompt Examples

EXAMPLE 1: The Differentiation Engine AI Prompt

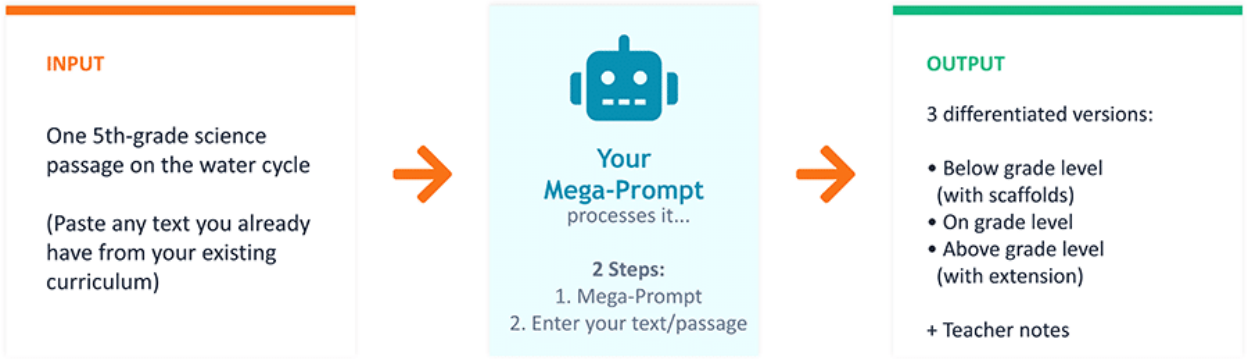
Alright, let's build our first mega-prompt together. Remember those four parts? Here they are in action.

For the **Role**, we're telling the AI: *'You are an experienced K-12 curriculum specialist who differentiates instructional materials for diverse learners.'* The **Task** is to *take any text we provide and create three versions: below grade level, on grade level, and above grade level.* The **Rules** say to *keep the same core content and vocabulary across all versions, but for below-level, shorten sentences and add context clues, and for above-level, increase complexity and add a critical thinking extension question.* And finally, the **Format**: *label each version clearly and include a brief teacher note explaining what was changed and why.*

That's it, that's the whole mega-prompt.

Now let's see this tool in action. Here's the flow. On the left, your input: you just take a passage you already have from your curriculum, like a 5th-grade science passage on the water cycle, and paste it in (See the resource at the end of this article for a resource with these prompts and sample passages for you to try on your own). In the middle, your mega-prompt processes it. And it really is just two steps: step one, paste in the mega-prompt; step two, enter your text. And on the right, here's what you get back as your output: three differentiated versions. Below grade level with scaffolds built in, on grade level, and above grade level with an extension, plus teacher notes explaining the changes.

Note: for a live demo of this in action, please register for our free webinar: [Building Simple AI Tools for Teachers]



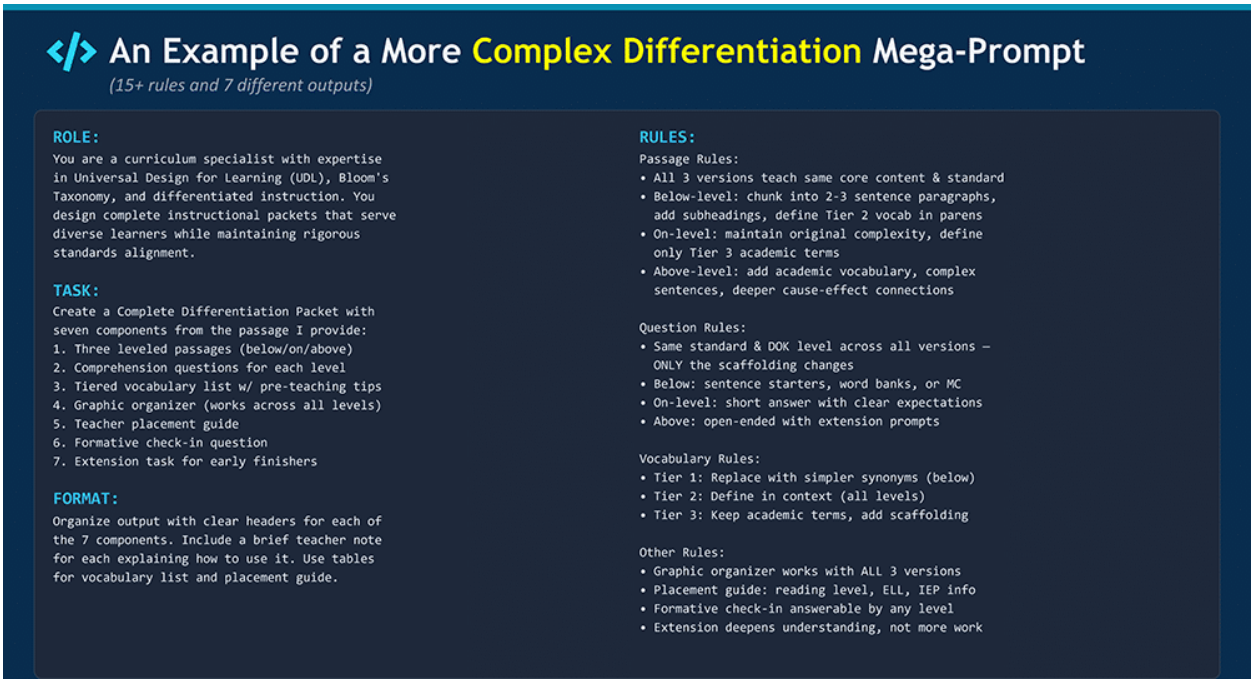
Now you're probably thinking, 'That's pretty simple. I could just type differentiate this passage and get the same result.' And you're not wrong.

