

Kentucky Summative Assessments



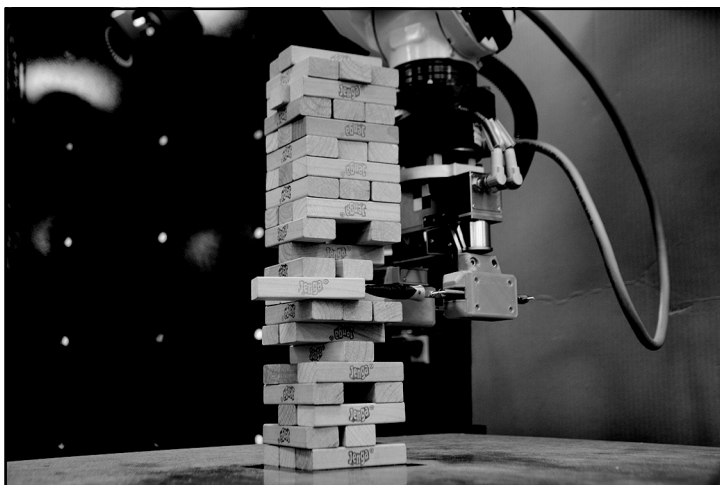
Grade 8 Reading Released Items 2023

Directions: Read the article “MIT Is Teaching a Robot to Beat You at Jenga.” Then answer the questions.

MIT Is Teaching a Robot to Beat You at Jenga

by Rob Verger

Originally published on www.popsoci.com, January 30, 2019



Courtesy of the MIT researchers

- 1 You probably remember the rules of Jenga: You tap at a wooden block in the tower, try to remove it, and then hopefully place the piece back on top of the increasingly unstable creation. The first person to knock the tower over loses. Jenga!
- 2 Jenga’s physical nature makes it different from classic coffee table games like chess, or Go, which are contests at which artificial intelligence already excels. As complex as those games are, Jenga poses its own unique challenges for a robot. Mechanical engineers at the Massachusetts Institute of Technology have been working on a two-fingered bot that uses AI and sensors to figure out the physics of that game and play it.
- 3 With a game like chess, you can glean all the information you need to play, and hopefully win, just by looking at the board. No one needs to poke at the knight on a chess board to figure out if it’s capable of moving. (And with board games like that, AI software can learn rapidly in simulation.) Jenga is different. You can’t just look. You need to touch. “You need to physically interact with it to actually get enough information to make a decision,” says Nima Fazeli, a doctoral candidate and mechanical engineer at MIT, and the first author on a new paper in the journal *Science Robotics* describing the Jenga-playing robot.



- 4 Fazeli and his colleagues built the robot with two finger-like appendages it can use to push on a block and later grasp it. The machine relies on two sensors to perceive its Jenga-filled world: a camera that sees the tower, and a force sensor in its “wrist” to know how hard it is pushing. While they had to build its gripper component, the arm itself is an off-the-shelf-style robotic device. Through those sensors and machine learning techniques like neural networks, it was able to discern the physics of the game.
- 5 The robot learned through experience. The eventual goal was for it to become “good at predicting when [it] is a good idea to keep pushing, or when [it] is a good idea to stop pushing,” says Alberto Rodriguez, the paper’s senior author and a professor of mechanical engineering at MIT. Through poking at blocks and seeing if they feel like they could move easily or not, or if the tower collapses, the robot can “build nuggets of experience.”
- 6 That learning is what the robot can do thanks to artificial intelligence, although the engineers had to give it some basic information first—they told it that the goal of the game was to remove blocks and then place them on top. But the other stuff is autonomous. “It decides on its own which block to push, [and] which blocks to probe; it decides on its own how to extract them; and it decides on its own when it’s a good idea to keep extracting them, or to move to another one,” says Rodriguez. It can give up on a specific block if it needs to, an important skill.
- 7 But don’t worry that this robot is going to show up at your door for your next game night and clobber you and your friends. Rodriguez says that the contraption is “good enough so that it could play against a human,” and it would be fun, even if it is slow. But the researchers say an expert could still beat it. “This is definitely not a project that was driven by trying to achieve superhuman performance,” he adds.
- 8 Worried about robots taking over the world? Take heart that while AI systems are great at board games like chess, they still need some work before easily clobbering us at a physical game of blocks. Jenga!

