uken Uniwersytet Komisji Edukacji Narodowej w Krakowie

Kraków

Krakowskie Forum AI w Edukacji

Od badań do praktyki szkolnej

23–24 November 2026 / Kraków

From AI responses to students' questions – experiences from the classroom



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With support from the City of Kraków and the Erasmus+ SmartStart Teacher Academy

Kuratorium Oświaty w Krakowie

Koło Naukowe Nauczyciel z Pasją

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Kompetencje i odpowiedzialne korzystanie z AI
Competencies and Responsible Use of AI



Kraków



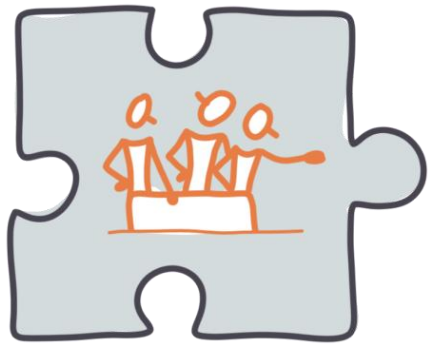
my activity



student's activity

How to study?







an optional course for first-year students

How to study?



What academic competencies are required to study chemistry?

- group discussion
- discussion with AI
- prompt
- prompt structure

One question – different answers – students ask several AI tools the exact same question. They analyse the differences and independently verify the accuracy of the answers.

How to study?



HOW TO WRITE AN EFFECTIVE PROMPT

A simple framework for getting better AI responses

1 DEFINE YOUR GOAL
Specify what you want: an explanation, a plan, an analysis, a graphic, a table or a summary.

2 ASSIGN A ROLE
Specify the role the AI should adopt, such as an expert, teacher, editor, mentor or consultant.

3 PROVIDE CONTEXT
Describe the situation, topic, target audience and intended use of the response.

4 DEFINE THE TASK
State clearly what the AI should do: compare, design, evaluate, summarize or prepare questions.

5 SPECIFY THE OUTPUT FORMAT
Choose a format: bullet points, a table, an outline, an email, a lesson plan, a presentation or a graphic.

6 SET CRITERIA AND CONSTRAINTS
Specify the style, length, language, level of formality, sources, required elements and what to avoid.

7 ITERATE AND REFINE
If the result does not meet your expectations, clarify your instructions, add missing information and request revisions.

