

# Groundbreaking AI Applications Transforming E-Learning: Discover Innovative Projects and Their Impact

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"The 2 Sigma Problem: The Search for Methods of Group Instruction as Effective as One-to-One Tutoring." *B. Bloom, Educational Researcher (1984).*



**The 2 Sigma Problem**



# PLATO

CHANGING HOW THE WORLD LEARNS

Welcome to

```
EEEEEE LL      IIII  ZZZZZZ  AAAAA
EE      LL      II    ZZ     AA   AA
EEEEEE LL      II    ZZ     AAAAAA
EE      LL      II    ZZ     AA   AA
EEEEEE LLLLLL IIII  ZZZZZZ  AA   AA
```

Eliza is a mock Rogerian psychotherapist.  
The original program was described by Joseph Weizenbaum in 1966.  
This implementation by Norbert Landsteiner 2005.

ELIZA: Is something troubling you ?

YOU: Men are all alike.

ELIZA: What is the connection, do you suppose ?

YOU: They're always bugging us about something or other.

ELIZA: Can you think of a specific example ?

YOU: Well, my boyfriend made me come here.

ELIZA: Is it important to you that your boyfriend made you come here?

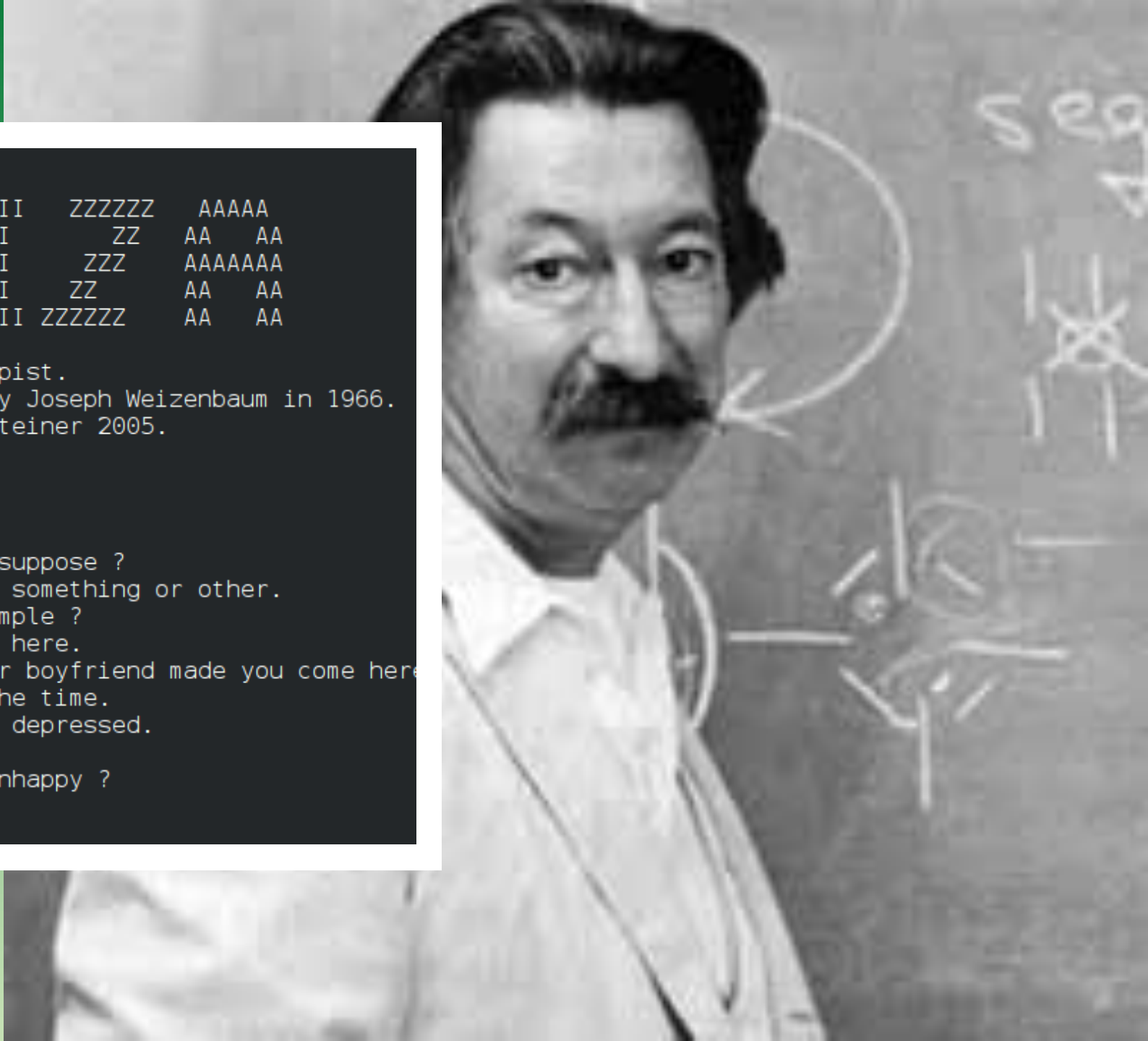
YOU: He says I'm depressed much of the time.