“MIT is Teaching a Robot to Beat You at Jenga” by Rob Verger, from *Popular Science*, Jan. 30, 2019. © 2019 Popular Science.



1

RE924647881_3

What is the author's main purpose in writing the article?

- A** To elaborate on the most effective methods for winning a popular game
- B** To indicate that there are limitations to the benefits that technology can provide
- C** To inform readers that robots are being programmed to respond more like humans
- D** To warn readers that robots may one day exceed the abilities of the average person



Released Item Performance

Kentucky Summative Assessments

Spring 2023

Grade 8

Reading

Item: RE924647881

Book Question Number: 1

Standard: RI.8, RI.8.6

Item Type: MC

Key: C

| Student Group | Number of Students | Percent Correct | Average Item Score | Item Breakout Statistics - Answer Choice Options | | | |
|-------------------------------------|--------------------|-----------------|--------------------|--|-------|-------|-------|
| | | | | A (%) | B (%) | C (%) | D (%) |
| All Students | 49,130 | 54% | 0.54 | 6% | 34% | 54% | 7% |
| Gender | | | | | | | |
| Female | 23,856 | 55% | 0.55 | 6% | 33% | 55% | 6% |
| Male | 25,270 | 52% | 0.52 | 6% | 34% | 52% | 8% |
| Ethnicity | | | | | | | |
| African American | 5,344 | 46% | 0.46 | 10% | 34% | 46% | 10% |
| American Indian or Alaska Native | 75 | 56% | 0.56 | 4% | 36% | 56% | 4% |
| Asian | 863 | 56% | 0.56 | 4% | 34% | 56% | 5% |
| Hispanic or Latino | 4,245 | 49% | 0.49 | 8% | 35% | 49% | 8% |
| Native Hawaiian or Pacific Islander | 72 | 35% | 0.35 | 15% | 42% | 35% | 8% |
| White (non-Hispanic) | 36,106 | 55% | 0.55 | 5% | 33% | 55% | 6% |
| Two or more races | 2,420 | 53% | 0.53 | 7% | 33% | 53% | 7% |
| Migrant | | | | | | | |
| Migrant | 211 | 46% | 0.46 | 10% | 30% | 46% | 13% |
| English Learner | | | | | | | |
| English Learner | 1,918 | 38% | 0.38 | 16% | 34% | 38% | 12% |
| Economically Disadvantaged | | | | | | | |
| Economically Disadvantaged | 29,187 | 51% | 0.51 | 7% | 34% | 51% | 8% |
| Students with Disabilities | | | | | | | |
| Students with Disabilities | 5,847 | 42% | 0.42 | 14% | 34% | 42% | 10% |



2

RE924648458_4

What is the **most likely** reason the photograph is included in the article?

- A** To display the technical design of the robot
- B** To specify the type of setting in which the robot performs most effectively
- C** To show the precision with which the robot's hand holds a piece of the puzzle
- D** To provide an accurate representation of the type of robot created to play Jenga



Released Item Performance

Kentucky Summative Assessments

Spring 2023

Grade 8

Reading

Item: RE924648458

Book Question Number: 2

Standard: RI.8, RI.8.7

Item Type: MC

Key: D

| Student Group | Number of Students | Percent Correct | Average Item Score | Item Breakout Statistics - Answer Choice Options | | | |
|-------------------------------------|--------------------|-----------------|--------------------|--|-------|-------|-------|
| | | | | A (%) | B (%) | C (%) | D (%) |
| All Students | 49,126 | 61% | 0.61 | 21% | 6% | 12% | 61% |
| Gender | | | | | | | |
| Female | 23,855 | 65% | 0.65 | 18% | 6% | 11% | 65% |
| Male | 25,267 | 58% | 0.58 | 23% | 6% | 12% | 58% |
| Ethnicity | | | | | | | |
| African American | 5,341 | 58% | 0.58 | 19% | 11% | 12% | 58% |
| American Indian or Alaska Native | 75 | 60% | 0.60 | 31% | 1% | 8% | 60% |
| Asian | 863 | 67% | 0.67 | 19% | 4% | 11% | 67% |
| Hispanic or Latino | 4,245 | 59% | 0.59 | 20% | 9% | 12% | 59% |
| Native Hawaiian or Pacific Islander | 72 | 64% | 0.64 | 17% | 7% | 13% | 64% |
| White (non-Hispanic) | 36,105 | 62% | 0.62 | 21% | 5% | 12% | 62% |
| Two or more races | 2,420 | 60% | 0.60 | 21% | 7% | 11% | 60% |
| Migrant | | | | | | | |
| Migrant | 211 | 59% | 0.59 | 14% | 12% | 15% | 59% |
| English Learner | | | | | | | |
| English Learner | 1,917 | 53% | 0.53 | 14% | 17% | 16% | 53% |
| Economically Disadvantaged | | | | | | | |
| Economically Disadvantaged | 29,186 | 59% | 0.59 | 20% | 8% | 13% | 59% |
| Students with Disabilities | | | | | | | |
| Students with Disabilities | 5,843 | 53% | 0.53 | 19% | 13% | 15% | 53% |



