

FOR CHEMISTRY TEACHERS

80 chat prompts

# Prompts for Chemistry Teachers.

*Ready-to-use prompts for planning,  
teaching and reflection.*

*The right tool at the right time.  
Part of the WISE Framework for Education at  
choosewise.education.*

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# Glossary

A few terms that recur throughout this guide. If you already know them, skip ahead to the framework on the next page.

## AI — Artificial Intelligence

An attempt to make machines mimic brain functions — to "think" and learn roughly the way humans do. We don't fully understand how the brain works, but we can try to replicate the parts we do understand.

## Prompt

An instruction given to a chatbot to get a desired response or task performed.

## Iterate

After receiving a response from a chatbot, you refine and clarify the parts you're not satisfied with — sharpening the answer until it's what you want. The better your starting prompt, the fewer iterations you'll need.

## Chatbot

A chatbot has been trained to find patterns in large amounts of text. It uses those patterns to generate a response to your prompt. The answer is produced in real time.

## GPT

The underlying model (Generative Pre-trained Transformer) that a chatbot uses. The same GPT can power different chatbots — for example, Copilot and ChatGPT have both used OpenAI's GPT.

## Generative AI

AI that creates (generates) text, images, video, or sound in real time when prompted to do so.

## Bias

AI responses can be skewed or partial, depending on the data the AI was trained on and the biases present in that data. These biases are harder to spot in chatbots than in image-generating AI.

## Hallucination

The text you receive from a chatbot is based on patterns in its training data, but word generation also involves randomness — meaning generated words can sometimes create a meaning that simply isn't true.

## A framework for writing your own prompts

**Role:** Act as an experienced physics teacher.

**Task:** Create a lesson plan that introduces year 8 students to optics.

**Context:** I teach at a middle school, have 25 students in my class, and the lesson is 60 minutes long.

**Format:** Link content and activities to the physics curriculum and give me a plan that describes each part of the lesson and the materials required.

**Tone:** Use a formal but friendly tone.

## A few chatbots to know

AI can also generate images and more, but we focus here on chat capabilities.

**ChatGPT** — OpenAI's chatbot

**Gemini** — Google's chatbot

**NotebookLM** — Google's tool that can, among other things, generate a two-voice podcast

**Copilot** — Microsoft's chatbot

**Claude** — Anthropic's chatbot

**Perplexity** — From San Francisco, was early to include source links

**Duck AI** — DuckDuckGo's chatbot, lets you pick among several GPTs

**Mistral AI** — A chatbot from France

Most chatbots have age restrictions.

## How to use the prompts

All the prompts are starting points — examples to get you going. Adapt them to fit your context.

After using a chatbot for a while, you'll learn what kinds of prompts work better or worse. Try the same prompt twice — first as-is, then with the prefix "Act as an experienced expert teacher in [subject]" — and see whether the quality of the response improves. A good response means a good prompt. A poor response means the prompt needs more context or adjustment. Some chatbots are better than others at certain tasks, so if you're not satisfied despite multiple tries, consider switching chatbot.

### Brackets and privacy

You paste the prompt text into the chatbot's input field. Wherever brackets *[like this]* appear, replace the text inside with whatever fits your context.

**Always double-check the responses** — chatbot output is not guaranteed to be accurate.

**Note:** Think carefully before uploading texts or documents. Never upload personal data or sensitive information. Mind GDPR.