ELIZA: I am sorry to hear that you are depressed.

YOU: It's true. I am unhappy.

ELIZA: Can you explain what made you unhappy ?

YOU:





*OpenAI*



**ChatGPT**

# AI Tutor Pro

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# CHECK your knowledge and skills on any topic

Ask me questions about...

A specific topic

Ask you questions on any topic you would like to learn.

My content

Ask you questions on content that you provide.

e.g. instead of "human rights", enter "Canadian Charter of Human Rights and Freedoms."

History of the Berlin wall

Summary Yes! I would like a summary table of the questions and my answers.

Start



Always verify the answers AI Tutor Pro provides. Like most AI, it is especially for mathematics questions.

If AI Tutor Pro doesn't ask you a question, press the **Ask me another** to continue your session.

Don't be afraid to tell AI Tutor Pro you don't know an answer.

Click on the green copy icon when you're finished to keep a record.



AI Tutor Pro

Welcome to AI Tutor Pro - I'm here to help you learn. Here is your first question.

When was the Berlin Wall constructed?

Answer or press "Ask me another question"

Send

Ask me another question

Done



# GROW your knowledge and skills on any topic

Help me learn more about...

A specific topic

Ask you questions on any topic you would like to learn.

My content

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e.g. instead of "human rights", enter "Canadian Charter of Human Rights and Freedoms."

History of the Berlin wall

Level

Intermediate

Start



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Don't be afraid to tell AI Tutor Pro you don't know an answer.

Click on the green copy icon when you're finished to keep a record of your session.

AI Tutor Pro

Hello and welcome. I am AI Tutor Pro. Today we are discussing the History of the Berlin Wall at an intermediate level.

Let's start our journey into this incredibly significant question: Can you tell me what was the main event leading to the construction of the Berlin Wall? If necessary, I can provide the answer to help with your understanding. Do not hesitate to ask questions and explore this subject more deeply.

AI Tutor Pro

That's a great start! The end of World War II indeed led to the construction of the Berlin wall. Germany was divided into four zones occupied by the United States, Britain, France, and the Soviet Union. The relationship between the Soviet Union and the other three powers deteriorated. East Berlin (controlled by USSR) and

Can you recall the date when the Berlin Wall started being built and the political climate at that time?

The USSR was beginning to crumble

You

AI Tutor Pro

Actually, construction of the Berlin Wall began much earlier, on August 13, 1961, during the height of the Cold War rather than near its end. The Soviet Union was not yet in the process of disintegration; indeed, it was very much an active superpower. The Wall was essentially a physical manifestation of the ideological divide between the East and the West, or more specifically, between Communism and Democracy. The East German government (GDR), backed by the USSR, decided to build the Wall to prevent East Germans to emigrate to the West.

Could you tell me what were some measures used to fortify the Wall, making it an 'Iron Curtain' through the city?

Answer or press "Ask me another question"

Send

Ask me another question

Done

# GROW your knowledge and skills on any topic

Help me learn more about...

A specific topic

Ask you questions on any topic you would like to learn.

My content

Ask you questions on content that you provide.

e.g. instead of "human rights", enter "Canadian Charter of Human Rights and Freedoms."

U.S. Secretary of State Antony Blinken is repeating his call for the government of India

Level

Introductory

Start



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Click on the green copy icon when you're finished to keep a record of your session.



AI Tutor Pro

Hello and welcome. I am AI Tutor Pro. Today, we will be discussing recent developments in international relations, particularly between Canada, India, and the US. We will look at this issue at an introductory level, focusing on the basic principles involved and the key players taking part in these affairs.

To start, can you tell me what you understand about the ongoing situation revolving around the accused involvement of the government of India in the killing of a Canadian citizen, Hardeep Singh Nijjar? Furthermore, can you point out what actions the Canadian government took in response, and how the US is involved in this matter?

Remember that understanding such real-life events can provide insight into international relations practices and help you observe diplomacy in action. Let's start our discussion.

finished

You

AI Tutor Pro

Great! Remember that understanding international relations involves

# Use of AI Tutor Pro in Online Course

Course: GS/EDUC5216 M - Mixed-Methods Research in Education (Winter 2019-2020)

- Participants
- Badges
- Competencies
- Grades
- General
- Course Resources and Support
- Module 1 (Jan 6 - Jan 19) Introduction to Mixed Methods Research
- Module 2 (Jan 20- Feb 2) Designing a Mixed Methods Study
- Module 3 (Feb 3 - 23)

**Qualitative** **Quantitative**

EDUC 5216 Mixed Methods Research in Education  
Adapted from <http://memira.willaprint.com/>

- Course Announcements
- Ice-breaker Discussion
- Welcome video
- Q&A Forum
- Coffee Shop

### Course Resources and Support

Here you'll find the course syllabus and various supporting documents for the course. Always read the **Course Announcements** when you login.