Reading

3

RE924645517_4

What is the purpose of paragraph 3 in relation to the MIT project?

- A** It argues that chess is the best game to gauge levels of artificial intelligence.
- B** It presents information on the different methods of competing in chess and Jenga.
- C** It discusses the speed by which a robot can learn to maneuver around a chessboard.
- D** It elaborates on the reasons for programming the robot to play Jenga rather than chess.



Released Item Performance

Kentucky Summative Assessments

Spring 2023

Grade 8

Reading

Item: RE924645517

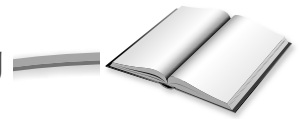
Book Question Number: 3

Standard: RI.8, RI.8.5

Item Type: MC

Key: D

| Student Group | Number of Students | Percent Correct | Average Item Score | Item Breakout Statistics - Answer Choice Options | | | |
|-------------------------------------|--------------------|-----------------|--------------------|--|-------|-------|-------|
| | | | | A (%) | B (%) | C (%) | D (%) |
| All Students | 49,124 | 45% | 0.45 | 8% | 36% | 11% | 45% |
| Gender | | | | | | | |
| Female | 23,855 | 47% | 0.47 | 7% | 37% | 9% | 47% |
| Male | 25,265 | 44% | 0.44 | 10% | 34% | 12% | 44% |
| Ethnicity | | | | | | | |
| African American | 5,340 | 38% | 0.38 | 10% | 39% | 12% | 38% |
| American Indian or Alaska Native | 75 | 55% | 0.55 | 8% | 29% | 8% | 55% |
| Asian | 863 | 43% | 0.43 | 6% | 42% | 9% | 43% |
| Hispanic or Latino | 4,245 | 39% | 0.39 | 9% | 39% | 12% | 39% |
| Native Hawaiian or Pacific Islander | 72 | 35% | 0.35 | 10% | 49% | 7% | 35% |
| White (non-Hispanic) | 36,104 | 47% | 0.47 | 8% | 35% | 10% | 47% |
| Two or more races | 2,420 | 45% | 0.45 | 8% | 36% | 11% | 45% |
| Migrant | | | | | | | |
| Migrant | 211 | 33% | 0.33 | 9% | 42% | 15% | 33% |
| English Learner | | | | | | | |
| English Learner | 1,918 | 28% | 0.28 | 13% | 45% | 15% | 28% |
| Economically Disadvantaged | | | | | | | |
| Economically Disadvantaged | 29,182 | 42% | 0.42 | 9% | 37% | 12% | 42% |
| Students with Disabilities | | | | | | | |
| Students with Disabilities | 5,843 | 32% | 0.32 | 12% | 40% | 15% | 32% |



4

RE924644493_2

What does the author's use of "finger-like appendages" and "wrist" in paragraph 4 suggest about the robot?

- A** The robot is unable to function without reaching and grasping.
- B** The robot has specific characteristics similar to the human form.
- C** The robot must be programmed by engineers in order to work properly.
- D** The robot relies on its mechanical arm to communicate and move objects.



