FOR PHYSICS TEACHERS

80 chat prompts

Prompts for Physics 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.

VOL. 10

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.

BEFORE YOU START

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.

80 PROMPTS

Physics Teachers

01 Create a lesson plan for a physics lesson in *[grade X]* on *[specific theme, e.g. motion and forces]*, with three sections focusing on theory, experiment, and analysis, and a connection to the national curriculum.

02 Give me five strategies for teaching *[grade X]* students about *[specific theme, e.g. energy]*, with a practical exercise for each and a reflection on its value.

03 Write a short guide for introducing *[specific theme, e.g. sound]* 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. electricity]* in *[grade X]*, with a simulation for each and a connection 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. heat]*, with a hypothesis and an analysis question for each.

06 Give me an example of a routine for starting a physics lesson in *[grade X]* on *[specific theme, e.g. light]*, with three steps and a connection to everyday phenomena.

07 Suggest three ways to integrate *[specific theme, e.g. force and motion]* in a *[grade X]* class with practical exercises, with an experiment for each and a reflection.

08 Create an assessment rubric for a physics lesson in *[grade X]* on *[specific theme, e.g. energy conversions]*, with three knowledge requirements from the national curriculum and criteria for different levels.

09 Give me five ideas for teaching *[specific theme, e.g. electricity]* in *[grade X]*, with a creative activity for each and a connection to scientific concepts.

10 Write a short template for planning a physics lesson in *[grade X]* on *[specific theme, e.g. gravity]*, with three sections (introduction, experiment, reflection) and a problem-solving task.

11 Suggest three ways to collaborate with a *[mathematics teacher]* on a cross-curricular project about *[specific theme, e.g. motion]* in *[grade X]*, with one idea for each and a learning goal.

12 Give me an example of a lesson in *[grade X]* on *[specific theme, e.g. sound waves]*, with three steps focusing on experiment and an analysis task.

13 Create a list of five discussion questions for a *[grade X]* class on *[specific theme, e.g. energy]*, focusing on sustainability and a connection to current events.

14 Suggest three ways to use everyday examples to teach *[specific theme, e.g. heat]* 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. electricity]* in *[grade X]*, with three steps and a connection to scientific method as outlined in the national curriculum.

16 Give me five ideas for making *[specific theme, e.g. light]* 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. forces]* in *[grade X]*, with a method for each and a connection to the national curriculum's knowledge requirements.

18 Create a plan for a physics lesson in *[grade X]* on *[specific theme, e.g. energy]*, with three sections and a closing reflection task on energy use.

19 Give me an example of an experimental exercise for a *[grade X]* class on *[specific theme, e.g. gravity]*, with three steps and an analysis of results.

20 Write a list of three short ways to connect *[specific theme, e.g. motion]* to students' everyday lives in a *[grade X]* class, with a question for each and a connection to the national curriculum.

21 Create a detailed plan for a project on *[specific theme, e.g. energy conversions]* 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. sound]* in *[grade X]*, with an experimental activity for each and a connection to scientific phenomena.

23 Write a short guide for using simulations in a physics lesson on *[specific theme, e.g. electricity]* in *[grade X]*, with three steps and an analysis task.

24 Suggest three ways to integrate *[specific theme, e.g. forces]* with technology in a *[grade X]* class, with a cross-curricular activity for each and a learning goal.

25 Create a list of five creative problem-solving tasks for a *[grade X]* class on *[specific theme, e.g. heat]*, with instructions for each and a connection to everyday phenomena.

26 Give me an example of a routine for closing a physics lesson on *[specific theme, e.g. light]* in *[grade X]*, with three steps and a reflection question.

27 Suggest three ways to use experiments to teach *[specific theme, e.g. energy]* 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. motion]*, with three levels and criteria linked to the national curriculum's knowledge requirements.

29 Give me five ideas for teaching *[specific theme, e.g. gravity]* in *[grade X]*, with a practical activity for each and a reflection on scientific concepts.

30 Write a short template for planning a physics lesson in *[grade X]* on *[specific theme, e.g. electricity]*, with three sections and a connection 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. energy]* in *[grade X]*, with one idea for each and a learning goal.

32 Give me an example of a discussion about *[specific theme, e.g. sound waves]* 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. forces]*, with an experimental source for each and an analysis question.

34 Suggest three ways to use everyday technology to teach *[specific theme, e.g. heat]* 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. energy conversions]* in *[grade X]*, with three steps and a connection to scientific method in the national curriculum.

36 Give me five ideas for connecting *[specific theme, e.g. electricity]* 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. gravity]*, with a method for each and a connection to the national curriculum.

38 Create a plan for a physics lesson in *[grade X]* on *[specific theme, e.g. light]*, with three sections and a discussion about everyday relevance.

