

Bots in the Classroom: AI-Powered Tutoring at Your Fingertips

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Essential Question(s)

How can I effectively use AI tools to support my learning and improve my understanding of challenging concepts?

Summary

In this activity, students will explore how AI can serve as a personalized tutor to support their learning in challenging subject areas. Students will also create their own tutoring prompts and practice using prompts developed by their peers to enhance understanding and collaboration.

Learning Goals

Explore how to customize AI tools through prompting to support learning needs and give feedback on prompts created by other students.

Attachments

- AI Tutoring Notecatcher—Bots in the Classroom - Spanish.docx
- AI Tutoring Notecatcher—Bots in the Classroom - Spanish.pdf
- AI Tutoring Notecatcher—Bots in the Classroom.docx
- AI Tutoring Notecatcher—Bots in the Classroom.pdf
- Critique the Bot—Bots in the Classroom - Spanish.docx
- Critique the Bot—Bots in the Classroom - Spanish.pdf
- Critique the Bot—Bots in the Classroom.docx
- Critique the Bot—Bots in the Classroom.pdf
- Lesson Slides—Bots in the Classroom.pptx
- Writing Effective Prompts for Generative AI—Bots in the Classroom - Spanish.docx
- Writing Effective Prompts for Generative AI—Bots in the Classroom - Spanish.pdf
- Writing Effective Prompts for Generative AI—Bots in the Classroom.docx
- Writing Effective Prompts for Generative AI—Bots in the Classroom.pdf

Materials

- Student devices with access to AI tools (see Preparation section)
- Lesson Slides (attached)
- AI Tutoring Notecatcher (attached; one per student)
- Writing Effective Prompts for Generative AI (attached; one per student)
- Critique the Bot (attached; one per student)

Before You Begin

This activity is designed as a follow-up to Bots in the Classroom: The Ethics of Artificial Intelligence (AI) in the Classroom. If students have not yet completed Part 1, it is strongly recommended they do so prior to beginning this lesson. Part 1 provides foundational knowledge and ethical framing that will help students engage more meaningfully with the AI applications explored in Part 2.

Preparation

Prior to facilitating this activity, select an AI chatbot or tool for students to use for this activity. Ensure that the tool complies with your district's AI use policies and that it can be accessed by students. Some recommended tools are:

- AI Chatbots
- MagicSchool
- SchoolAI

Before using any AI system, please be aware that most AI platforms and tools require users to be at least **13 years of age** in compliance with the **Children's Online Privacy Protection Act (COPPA)** and other applicable privacy regulations.

If a student is under the age of 13, they *must* have verifiable parental or guardian consent or be directly supervised by a teacher or school administrator when using this tool. Teachers are responsible for ensuring that students under 18 use AI systems in a safe, ethical, and age-appropriate manner and in alignment with school and district policies.

Teachers should consult their district's guidelines and technology use policies *before* introducing AI tools in the classroom to ensure compliance with local regulations and data privacy requirements.

By continuing to use any AI system, users confirm they meet the minimum age requirement or have obtained the appropriate consent and supervision.

10 minutes

Engage

Use **slides 2–3** from the attached **Lesson Slides** to introduce the topic and learning objective.

Distribute the **Critique the Bot** handout to each student.

Display **slide 4**. Introduce the Critique the Bot instructional strategy by having students read the prompt on the handout and then review the AI-generated feedback shown below it. Ask students to determine which response they find more helpful from a student perspective. Encourage them to mark any observations, concerns, or differences they notice between the two responses. Allow approximately five minutes for students to read and analyze the content individually.

After the critique is complete, transition to **slide 5** and explain the Think-Pair-Share strategy. Have students find an Elbow Partner (someone seated next to them) and discuss which response they preferred, what stood out to them, and whether they agreed or disagreed with their partner's interpretation. After two minutes of discussion, invite pairs to share their thoughts with the whole group.

25 minutes

Explore

Next, move to **slide 6** and have students get out their internet connected devices. Help them navigate to the AI program you have chosen for them to work with. Once students are all on the program, show them how to copy and paste the example prompt into the program.

Teacher's Note: Picking a Prompt

This activity can be done with a prompt you have created or with a pre-made example prompt.

To create your own prompt for this activity, go to https://k20.ou.edu/5g, select "Make a copy" when prompted, and use the tool to create your own prompt. Then, copy and paste the prompt into a place where it can be shared digitally with students, such as on a Padlet or posted to an online classroom. Replace the existing directions on slide 6 with directions for how to access where you have digitally shared the prompt.