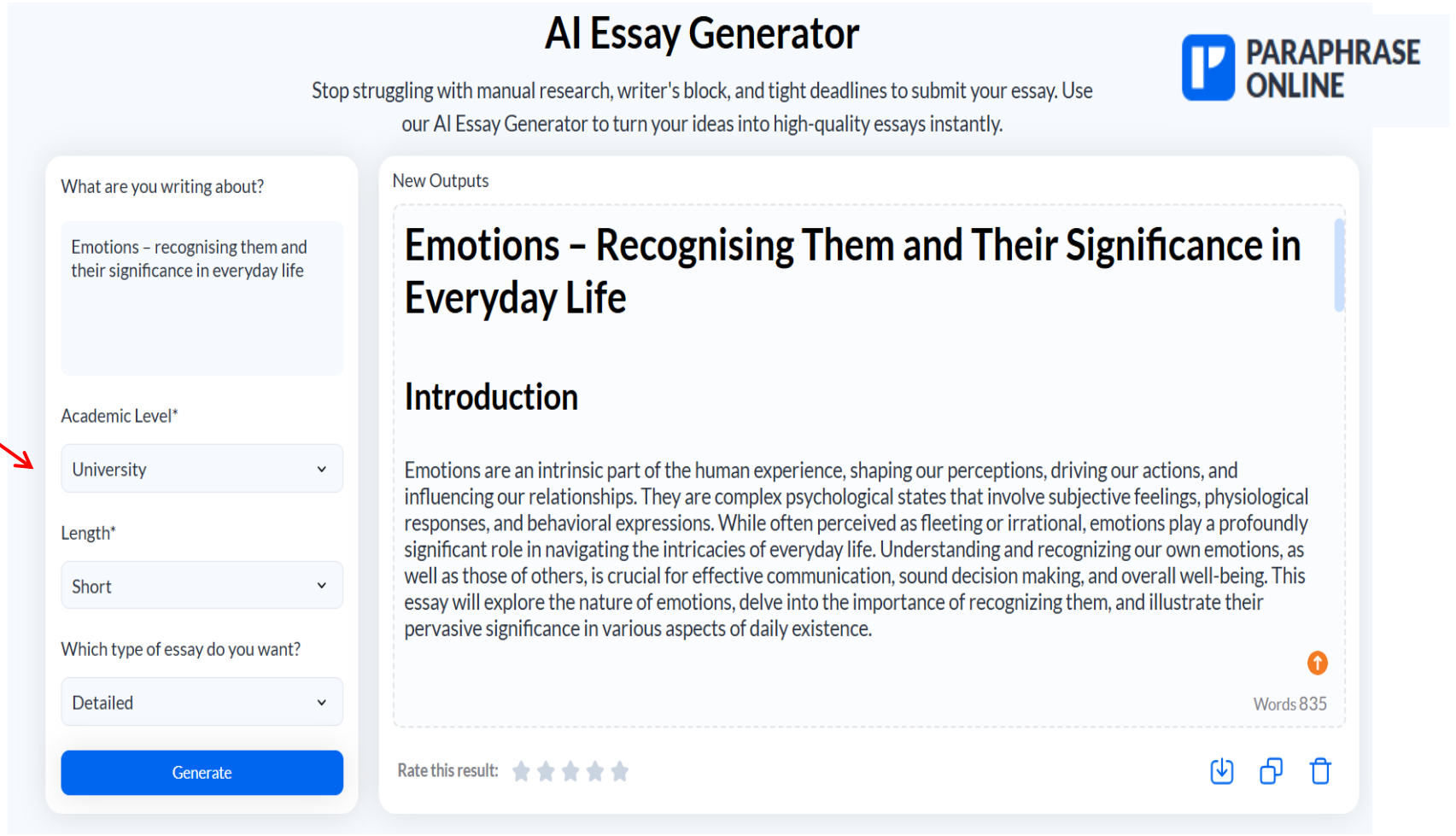
A GENERAL-PURPOSE PROMPT TEMPLATE

You are [role].
Your task is to [task].
Context: [context].
Target audience: [audience].
Present your response in [format].
Include [criteria].
Avoid [constraints].

KEY PRINCIPLE The more precise your prompt, the more likely you are to receive a relevant and useful response.



How to study?





group work – random selection of topics for presentations – preparation of materials – presentation

How to study?



group work – random selection of topics for presentations – preparation – presentation

Text critics – students ask the AI to critique an essay, point out weaknesses and areas for improvement.

Bibliographic detectives - students ask the AI to suggest five academic publications. They check whether they exist, who the authors are, their DOIs, and whether the content is relevant to the topic.

Popularisation of the Natural Scences

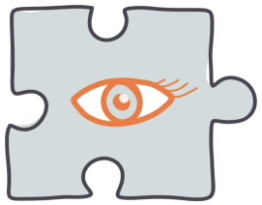




an optional course within the humanities courses

Summarise the lecture recording in the form of notes for the student





Chat GPT

STUDENT LECTURE NOTES

Professor Jerzy Bralczyk – "How to Speak So That People Will Listen"

Source: Watch the lecture by Professor Jerzy Bralczyk ↗

Main message of the lecture: There is no single universal formula for effective public speaking. If we want people to listen to us, we need to establish a connection with our audience, build credibility, and use language effectively. Good communication is not about demonstrating impressive speaking skills. It is about creating a meaningful relationship with listeners.

These notes summarise the main ideas of the lecture and include practical applications for university students. They are not a word-for-word transcript.

1. Three pillars of effective communication

01	02	03
CONNECTION	**CREDIBILITY**	**COMMUNICATION SKILLS**
Building a relationship with the audience	Demonstrating honesty and competence	Using language consciously and appropriately

2. Connection – speak with people, not simply at them

- Effective communication begins with recognising the audience.
- Speaking *at* someone may involve simply delivering information.
- Speaking *with* someone involves establishing a relationship and sharing ideas.
- Connection is created not only through words but also through eye contact, gestures, intonation, and the communication context.
- A speaker should look for common ground with the audience and maintain that connection throughout the presentation.