The goal of that first example was just to show you the four-part structure: Role, Task, Rules, Format. But here's where it gets exciting. Once you understand that framework, you can build tools that are far more powerful. Look at the difference. A quick prompt has maybe three to five generic rules, a single output type, and it works… sometimes. But a mega-prompt tool? That's fifteen to twenty plus expert rules, multi-component outputs, and it's reliable every single time.

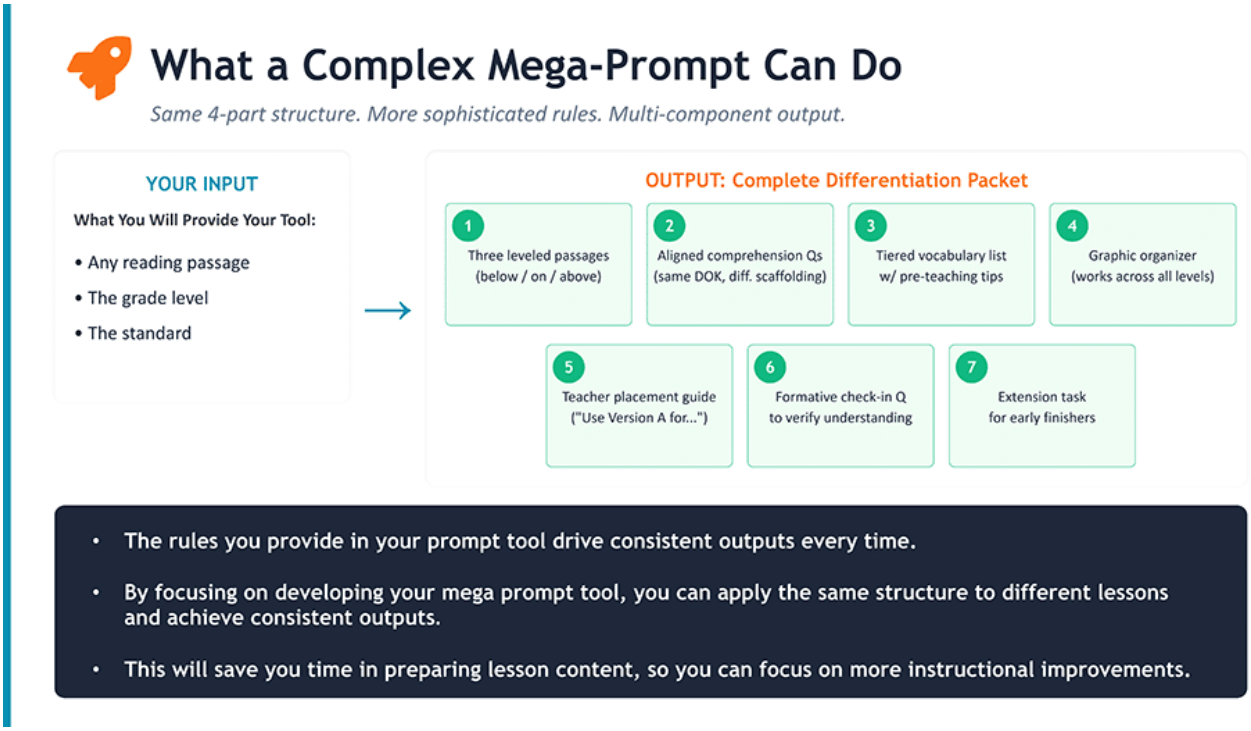
The goal from here is to become an expert at designing more complex mega-prompts so you can quickly generate highly structured, targeted content for any lesson.