Released Item Performance

Kentucky Summative Assessments

Spring 2023

Grade 8

Reading

Item: RE924644493

Book Question Number: 4

Standard: RI.8, RI.8.4

Item Type: MC

Key: B

| Student Group | Number of Students | Percent Correct | Average Item Score | Item Breakout Statistics - Answer Choice Options | | | |
|-------------------------------------|--------------------|-----------------|--------------------|--|-------|-------|-------|
| | | | | A (%) | B (%) | C (%) | D (%) |
| All Students | 49,123 | 62% | 0.62 | 7% | 62% | 8% | 23% |
| Gender | | | | | | | |
| Female | 23,857 | 63% | 0.63 | 6% | 63% | 7% | 24% |
| Male | 25,262 | 61% | 0.61 | 8% | 61% | 8% | 23% |
| Ethnicity | | | | | | | |
| African American | 5,342 | 51% | 0.51 | 11% | 51% | 12% | 26% |
| American Indian or Alaska Native | 75 | 60% | 0.60 | 12% | 60% | 5% | 23% |
| Asian | 863 | 70% | 0.70 | 6% | 70% | 4% | 21% |
| Hispanic or Latino | 4,242 | 52% | 0.52 | 10% | 52% | 12% | 27% |
| Native Hawaiian or Pacific Islander | 72 | 54% | 0.54 | 7% | 54% | 14% | 25% |
| White (non-Hispanic) | 36,105 | 64% | 0.64 | 7% | 64% | 7% | 22% |
| Two or more races | 2,419 | 63% | 0.63 | 7% | 63% | 7% | 23% |
| Migrant | | | | | | | |
| Migrant | 211 | 45% | 0.45 | 10% | 45% | 14% | 31% |
| English Learner | | | | | | | |
| English Learner | 1,915 | 31% | 0.31 | 14% | 31% | 19% | 35% |
| Economically Disadvantaged | | | | | | | |
| Economically Disadvantaged | 29,181 | 56% | 0.56 | 9% | 56% | 10% | 26% |
| Students with Disabilities | | | | | | | |
| Students with Disabilities | 5,845 | 37% | 0.37 | 14% | 37% | 17% | 33% |



5

RE924644112_2

How does the author use a comparison between chess and Jenga to help the reader better understand the MIT project?

- A** He questions the need to teach a robot to play Jenga as opposed to a game like chess.
- B** He emphasizes that the physical nature of Jenga requires more human skills than chess.
- C** He argues that playing both chess and Jenga require more physical skills than intelligence.
- D** He reveals that a robot can more easily memorize the moves while playing Jenga than chess.



Released Item Performance

Kentucky Summative Assessments

Spring 2023

Grade 8

Reading

Item: RE924644112

Book Question Number: 5

Standard: RI.8, RI.8.3

Item Type: MC

Key: B

| Student Group | Number of Students | Percent Correct | Average Item Score | Item Breakout Statistics - Answer Choice Options | | | |
|-------------------------------------|--------------------|-----------------|--------------------|--|-------|-------|-------|
| | | | | A (%) | B (%) | C (%) | D (%) |
| All Students | 49,120 | 68% | 0.68 | 9% | 68% | 12% | 11% |
| Gender | | | | | | | |
| Female | 23,854 | 70% | 0.70 | 8% | 70% | 12% | 10% |
| Male | 25,262 | 67% | 0.67 | 11% | 67% | 11% | 11% |
| Ethnicity | | | | | | | |
| African American | 5,342 | 56% | 0.56 | 12% | 56% | 18% | 13% |
| American Indian or Alaska Native | 75 | 71% | 0.71 | 12% | 71% | 12% | 5% |
| Asian | 863 | 77% | 0.77 | 9% | 77% | 7% | 6% |
| Hispanic or Latino | 4,242 | 60% | 0.60 | 11% | 60% | 16% | 13% |
| Native Hawaiian or Pacific Islander | 72 | 57% | 0.57 | 14% | 57% | 18% | 11% |
| White (non-Hispanic) | 36,102 | 71% | 0.71 | 9% | 71% | 10% | 10% |
| Two or more races | 2,419 | 67% | 0.67 | 9% | 67% | 14% | 11% |
| Migrant | | | | | | | |
| Migrant | 211 | 47% | 0.47 | 10% | 47% | 24% | 18% |
| English Learner | | | | | | | |
| English Learner | 1,916 | 39% | 0.39 | 16% | 39% | 24% | 21% |
| Economically Disadvantaged | | | | | | | |
| Economically Disadvantaged | 29,177 | 62% | 0.62 | 11% | 62% | 15% | 12% |
| Students with Disabilities | | | | | | | |
| Students with Disabilities | 5,844 | 43% | 0.43 | 16% | 43% | 21% | 19% |



6

RE924642103_2,3

Which sentence from the article **best** illustrates that the MIT robot exhibits the ability to think for itself? Select **two** correct answers.