Create a short voice message based on the text provided



guidelines for preparing a successful popular science presentation

1 źródło · 21 lis 2026

Poradnik autorstwa Adama Liwińskiego wszechstronnie omawia **zasady przygotowania udanego wystąpienia publicznego**. Publikacja wyjaśnia, jak prawidłowo opracować **konspekt oraz pełny skrypt**, dbając przy tym o odpowiedni dobór słownictwa i logiczną strukturę wypowiedzi. Autor podkreśla również ogromne znaczenie **wizualnego wsparcia w postaci slajdów**, które powinny być przejrzyste i ograniczone do absolutnego minimum. Kluczowym elementem sukcesu okazuje się także dokładne zrozumienie **kontekstu wystąpienia**, obejmującego cel, specyfikę odbiorców oraz precyzyjne określenie tematu. Całość procesu wieńczą **wielokrotne próby**, zarówno samodzielne i przed kamerą, jak i przed żywą publicznością, co

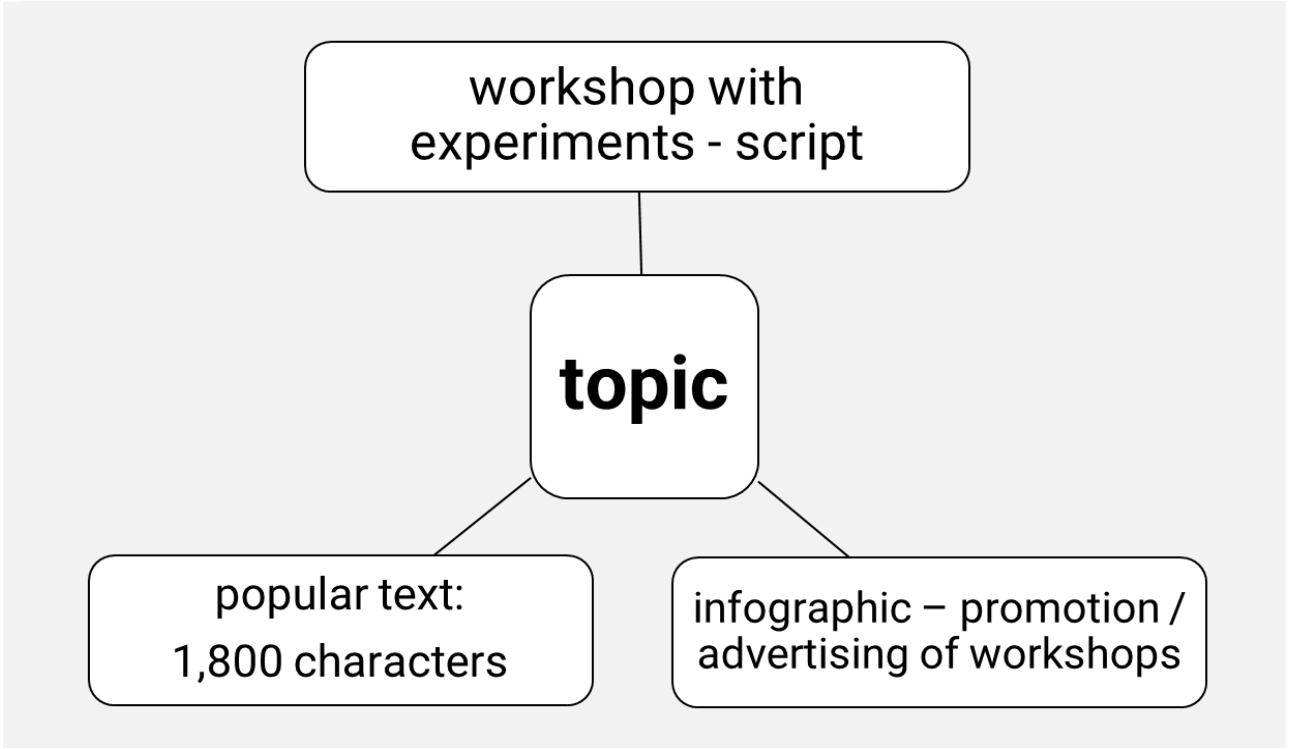
Create a short voice message based on the text provided

1 źródło









Why, when cooking dumplings, should you wait until they float to the surface?





Why do dumplings float to the top whilst they're cooking?