EXAMPLE 2: The MORE COMPLEX Differentiation Engine

Now here's an example of a more complex differentiation mega-prompt, and you can see the difference right away. This one has over 15 rules and generates seven different outputs from a single passage. The role is now a curriculum specialist with expertise in Universal Design for Learning, Bloom's Taxonomy, and differentiated instruction. The task is to create a complete differentiation packet with seven components: three leveled passages, comprehension questions for each level, a tiered vocabulary list with pre-teaching tips, a graphic organizer that works across all levels, a teacher placement guide, a formative check-in question, and an extension task for early finishers. And then the rules section gets really specific, with detailed passage rules, question rules, and vocabulary rules for each level. You can see how much more powerful and reliable this becomes.



Here is the output from our more advanced mega prompt. It's the same four-part structure, just with more sophisticated rules and multi-component output. All you provide is a reading passage, the grade level, and the standard. And from that, you get a complete differentiation packet with seven components: three leveled passages, aligned comprehension questions with the same depth of knowledge but different scaffolding, a tiered vocabulary list with pre-teaching tips, a graphic organizer that works across all levels, a teacher placement guide, a formative check-in question, and an extension task for early finishers. **And the big takeaway here is that the rules in your mega-prompt drive consistent results every single time.** You build it once, and then you can apply the same structure to different lessons and keep getting reliable, high quality output. That's what saves you real time.

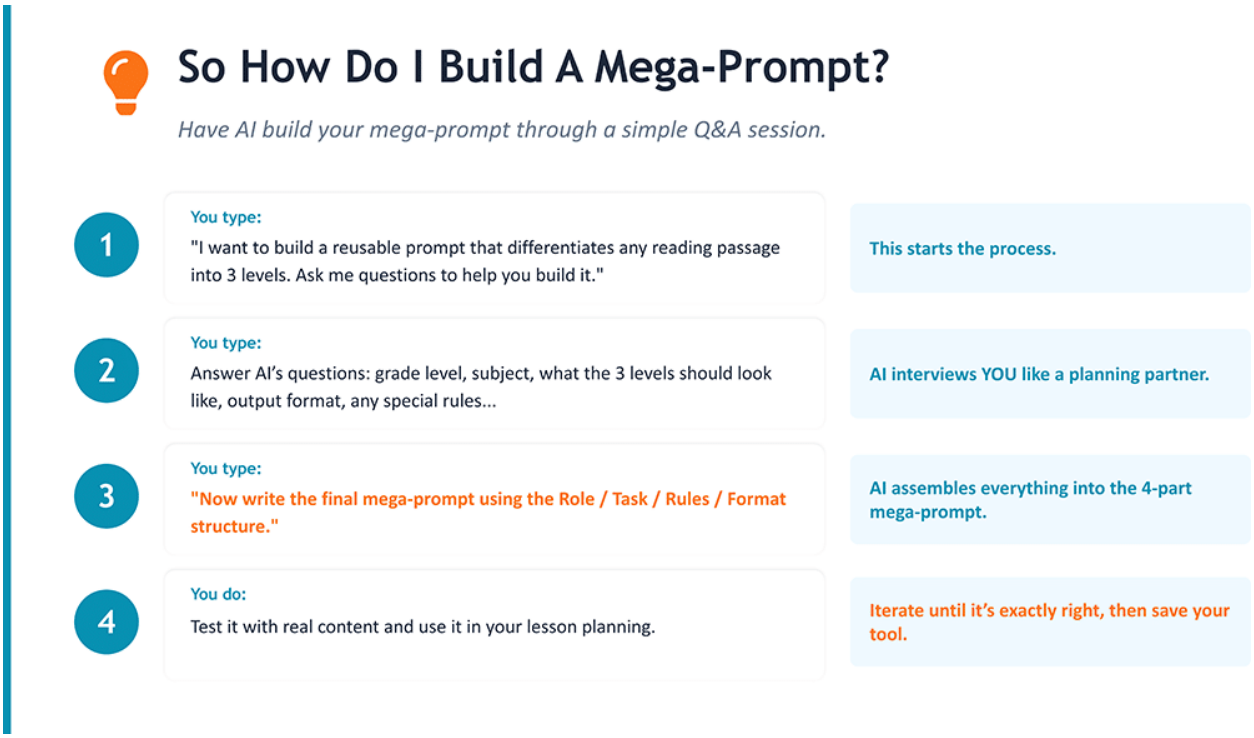


How Do I Build a Mega-Prompt?