The required course text book is Creswell, J. W. (2015). *A concise introduction to mixed methods research*. Thousand Oaks, CA: Sage. Available at the **York Bookstore** or **Amazon**.

AI Tutor Pro  
Your Knowledge & Skills Builder

## CHECK your knowledge and skills on any topic

Ask me questions about...

**A specific topic**  
Ask you questions on any topic you would like to learn.

**My content**  
Ask you questions on content that you provide.

e.g. instead of "human rights", enter "Canadian Charter of Human Rights and Freedoms."

qualitative data analysis

Summary Yes! I would like a summary table of the questions and my answers.

Start

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Generate

# MULTIPLE-CHOICE

questions on any topic

The topic for the multiple choice quiz

Renaissance Art

How many total questions in the quiz?

3

How many options for each question?

4

1. Analyze the use of perspective in Renaissance art.
  - a) It was completely ignored as artists wanted to represent a 2D reality.
  - b) It was created by the viewer, and not embedded in the art works.
  - c) It was used to create a 3-dimensional illusion in 2-dimensional paintings.
  - d) It was presented in scrambled sequence to challenge the viewer's perception.(Correct Answer: c)

2. Evaluate the impact of Humanism on the art of the Renaissance.
  - a) Humanism completely abolished the use of religious themes in Renaissance art.
  - b) Humanism caused artists to avoid human form representation, emphasizing more on landscapes.
  - c) Humanism shifted focus to the importance and potential of the individual, which was reflected in the artworks.
  - d) Humanism pushed artists to represent alien figures from other planets in their works.(Correct Answer: c)



Generate

# ESSAY QUESTIONS

with a scoring rubric on any topic

The topic for the essay questions

Effects of Climate Change on Global Ecosystems

Number of questions

1

Level

Introductory

Include scoring rubric?

Question: Discuss the major effects of climate change on global ecosystems and include specific examples to illustrate your points. How are these changes anticipated to evolve over the next few decades based on current scientific predictions?

Scoring Rubric:

- Excellent (9-10): The essay responds completely to the question by elaborating on multiple significant effects of climate change on global ecosystems using well-explained examples. The student displays a deep understanding of how these changes are expected to evolve over the next decades as per scientific predictions, incorporating relevant data and research. The ideas are logically organized, with clear and concise language used throughout.
- Good (7-8): The essay provides a satisfactory response to the question by discussing some notable effects of climate change on global ecosystems, with some examples included. The student indicates a reasonable understanding of how these effects could change in the future but could have incorporated more



# Generate a COURSE DESCRIPTION and syllabus on any topic

Start by generating a course description then continue by generating course outcomes and an outline.

① Description   ② Outcomes   ③ Outline   ④ Notes

The topic for the course

inorganic chemistry

Word count

50

Course length in weeks

12

Explore the foundations and applications of inorganic chemistry in this comprehensive 12-week course, designed to delve into the core principles, synthesis, and behavior of inorganic compounds. Structured to cater to both novices and seasoned scientists, the program covers periodic trends, coordination chemistry, organometallics, solid-state chemistry, bioinorganic systems, and current research frontiers, integrating theoretical knowledge with practical laboratory work to consolidate your learning experience.



Generate

Generate outcomes

# Generate a COURSE DESCRIPTION and syllabus on any topic

Start by generating a course description then continue by generating course outcomes and an outline.

① Description   ② Outcomes   ③ Outline

Outcomes

5

Outcomes



1. Analyze Inorganic Substances: You will be able to analyze and understand the behavior and interactions of inorganic substances and comprehend how these principles apply to real-world situations.
2. Evaluate Molecular Structure: You will evaluate molecular structure, core concepts, and periodic trends, gaining an in-depth understanding of the pivotal components of inorganic chemistry.
3. Experiment with Inorganic Chemistry: You will creatively apply laboratory methods to conduct various experiments associated with inorganic chemistry, enhancing your practical knowledge and experimental skill set.
4. Create Bonds and Structures: You will construct and elaborate on various bonding theories and relate the molecular structure to properties of substances, enhancing your critical thinking abilities in inorganic chemistry.



Generate a

# COURSE DESCRIPTION

and syllabus on any topic

Start by generating a course description then continue by generating course outcomes and an outline.