Dumplings float because their **average density becomes lower than the density of the surrounding water**.

Here's what happens:

perplexity

1. **At first, the dumpling is denser than water**
   - The dough is compact and relatively heavy for its volume, so it sinks.
2. **As it heats up, the inside expands**
   - Water inside the dough turns to steam.
   - Small air bubbles and steam pockets expand.
   - If the dough contains a leavening agent (such as baking powder), it may produce additional gas.
3. **The dumpling's volume increases**
   - Its mass changes very little, but its volume increases.
   - Density = mass ÷ volume, so the density decreases.

Duck.ai

Copilot

theory, inspiration, engagement, the audience's language

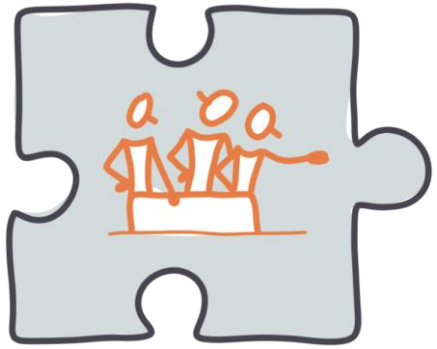
One question – different answers – students ask several AI tools the exact same question. They analyse the differences and independently verify the accuracy of the answers.

Error hunters - students analyse the response generated by the AI, identify factual errors, classify them and suggest corrections.

Does the source actually confirm this? – students check whether the actual publications cited by the AI support the conclusions it has drawn.

Didactics of chemistry







Didactics of chemistry





text with mistakes

self-correction of the text by the student

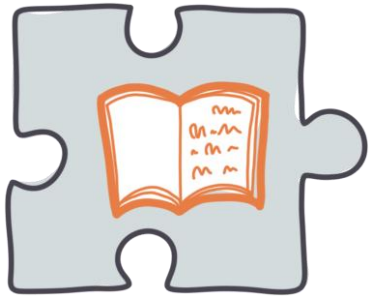
AI-assisted correction

AI as a reviewer – students submit their own work to the AI for assessment. They then decide for themselves which comments to accept and which to reject.

Didactics of chemistry

2. Zjawisko przewodnictwa ciepła w metalach

Cel: Obserwacja przewodnictwa ciepła w metalach. **Materiały:** Sztabki różnych metali (np. miedź, aluminium, stal), świeczka, termometr. **Opis:** Uczniowie podgrzewają końce sztabek różnych metali nad świeczką i obserwują, który metal szybciej przewodzi ciepło, używając termometru do pomiaru temperatury na drugim końcu sztabki.



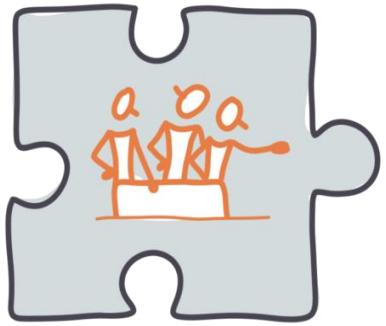
2. Thermal conductivity in metals

Objective: Observe heat conduction in metals. Materials: Rods made of different metals (e.g. samples), a candle and a thermometer. Procedure: Students heat one end of each metal rod over a candle and observe which metal conducts heat more quickly. They use a thermometer to measure the temperature at the other end of each rod.

AI in the witness stand - students raise objections to the AI's responses, present evidence and defend their own position during the discussion.

Elements of educational assessment in school practice







Educational assessment in school practice



Students create chemical error-filled exercises.

The ‘false question’ trap – students formulate a question containing a false assumption. They check whether the AI will challenge it or accept it uncritically.

One text – different answers – students ask several AI tools the exact same question. They analyse the differences and independently verify the accuracy of the answers.