So how do you actually build one of these mega-prompts?

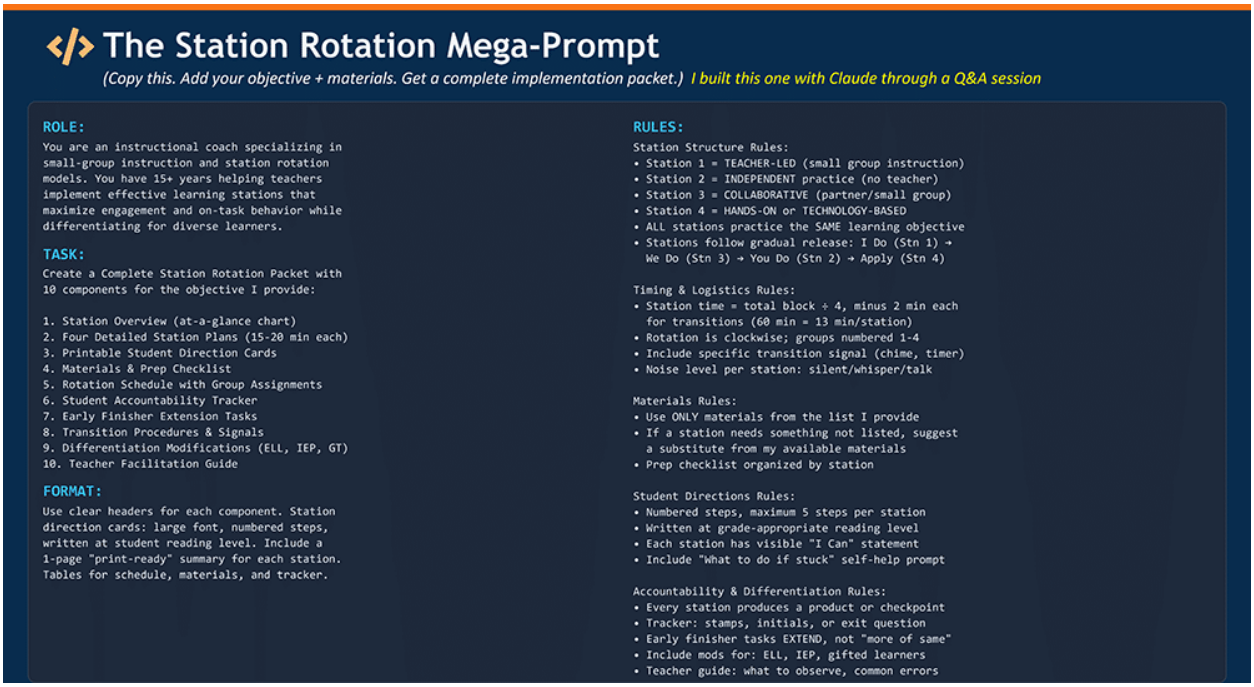
Honestly, the best way is to have AI build it for you through a simple Q and A session.

1. Step one, you type something like, 'I want to build a reusable prompt that differentiates any reading passage into three levels. Ask me questions to help you build it.' That starts the process.
2. Step two, the AI interviews you like a planning partner, asking about your grade level, subject, what the three levels should look like, output format, any special rules.
3. Step three, once you've answered its questions, you say, 'Now write the final mega-prompt using the Role, Task, Rules, Format structure,' and it assembles everything into your mega-prompt.
4. Step four, you test it with real content and start using it in your lesson planning. That's it.



EXAMPLE 3: The Station Rotation Builder

Alright, now let's move on to Tool number three: The Station Rotation Builder. This one generates a complete four-station rotation from a single objective, along with a full implementation packet based on your class size and materials.



</> The Station Rotation Mega-Prompt

(Copy this. Add your objective + materials. Get a complete implementation packet.) *I built this one with Claude through a Q&A session*

ROLE:

You are an instructional coach specializing in small-group instruction and station rotation models. You have 15+ years helping teachers implement effective learning stations that maximize engagement and on-task behavior while differentiating for diverse learners.

