

How Human is AI?

ChatGPT vs the Turing Test

Why?

This lesson plan introduces students to the fascinating world of artificial intelligence and the Turing Test through direct interaction and critical analysis of AI text generators like ChatGPT. By engaging with AI, students will grasp the theoretical aspects of machine intelligence and critically evaluate the capabilities and limitations of AI in mimicking human conversation. This hands-on approach helps demystify AI technology. Students will enhance their analytical, communication, and teamwork skills.

Materials Needed

- Paper and writing utensils for students to write down questions and responses
- Computers with access to an AI chat program such as ChatGPT

Time needed

Approximately 45 - 60 minutes

Objectives

- Students will be able to define and explain the concept of the Turing Test and its significance in evaluating artificial intelligence.
- Students will be able to engage with ChatGPT or a similar AI text generator to analyze its responses and interactions.
- Students will be able to critically assess the capabilities and limitations of conversational AI in mimicking human-like responses.

Key Concepts & Vocabulary

Turing Test: A test of a machine's ability to exhibit intelligent behavior equivalent to, or indistinguishable from, that of a human.

Conversational AI: A form of artificial intelligence specifically designed to communicate with humans in a natural, conversational manner.

Natural Language Processing (NLP): A subfield of AI focused on the interaction between computers and humans through natural language.

Lesson

1. Begin with a brief introduction to AI. This can be read from the handout at the end of this lesson plan. There may also be videos online providing a similar introduction.
2. Mention the Turing Test as developed by computer scientist Alan Turing to evaluate a machine's ability to exhibit intelligent behavior equivalent to that of a human.

3. Divide the class into groups of three or four. Explain the activity, emphasizing the goal of engaging with an AI text generator and comparing its responses to those of humans in a blind comparison to assess which is more human-like.
4. In groups, have students craft a set of brief questions they think will test the AI to determine whether it can pass as a human. (Have them consider questions that would require knowledge of facts and creativity, such as “How would you describe the color blue to someone who had never seen anything before?” or “If you had to choose between saving an irreplaceable painting or an endangered species, which would you save, and why?”)
5. Have groups select one student to start as the Questioner and one as the Human Responder. These roles will shift.
6. Students access an AI chatbot, such as ChatGPT. The Questioner types questions into the AI chat, and the Human Responder writes or types an answer to the same question. All other group members should sit in a location where they can't see the screens or papers.
7. The Questioner should read the two answers next, in any order. The other students listen to the two answers, and make a guess as to which was from the AI and which was from the Human Responder.
8. After a couple of questions, students switch roles. Do this enough times so that each student has the chance to be the Questioner and the Human Responder.

Discussion Questions

- What characteristics of the AI's responses seemed most and least human-like?
- How do you think advancements in AI might affect the future of human-AI interactions?
- Can a machine ever truly possess human-like intelligence, or is there always something inherently missing?
- Should AI bots ever get rights as if they were human?
- What professions do you think will be most affected by human-like, and how should society prepare for these changes?

Supplemental Activity Ideas

AI in Art and Music: Explore the intersection of AI and creativity by analyzing artworks and music composed with the help of AI. Students can discuss the role of AI in creative processes and its potential to be an artist.

History of AI Timeline: Students research and construct a timeline of key milestones in the development of AI, from early concepts in mythology and literature to contemporary breakthroughs, fostering an appreciation for the field's evolution.

Problem Solving with AI: Investigate how AI technologies are being used to address challenges in the world, such as climate change modeling, wildlife conservation, and inter-country relations, highlighting AI's potential for positive societal impact.

Sources to Learn More

Information about the Turing test: <https://builtin.com/artificial-intelligence/turing-test>