## Chemistry Teachers

- 01 Create a lesson plan for a chemistry lesson in grade [X] on [specific theme, e.g. chemical reactions], with three sections focusing on theory, experiment, and analysis, and a link to the national curriculum.
- 02 Give me five strategies for teaching grade [X] students about [specific theme, e.g. elements], with a practical exercise for each and a reflection on its value.
- 03 Write a short guide for introducing [specific theme, e.g. acids and bases] to a grade [X] class, with three steps and an engaging demonstration activity.
- 04 Suggest three ways to use digital tools to teach [specific theme, e.g. the periodic table] in grade [X], with a simulation for each and a link to digital competence in the national curriculum.
- 05 Create a list of five experimental tasks for a grade [X] class on [specific theme, e.g. mixtures], with a hypothesis and an analysis question for each.
- 06 Give me an example of a routine for starting a chemistry lesson in grade [X] on [specific theme, e.g. atoms], with three steps and a connection to everyday phenomena.
- 07 Suggest three ways to integrate [specific theme, e.g. chemical bonds] into a grade [X] class with practical exercises, with an experiment for each and a reflection.
- 08 Create an assessment rubric for a chemistry lesson in grade [X] on [specific theme, e.g. reactions], with three knowledge requirements from the national curriculum and criteria for different levels.
- 09 Give me five ideas for teaching [specific theme, e.g. acids and bases] in grade [X], with a creative activity for each and a link to chemical concepts.
- 10 Write a short template for planning a chemistry lesson in grade [X] on [specific theme, e.g. organic chemistry], with three sections (introduction, experiment, reflection) and a problem-solving task.

- 11 Suggest three ways to collaborate with a biology teacher on a cross-curricular project about *[specific theme, e.g. chemical processes in nature]* in grade *[X]*, with one idea for each and a goal.
- 12 Give me an example of a lesson in grade *[X]* on *[specific theme, e.g. mixtures]*, with three steps focusing on experiments and an analysis task.
- 13 Create a list of five discussion questions for a grade *[X]* class on *[specific theme, e.g. chemical reactions]*, with a focus on sustainability and a link to current issues.
- 14 Suggest three ways to use everyday examples to teach *[specific theme, e.g. acids and bases]* in grade *[X]*, with a demonstration for each and an analysis of the phenomenon.
- 15 Write a short guide for teaching *[specific theme, e.g. the periodic table]* in grade *[X]*, with three steps and a link to scientific inquiry methods in the national curriculum.
- 16 Give me five ideas for making *[specific theme, e.g. chemical bonds]* more engaging for a grade *[X]* class, with a practical activity for each and a rationale.
- 17 Suggest three ways to assess students' understanding of *[specific theme, e.g. reactions]* in grade *[X]*, with a method for each and a link to the national curriculum's knowledge requirements.
- 18 Create a plan for a chemistry lesson in grade *[X]* on *[specific theme, e.g. atoms]*, with three sections and a closing reflection task on chemical processes.
- 19 Give me an example of an experimental exercise for a grade *[X]* class on *[specific theme, e.g. organic chemistry]*, with three steps and an analysis of results.
- 20 Write a list of three short ways to connect *[specific theme, e.g. mixtures]* to students' everyday lives in a grade *[X]* class, with a question for each and a link to the national curriculum.
- 21 Create a detailed plan for a project on *[specific theme, e.g. chemical reactions]* for a grade *[X]* class, with three lessons focusing on experiments and sustainability solutions.

- 22 Give me five strategies for teaching *[specific theme, e.g. the periodic table]* in grade *[X]*, with an experimental activity for each and a link to chemical concepts.
- 23 Write a short guide for using simulations in a chemistry lesson on *[specific theme, e.g. acids and bases]* in grade *[X]*, with three steps and an analysis task.
- 24 Suggest three ways to integrate *[specific theme, e.g. chemical bonds]* with physics in a grade *[X]* class, with a cross-curricular activity for each and a goal.
- 25 Create a list of five creative problem-solving tasks for a grade *[X]* class on *[specific theme, e.g. mixtures]*, with instructions for each and a connection to everyday phenomena.
- 26 Give me an example of a routine for closing a chemistry lesson on *[specific theme, e.g. reactions]* in grade *[X]*, with three steps and a reflection question.
- 27 Suggest three ways to use experiments to teach *[specific theme, e.g. organic chemistry]* in grade *[X]*, with a lab activity for each and an analysis of results.
- 28 Write an assessment task for a grade *[X]* class on *[specific theme, e.g. atoms]*, with three levels and criteria linked to the national curriculum's knowledge requirements.
- 29 Give me five ideas for teaching *[specific theme, e.g. acids and bases]* in grade *[X]*, with a practical activity for each and a reflection on chemical processes.
- 30 Write a short template for planning a chemistry lesson in grade *[X]* on *[specific theme, e.g. chemical reactions]*, with three sections and a link to sustainability in the national curriculum.
- 31 Suggest three ways to collaborate with a science teacher on a cross-curricular theme about *[specific theme, e.g. chemical processes in nature]* in grade *[X]*, with one idea for each and a goal.
- 32 Give me an example of a discussion on *[specific theme, e.g. the periodic table]* for a grade *[X]* class, with three questions and a method for assessing participation.