Educational assessment in school practice



GOOD FEEDBACK

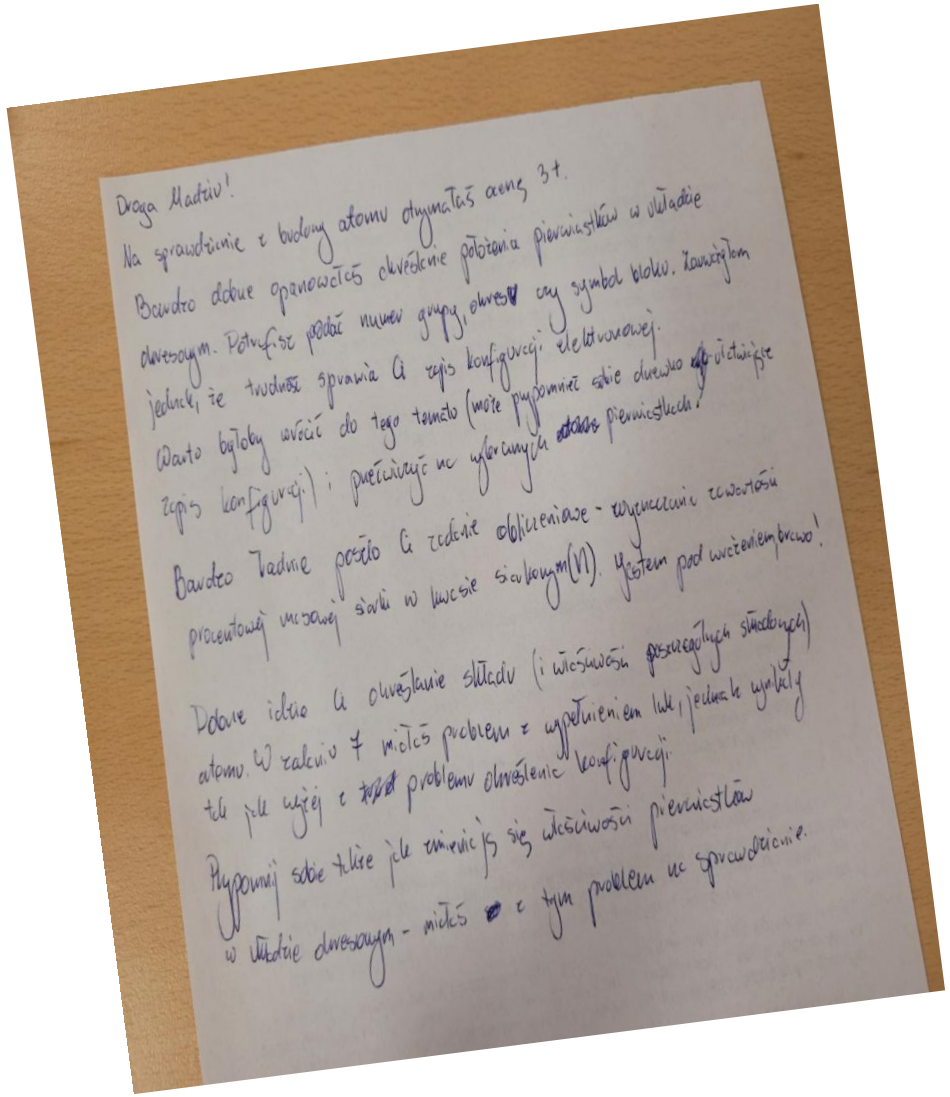
Key principles for giving effective feedback to students

F	**Focused** Address one important aspect at a time.
E	**Evidence-based** Refer to observable work, not assumptions.
E	**Encouraging** Support confidence and motivation.
D	**Descriptive** Describe what works and what needs improvement.
B	**Balanced** Highlight strengths and next steps.
A	**Actionable** Show clearly what the student can do next.
C	**Clear** Use simple, precise, understandable language.
K	**Kind** Respect the learner and the learning process.

Good feedback is focused, clear, supportive, and useful for improvement.