1

Description

2

Outcomes

3

Outline

Subtopics

4

Outline



Week 1 - Introduction to Inorganic Chemistry

- The Field of Inorganic Chemistry: Historical Background and Importance
- Understanding the Atom: Structure and Properties
- Periodic Table: Organization and Periodic Trends
- Chemical Bonding: Ionic and Covalent Bonds

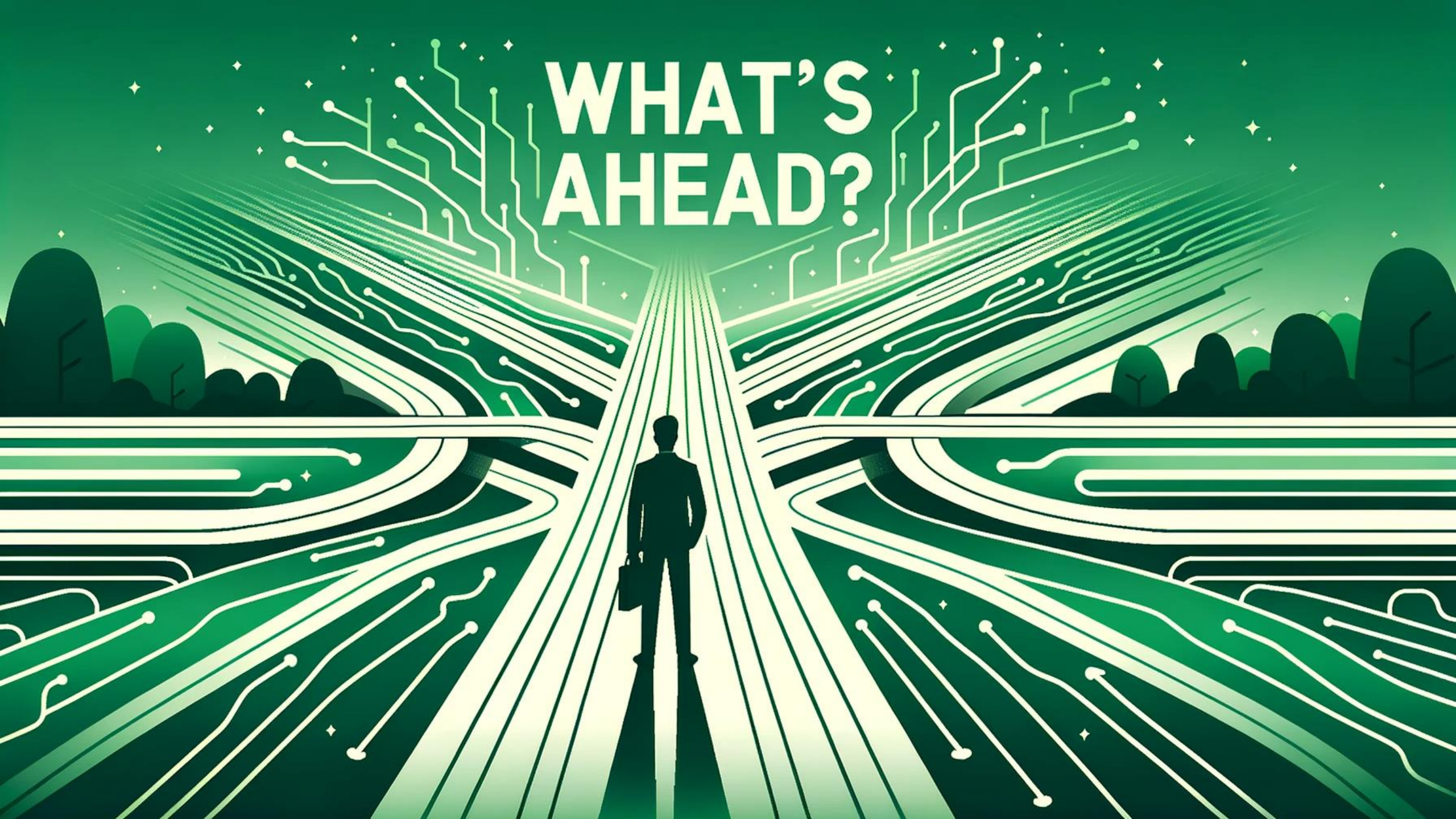
Week 2 - Molecular Structure and Geometry

- Lewis Structures and VSEPR Theory
- Polarity of Molecules: Dipole Moment
- Molecular Orbital Theory
- Hybridization and its Role in Chemistry

Week 3 - The Chemistry of Main Group Elements

- Hydrogen and Alkali Metals: Reactions and Properties
- Transition Metals: d-Block Elements
- Post-transition Metals and Metalloids

# WHAT'S AHEAD?



**Thank you!**

**AI Tutor Pro** <https://www.aitutorpro.ca>

**AT Teaching Assistant Pro**

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<https://ronowston.ca>