- 33 Create a list of five analysis tasks for a grade [X] class on [specific theme, e.g. mixtures], with an experimental source for each and an analysis question.
- 34 Suggest three ways to use everyday examples to teach [specific theme, e.g. reactions] in grade [X], with a demonstration for each and a reflection on the phenomenon.
- 35 Write a short guide for teaching [specific theme, e.g. chemical bonds] in grade [X], with three steps and a link to scientific inquiry methods in the national curriculum.
- 36 Give me five ideas for connecting [specific theme, e.g. organic chemistry] to current issues in a grade [X] class, with a question for each and a rationale.
- 37 Suggest three ways to assess students' experimental skills in a grade [X] class on [specific theme, e.g. acids and bases], with a method for each and a link to the national curriculum.
- 38 Create a plan for a chemistry lesson in grade [X] on [specific theme, e.g. atoms], with three sections and a discussion about chemical processes in everyday life.
- 39 Give me an example of a problem-solving task for a grade [X] class on [specific theme, e.g. chemical reactions], with three steps and an analysis of results.
- 40 Write a list of three short ways to use digital tools to teach [specific theme, e.g. the periodic table] in grade [X], with a resource for each and a link to the national curriculum.
- 41 Create a lesson series on [specific theme, e.g. acids and bases] for a grade [X] class, with three lessons exploring theory, experiments, and applications, and a link to the national curriculum.
- 42 Give me five ideas for teaching [specific theme, e.g. the periodic table] in grade [X], with an experimental activity for each and a reflection on chemical properties.
- 43 Write a short guide for introducing [specific theme, e.g. chemical reactions] to a grade [X] class, with three steps and an engaging demonstration.

- 44 Suggest three ways to use simulations to teach *[specific theme, e.g. chemical bonds]* in grade *[X]*, with a digital exercise for each and a link to the national curriculum.
- 45 Create a list of five discussion tasks for a grade *[X]* class on *[specific theme, e.g. mixtures]*, with a question for each and a connection to everyday phenomena.
- 46 Give me an example of a routine for closing a chemistry lesson on *[specific theme, e.g. organic chemistry]* in grade *[X]*, with three steps and a reflection task.
- 47 Suggest three ways to integrate *[specific theme, e.g. reactions]* with biology in a grade *[X]* class, with a cross-curricular activity for each and a goal.
- 48 Create an assessment task for a grade *[X]* class on *[specific theme, e.g. atoms]*, with three levels and criteria linked to the national curriculum's knowledge requirements.
- 49 Give me five strategies for making *[specific theme, e.g. acids and bases]* engaging for a grade *[X]* class, with a practical activity for each and a rationale.
- 50 Write a short template for planning a chemistry lesson in grade *[X]* on *[specific theme, e.g. chemical reactions]*, with three sections and a problem-solving task.
- 51 Suggest three ways to collaborate with a physics teacher on a project about *[specific theme, e.g. chemical processes]* in grade *[X]*, with one idea for each and a link to the national curriculum.
- 52 Give me an example of a lesson on *[specific theme, e.g. the periodic table]* for a grade *[X]* class, with three steps and an analysis of chemical trends.
- 53 Create a list of five experimental exercises for a grade *[X]* class on *[specific theme, e.g. organic chemistry]*, with a hypothesis for each and an analysis of data.
- 54 Suggest three ways to use everyday examples to teach *[specific theme, e.g. mixtures]* in grade *[X]*, with a demonstration for each and a reflection on the phenomenon.