To use the pre-made example prompt, have students navigate to https://k20.ou.edu/5j and copy the prompt then paste it into the AI program.

Direct students to spend 10 minutes working through the tutoring conversation, then start the *10-minute timer.*

Embedded video
https://youtube.com/watch?v=9gy-1Z2Sa-c

Once the time is up, display **slide 7** and introduce the Stand Up, Sit Down strategy. Ask students to write down the three most important takeaways from the tutoring session. Have all students stand. Then, one at a time, students will share one item from their list. If a student hears a response that also appears on their own list, they should mark it off. As students share, record their responses on the board or chart paper to create a shared list of class takeaways. Once a student has either shared or marked off all three items from their list, they may sit down. Continue the process until all students are seated.

Teacher's Note: Revisiting Prior Learning

If your class previously completed "Bots in the Classroom: The Ethics of Artificial Intelligence (AI) in the Classroom," consider having students revisit their *I Notice, I Wonder* responses from that activity. They can use those ideas to guide or inspire the three key takeaways they write for the *Stand Up, Sit Down* strategy. This helps reinforce connections between the two lessons and builds on prior thinking.

20 minutes

Explain

Next, display **slide 8** and distribute the **Writing Effective Prompts for Generative AI** handout. Use this reference sheet to introduce students to the concept of writing effective prompts for AI programs. Explain that prompt writing is how people guide AI to respond in useful and specific ways. In this activity, students will learn how to craft prompts that help AI act as an academic tutor.

Provide each student with a printed copy of the example prompt used during the Explore section.

Teacher's Note: Customizing the Critique Activity

If you used the example prompt from the Explore section, students should work with Prompt 1 from the Critique the Bot handout.

If you created your own prompt, generate a new handout by copying and pasting your custom prompt into a document. Replace the prompt on **slide 9** with your version, and be sure to highlight the four key components: Task, Format, Voice, and Context.

After distributing the materials, explain that effective prompts contain specific elements to help the AI understand what's being asked. Review the four components—*Task*, *Format, Voice,* and *Context*—shown on slide 8. Then, move to **slide 9**, where the example prompt is color-coded or underlined by section, and guide students in identifying which parts of the prompt align with each of the four categories.

25 minutes

Extend

Inform students that they will now be using what they've learned to create their own AI tutoring prompt. Display **slide 10** and pass out the **AI Tutoring Notecatcher** handout. Ask students to pick a topic that they are struggling with or that is of interest to them.

Have students use one of the prompts presented during the Explore section and customize the prompt in a way they think will yield the best AI tutor possible.

Optional Tech Integration

Instead of customizing the prompt from Explore by hand, students can utilize a simple prompt generation tool to create their prompt. To access the prompt generation tool, navigate to https://k20.ou.edu/5g. When prompted, select "Make a copy." Then, follow the directions at the top of the spreadsheet page.

A link to the tool and directions are on **slide 11**. If you choose to have students use the tool, un-hide this slide and hide slide 10.

Students should input the prompt to test the performance of the AI tutor. As they work, they should record their experiences and reflections in the AI Tutoring Notecatcher handout.

Ask students to take screenshots of their interaction with the AI tutor to share with you for evaluation.

10 minutes

Evaluate

Display **slide 12.** Once the student is satisfied with their prompt and how the tutor interacts with the users, they should complete a 3-2-1 reflection on their own paper:

3 - Write three things you learned through this process

2 - What were two challenges you faced during this assignment?

1 - What is one thing that surprised you about AI, prompts, or its usefulness?

Facilitate a short debrief conversation to help students consider how they are feeling about using an AI tutor and what they think it could help them with in school.

Screenshots and participation in discussion can be used as forms of assessment.

Research Rationale

Based on: Large Language Models as a Homework Tutor can Improve Student Engagement and Learning Outcomes.

Resources

- K20 Center. (n.d.). 3-2-1. Strategies. https://learn.k20center.ou.edu/strategy/117
- K20 Center. (n.d.). Critique the bot. Strategies. https://learn.k20center.ou.edu/strategy/3491
- K20 Center. (n.d.). Elbow partners. Strategies. https://learn.k20center.ou.edu/strategy/116
- K20 Center. (n.d.). Stand up, sit down. Strategies. https://learn.k20center.ou.edu/strategy/1771
- K20 Center. (n.d.). Think-pair-share. Strategies. https://learn.k20center.ou.edu/strategy/139