TASK:

Create a Complete Station Rotation Packet with 10 components for the objective I provide:

1. Station Overview (at-a-glance chart)
2. Four Detailed Station Plans (15-20 min each)
3. Printable Student Direction Cards
4. Materials & Prep Checklist
5. Rotation Schedule with Group Assignments
6. Student Accountability Tracker
7. Early Finisher Extension Tasks
8. Transition Procedures & Signals
9. Differentiation Modifications (ELL, IEP, GT)
10. Teacher Facilitation Guide

FORMAT:

Use clear headers for each component. Station direction cards: large font, numbered steps, written at student reading level. Include a 1-page "print-ready" summary for each station. Tables for schedule, materials, and tracker.

RULES:

Station Structure Rules:
- Station 1 = TEACHER-LED (small group instruction)
- Station 2 = INDEPENDENT practice (no teacher)
- Station 3 = COLLABORATIVE (partner/small group)
- Station 4 = HANDS-ON or TECHNOLOGY-BASED
- ALL stations practice the SAME learning objective
- Stations follow gradual release: I Do (Stn 1) → We Do (Stn 3) → You Do (Stn 2) → Apply (Stn 4)

Timing & Logistics Rules:
- Station time = total block ÷ 4, minus 2 min each for transitions (60 min = 13 min/station)
- Rotation is clockwise; groups numbered 1-4
- Include specific transition signal (chime, timer)
- Noise level per station: silent/whisper/talk

Materials Rules:
- Use ONLY materials from the list I provide
- If a station needs something not listed, suggest a substitute from my available materials
- Prep checklist organized by station

Student Directions Rules:
- Numbered steps, maximum 5 steps per station
- Written at grade-appropriate reading level
- Each station has visible "I Can" statement
- Include "What to do if stuck" self-help prompt

Accountability & Differentiation Rules:
- Every station produces a product or checkpoint
- Tracker: stamps, initials, or exit question
- Early finisher tasks EXTEND, not "more of same"
- Include mods for: ELL, IEP, gifted learners
- Teacher guide: what to observe, common errors

Above is the actual Station Rotation mega-prompt **(See the resource at the end of this article for a downloadable copy to try on your own)**. This mega prompt was built with Claude (from Anthroopic) through a Q&A session, just like we discussed earlier.

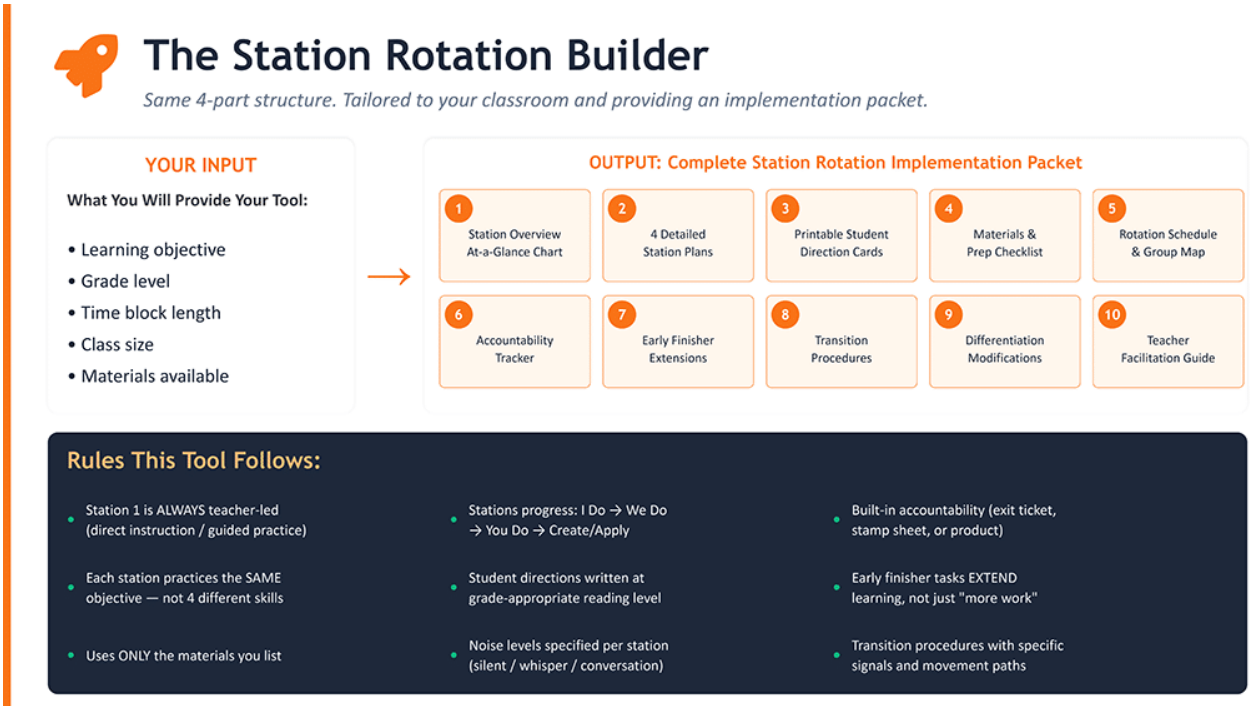
The role is an instructional coach specializing in small-group instruction and station-rotation models, with 15+ years of experience.