- 55 Write a short guide for teaching *[specific theme, e.g. chemical bonds]* in grade *[X]*, with three steps and a link to scientific inquiry methods in the national curriculum.
- 56 Give me five ideas for connecting *[specific theme, e.g. acids and bases]* to current issues in a grade *[X]* class, with a question for each and a rationale.
- 57 Suggest three ways to assess students' understanding of chemical processes in a grade *[X]* class on *[specific theme, e.g. reactions]*, with a method for each and a goal.
- 58 Create a plan for a chemistry lesson in grade *[X]* on *[specific theme, e.g. atoms]*, with three sections and a discussion about chemical properties.
- 59 Give me an example of an analysis task for a grade *[X]* class on *[specific theme, e.g. chemical reactions]*, with three steps and an evaluation of experimental data.
- 60 Write a list of three short ways to use digital resources to teach *[specific theme, e.g. the periodic table]* in grade *[X]*, with a resource for each and a link to the national curriculum.
- 61 Create a lesson plan for a grade *[X]* class on *[specific theme, e.g. mixtures]*, with three sections focusing on theory, experiments, and sustainability, and a link to the national curriculum.
- 62 Give me five strategies for teaching *[specific theme, e.g. chemical bonds]* in grade *[X]*, with an experimental activity for each and a link to chemical concepts.
- 63 Write a short guide for using practical exercises in a chemistry lesson on *[specific theme, e.g. acids and bases]* in grade *[X]*, with three steps and an analysis of results.
- 64 Suggest three ways to integrate *[specific theme, e.g. organic chemistry]* with *[mathematics]* in a grade *[X]* class, with a cross-curricular activity for each and a goal.
- 65 Create a list of five creative discussion questions for a grade *[X]* class on *[specific theme, e.g. chemical reactions]*, with a focus on sustainability and a link to current issues.

66 Give me an example of a routine for starting a chemistry lesson on *[specific theme, e.g. the periodic table]* in grade *[X]*, with three steps and an engaging demonstration.

67 Suggest three ways to use experiments to teach *[specific theme, e.g. mixtures]* in grade *[X]*, with a lab task for each and an analysis of data.

68 Write an assessment rubric for a grade *[X]* class on *[specific theme, e.g. organic chemistry]*, with three knowledge requirements from the national curriculum and criteria for different levels.

69 Give me five ideas for teaching *[specific theme, e.g. reactions]* in grade *[X]*, with a practical activity for each and a reflection on chemical processes.

70 Write a short template for planning a lesson in grade *[X]* on *[specific theme, e.g. acids and bases]*, with three sections and a link to scientific inquiry methods in the national curriculum.

71 Suggest three ways to collaborate with a *[biology teacher]* on a cross-curricular theme about *[specific theme, e.g. organic chemistry]* in grade *[X]*, with one idea for each and a goal.

72 Give me an example of a lesson on *[specific theme, e.g. chemical bonds]* for a grade *[X]* class, with three steps and a discussion about chemical properties.

73 Create a list of five problem-solving tasks for a grade *[X]* class on *[specific theme, e.g. the periodic table]*, with a task for each and an analysis of trends.

74 Suggest three ways to use everyday examples to teach *[specific theme, e.g. chemical reactions]* in grade *[X]*, with a demonstration for each and a reflection on the phenomenon.

75 Write a short guide for teaching *[specific theme, e.g. mixtures]* in grade *[X]*, with three steps and a link to sustainability in the national curriculum.

76 Give me five ideas for making *[specific theme, e.g. chemical reactions]* relevant for a grade *[X]* class, with a link to current issues for each and a rationale.

77 Suggest three ways to assess students' chemical understanding in a grade *[X]* class on *[specific theme, e.g. acids and bases]*, with a method for each and a link to the national curriculum.

78 Create a plan for a lesson in grade *[X]* on *[specific theme, e.g. organic chemistry]*, with three sections and a closing reflection on chemical processes.

79 Give me an example of an experimental task for a grade *[X]* class on *[specific theme, e.g. chemical bonds]*, with three steps and an evaluation of data.

80 Write a list of three short ways to use digital tools to teach *[specific theme, e.g. atoms]* in grade *[X]*, with a resource for each and a link to the national curriculum.

CONTINUE ON THE WEB

# The right tool at the right time.

This collection is part of a library of AI prompts for every role in the school — free to use, adapt, and share.

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Four questions that turn any "should we use this AI tool?" conversation into a structured decision — [choosewise.education/wise](https://choosewise.education/wise)

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