39 Give me an example of a problem-solving task for a *[grade X]* class on *[specific theme, e.g. motion]*, 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. energy]* in *[grade X]*, with a resource for each and a connection to the national curriculum.

41 Create a lesson series on *[specific theme, e.g. electricity]* for a *[grade X]* class, with three lessons exploring theory, experiment, and application, and a connection to the national curriculum.

42 Give me five ideas for teaching *[specific theme, e.g. light]* in *[grade X]*, with an experimental activity for each and a reflection on everyday phenomena.

43 Write a short guide for introducing *[specific theme, e.g. forces]* to a *[grade X]* class, with three steps and an engaging practical demonstration.

44 Suggest three ways to use simulations to teach *[specific theme, e.g. energy conversions]* in *[grade X]*, with a digital exercise for each and a connection to the national curriculum.

45 Create a list of five discussion tasks for a *[grade X]* class on *[specific theme, e.g. heat]*, with a question for each and a connection to sustainability.

46 Give me an example of a routine for closing a physics lesson on *[specific theme, e.g. gravity]* in *[grade X]*, with three steps and a reflection task.

47 Suggest three ways to integrate *[specific theme, e.g. sound]* with mathematics in a *[grade X]* class, with a cross-curricular activity for each and a learning goal.

48 Create an assessment task for a *[grade X]* class on *[specific theme, e.g. motion]*, with three levels and criteria linked to the national curriculum's knowledge requirements.

49 Give me five strategies for making *[specific theme, e.g. energy]* engaging for a *[grade X]* class, with a practical activity for each and a rationale.

50 Write a short template for planning a physics lesson in *[grade X]* on *[specific theme, e.g. electricity]*, with three sections and a problem-solving task.

51 Suggest three ways to collaborate with a technology teacher on a project about *[specific theme, e.g. forces]* in *[grade X]*, with one idea for each and a connection to the national curriculum.

52 Give me an example of a lesson on *[specific theme, e.g. heat]* for a *[grade X]* class, with three steps and an analysis of experimental results.

53 Create a list of five experimental exercises for a *[grade X]* class on *[specific theme, e.g. light]*, with a hypothesis for each and an analysis of data.

54 Suggest three ways to use everyday technology to teach *[specific theme, e.g. motion]* 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. energy conversions]* in *[grade X]*, with three steps and a connection to scientific method in the national curriculum.

56 Give me five ideas for connecting *[specific theme, e.g. gravity]* to current issues in a *[grade X]* class, with a question for each and a rationale.

57 Suggest three ways to assess students' problem-solving ability in a *[grade X]* class on *[specific theme, e.g. electricity]*, with a method for each and a learning goal.

58 Create a plan for a physics lesson in *[grade X]* on *[specific theme, e.g. sound]*, with three sections and a discussion about everyday relevance.

59 Give me an example of an analysis task for a *[grade X]* class on *[specific theme, e.g. forces]*, 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. heat]* in *[grade X]*, with a resource for each and a connection to the national curriculum.

61 Create a lesson plan for a *[grade X]* class on *[specific theme, e.g. energy]*, with three sections focusing on theory, experiment, and sustainability, and a connection to the national curriculum.

62 Give me five strategies for teaching *[specific theme, e.g. motion]* in *[grade X]*, with an experimental activity for each and a connection to scientific concepts.

63 Write a short guide for using practical exercises in a physics lesson on *[specific theme, e.g. light]* in *[grade X]*, with three steps and an analysis of results.

64 Suggest three ways to integrate *[specific theme, e.g. electricity]* with *[mathematics]* in a *[grade X]* class, with a cross-curricular activity for each and a learning goal.

65 Create a list of five creative discussion questions for a *[grade X]* class on *[specific theme, e.g. gravity]*, focusing on causes and effects and a connection to current events.

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

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

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

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

70 Write a short template for planning a lesson in *[grade X]* on *[specific theme, e.g. motion]*, with three sections and a connection to scientific method in the national curriculum.

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

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

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

74 Suggest three ways to use everyday examples to teach *[specific theme, e.g. gravity]* 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. heat]* in *[grade X]*, with three steps and a connection to sustainability as outlined in the national curriculum.

76 Give me five ideas for making *[specific theme, e.g. energy]* relevant for a *[grade X]* class, with a connection to current events for each and a rationale.

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

78 Create a plan for a lesson in *[grade X]* on *[specific theme, e.g. sound]*, with three sections and a closing reflection on everyday relevance.

79 Give me an example of an experimental task for a *[grade X]* class on *[specific theme, e.g. energy conversions]*, 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. forces]* in *[grade X]*, with a resource for each and a connection to the national curriculum.

CONTINUE ON THE WEB

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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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