

Alana Robinson & Qianhui Vanessa Zou  
Final Project: Unit Plan  
SEDC 73600 Curriculum Design  
Hunter College, Fall 2022

# Impacts of Artificial Intelligence and Machine Learning: How the A.I. BOTS in Our Lives Learn

## Lesson 8: What A.I. does well and does not do well, part 1 - **what A.I. does well** (Alana):

### Learning Target:

- Students identify types of tasks A.I. does well and explain how they know this.
- Students identify types of tasks A.I. does not do well and explain how they know this.
- Students understand that an AI is a computer program

### **K-1.CT.2 Computational Thinking - Data Analysis & Visualization**

Identify different kinds of data that can be collected from everyday life.

### **2-3.IC.1 Impacts of Computing**

Identify and analyze how computing technology has changed the way people live and work.

**2-3.IC.3 Impacts of Computing**

Discuss and explain how computing technology can be used in society and the world.

**2-3.IC.5 Impacts of Computing**

Identify and discuss how computers are programmed to make decisions without direct human input in daily life.

**4-6.CT.1 Computational Thinking - Modeling & Simulation**

Develop a computational model of a system that shows changes in output when there are changes in inputs.

**Introduction/Hook (I Do):**

Source: [ISTE's Hands-On AI Projects for the Classroom: A Guide for Elementary Teachers Hands-On - AI Projects](#)

The teacher shows the video [What's Intelligent about Artificial Intelligence](#)

The teacher leads a discussion about the main points in the video and highlights to students these points:

1. One day, AI creators hope to make machines that can perform any task a human can. This is called general AI.
2. But for now, AI is limited to performing just one or a few limited tasks. This is called narrow AI.
3. The teacher will use the Notice and Wonder protocol with the students. The students will provide notice statements: "I notice..." Then the students will provide wonder statements: "I wonder if.., I wonder how..., I wonder why..., or I wonder whether..." The teacher will make notes of each new notices and wonders.

[Notice and Wonder](#)


**Mini-Lesson (We do):**

Source:

[A Big Data Cheat Sheet: From Narrow AI to General AI | by Jonathan Howard | Medium](#)

[Tic Tac Toe vs AI](#)

**Narrow AI:**

1. First, the teacher shows students the video of the two Alexa's talking  
 [Two Amazon Echos chatting with each other #SeeBotsChat](#)
2. Next, the teacher guides students to see how non-sensical and unintelligent the conversation is between the two Alexas. This video illustrates Narrow AI.

3. Last, the teacher then reads the excerpt paragraph from the article which explains Narrow AI and how the video of the two Alexa's talking is an example of Narrow AI and why it is.

*"Narrow AI and Automation*

*The majority of currently active Artificial Intelligence is actually Narrow AI. Narrow AI is usually software that is automating a traditionally human activity, and in most cases it outperforms humans in efficiency and endurance. For example, in the present day we can ask our smartphones about the weather and expect accurate predictions. There is no hard and fast line where automation became Narrow AI; mechanical tools lead to computers and software development has lead us to Narrow AI. **But now humans can do something Narrow AI can't: we can learn new tasks.** We can solve problems we have never encountered before, using comparisons and creative thought. Some aspects of human creativity are not even fully understood yet, which makes them difficult to program. This video of Two Amazon Echos chatting with each other demonstrates this limitation of Narrow AI."*

### **Independent Activity (You do):**

In this online activity, students will share a laptop or tablet with a partner to explore an online example of Narrow AI in action. [Tic Tac Toe vs AI](#)

The teachers ask who plays Tic-Tac-Toe, who they like to play with, and who normally wins. The teacher then tells students that Aaron Wong has programmed an AI to play Tic-Tac-Toe using five rules for the AI to follow. The students will play the tic-tac-toe game in pairs and students will get an opportunity, at least six rounds per pair with each student playing three times, to play against the AI. Students will keep track of how many times the AI wins, how many times they win, and how many times the game ends in a tie.

After the pairs play they discuss if playing Tic-Tac-Toe is a task the AI did well. Why or Why not?

**\*\*\*The teacher explains to students that this is an example of an AI trained to do one specific task. Point out that usually, an AI can do one specific task very well.**



### **Wrap-Up-Debrief/Reflection: How do you want to be assessed? Peer or Self Assessment**

#### **Conversation Talk about the activity with your peer (Peer Assessment)**

- What did you learn about A.I. from this activity?
- What are you still confused about or have a question about?
- What did you enjoy about the activity?

#### **Exit Ticket (Self-Assessment)**

**Choose one question to answer**

- What did you learn about A.I.?
- What did you enjoy about this activity?
- List 3 examples of A.I. in your life and what makes it A.I.?

What do you still have a question about or are confused about?