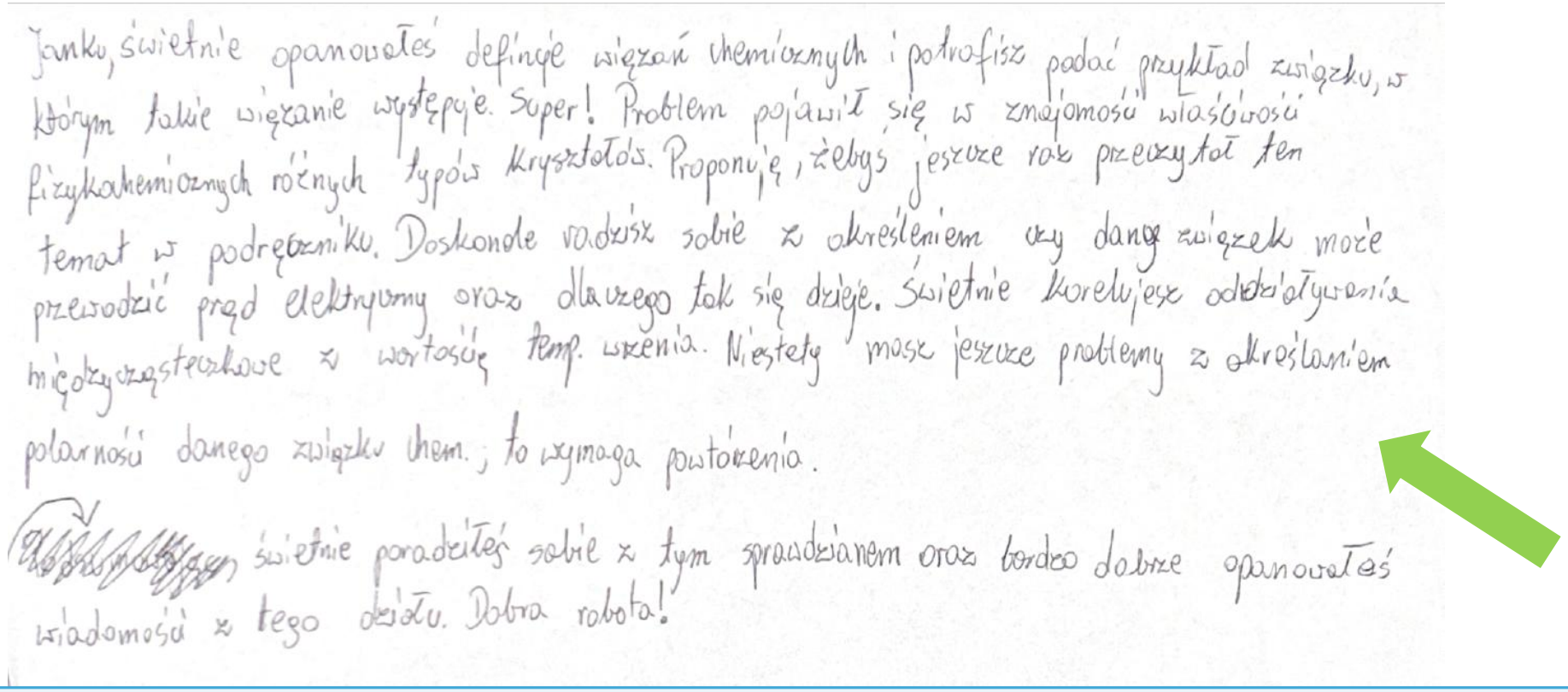
zaufanie
wspiera
konkretna
dialog
obszar
mocna
wzmacnia
wskazówka

Educational assessment in school practice



- checking the answers to test
- a student's formulation of feedback
- AI analysis of feedback

Educational assessment in school practice


Janku, świetnie opanowałeś definicje wiązań chemicznych i potrafisz podać przykład związku, w którym takie wiązanie występuje. Super! Problem pojawił się w znajomości właściwości fizykochemicznych różnych typów kryształów. Proponuję, żebyś jeszcze raz przeczytał ten temat w podręczniku. Doskonale radzisz sobie z określeniem czy dany związek może przewodzić prąd elektryczny oraz dlaczego tak się dzieje. Świetnie korelujesz oddziaływania międzycząsteczkowe z wartością temp. wrzenia. Niestety masz jeszcze problemy z określaniem polarności danego związku chem.; to wymaga powtórzenia.

Świetnie poradziłeś sobie z tym sprawdzianem oraz bardzo dobrze opanowałeś wiadomości z tego działu. Dobra robota!

AI as a Socratic partner - AI asks leading questions, but does not provide the answer. The student arrives at the answer independently and correct the text.

Conclusion:

AI provides answers.
Education develops the ability to question them



QUESTION	VERIFY	REFLECT
Don't just accept.	Look for evidence.	Think independently.



The goal is not to use AI more, but to think better with AI

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Thank you

Questions and discussion

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Szczególne podziękowania wszystkim Osobom studiującym za aktywny udział w zajęciach.

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