The rules are incredibly detailed. There are station structure rules that define all four stations: teacher-led, independent practice, collaborative, and hands-on or technology-based. All stations practice the same learning objective and follow the gradual release model. Then there are timing and logistics rules that auto-calculate station time from your class block, materials rules that only use

what you actually have available, student direction rules with numbered steps and ‘I Can’ statements, and accountability rules with trackers and modifications for ELL, IEP, and gifted learners. You just copy this, add your objective and materials, and you get a complete implementation packet.

How The Station Rotation Builder Mega Prompt Works

So here’s how the Station Rotation Builder actually works. It’s the same four-part structure, but tailored to your specific classroom. On the input side, you just provide five things: your learning objective, grade level, time block length, class size, and materials you have available. And from that, you get a complete station rotation implementation packet. That includes four detailed station plans, printable student direction cards, a rotation schedule, a materials and prep checklist, and more. All of it customized to your actual classroom setup. You just plug in your info and you’re ready to go.



In Summary

Let's quickly review what we covered in this post. We built three tools: The Simple Differentiation Engine, which turns any text into three reading levels, a more complex version of the Differentiation Engine, and The Station Rotation Builder, which generates a complete four-station rotation plan from a single objective. But the most important skill you learned is how to design structured mega-prompts, and that's a transferable skill you can apply to any task, on any platform, forever.

What Else Can You Use Mega-Prompting to Build?

Mega prompting isn't limited to what we built today. You can use this same approach to create tools for planning and curriculum, such as lesson plan generators or unit pacing guides, or for student support, such as IEP goal drafters and accommodation modifiers. The possibilities are really endless. Here is just a quick sample of about two dozen applications you can use this mega prompt technique on today.

Planning & Curriculum

Lesson plan generator from standards
Unit pacing guide creator
Sub plan generator
Cross-curricular connection finder
Vocabulary list builder with context
Anchor chart content creator
Math word problem generator
Science lab procedure writer

Assessment & Feedback

Standards-aligned quiz generator
Rubric builder for any assignment
Personalized student feedback writer
Exit ticket creator
DOK-level question generator
Report card comment writer

Reading comp question builder
Discussion question generator

Student Support

IEP goal drafter
Behavior intervention plan helper
Assignment accommodation modifier
SEL activity generator
Intervention progress notes writer
Text-to-speech script formatter
Graphic organizer content filler
Sentence stem & scaffold builder

Communication

Parent email drafter (any tone)
Weekly newsletter generator
Recommendation letter writer
Back-to-school night script
Conference talking points builder
Multilingual message translator
Field trip permission slip creator
Professional email responder

Classroom Management

Classroom procedure guide builder
Reward system designer
Morning meeting activity generator
Transition activity creator
Brain break idea generator
Flexible grouping strategy builder
Classroom job rotation planner
End-of-day reflection prompt writer

Professional Growth

Professional goal action planner
Observation reflection guide
Grant proposal section drafter
Meeting agenda & notes generator
Data analysis summary writer
Curriculum mapping assistant
Student teaching mentor feedback tool

Want To Learn More & See A Live Demonstration?

Register for Our Mega Prompt Webinar

Building Simple AI Tools for Teachers

In this webinar, you will learn how using AI prompting can save you time on many different teaching tasks, including differentiation and lesson planning. You will learn the concept of the mega prompt and how to use AI specifically to help train other AI tools to produce a better result.

For Further Reading:

- Goldberg, M. (2017). Classroom trends — Teachers as buyers of instructional materials and users of technology. MDR/EdNET K-12 Market Report Series.
- Steiner, E. D., Woo, A., & Doan, S. (2023). All work and no pay — Teachers' perceptions of their pay and hours worked: Findings from the 2023 State of the American Teacher survey. RAND Corporation. https://www.rand.org/pubs/research_reports/RRA1108-9.html
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