- A** “While they had to build its gripper component, the arm itself is an off-the-shelf-style robotic device.” (paragraph 4)
- B** “Through those sensors and machine learning techniques like neural networks, it was able to discern the physics of the game.” (paragraph 4)
- C** “It can give up on a specific block if it needs to, an important skill.” (paragraph 6)
- D** “But don’t worry that this robot is going to show up at your door for your next game night and clobber you and your friends.” (paragraph 7)
- E** “‘This is definitely not a project that was driven by trying to achieve superhuman performance,’ he adds.” (paragraph 7)



Released Item Performance

Kentucky Summative Assessments

Spring 2023

Grade 8

Reading

Item: RE924642103

Book Question Number: 6

Standard: RI.8, RI.8.1

Item Type: MS

Key: B,C

| Student Group | Number of Students | Percent Correct | Average Item Score | Item Breakout Statistics - Score Percentages | | |
|-------------------------------------|--------------------|-----------------|--------------------|--|-------------|-------------|
| | | | | Score 0 (%) | Score 1 (%) | Score 2 (%) |
| All Students | 48,925 | 77.4% | 1.55 | 6% | 34% | 60% |
| Gender | | | | | | |
| Female | 23,773 | 77.3% | 1.55 | 5% | 35% | 60% |
| Male | 25,148 | 77.6% | 1.55 | 6% | 33% | 61% |
| Ethnicity | | | | | | |
| African American | 5,300 | 68.2% | 1.36 | 9% | 47% | 45% |
| American Indian or Alaska Native | 75 | 80.7% | 1.61 | 1% | 36% | 63% |
| Asian | 862 | 84.6% | 1.69 | 3% | 24% | 72% |
| Hispanic or Latino | 4,214 | 71.7% | 1.43 | 7% | 42% | 51% |
| Native Hawaiian or Pacific Islander | 71 | 76.1% | 1.52 | 6% | 37% | 58% |
| White (non-Hispanic) | 35,992 | 79.3% | 1.59 | 5% | 31% | 64% |
| Two or more races | 2,406 | 77.9% | 1.56 | 5% | 34% | 61% |
| Migrant | | | | | | |
| Migrant | 210 | 60.0% | 1.20 | 13% | 54% | 33% |
| English Learner | | | | | | |
| English Learner | 1,880 | 58.2% | 1.16 | 12% | 60% | 28% |
| Economically Disadvantaged | | | | | | |
| Economically Disadvantaged | 29,037 | 73.2% | 1.46 | 7% | 39% | 53% |
| Students with Disabilities | | | | | | |
| Students with Disabilities | 5,763 | 62.1% | 1.24 | 12% | 51% | 36% |



7

RE924648623_1

Which claim from the article is **least** supported by factual evidence?

- A** The robot plays well enough to offer a fun challenge to humans.
- B** The robot learns to play Jenga through trial and error during a series of moves.
- C** The robot uses sensors to better feel what move will cause the tower to collapse.
- D** The robot builds on previous experience to increase its chances of winning the game.



Released Item Performance

Kentucky Summative Assessments

Spring 2023

Grade 8

Reading

Item: RE924648623

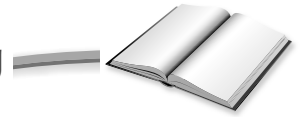
Book Question Number: 7

Standard: RI.8, RI.8.8

Item Type: MC

Key: A

| Student Group | Number of Students | Percent Correct | Average Item Score | Item Breakout Statistics - Answer Choice Options | | | |
|-------------------------------------|--------------------|-----------------|--------------------|--|-------|-------|-------|
| | | | | A (%) | B (%) | C (%) | D (%) |
| All Students | 49,113 | 48% | 0.48 | 48% | 17% | 14% | 20% |
| Gender | | | | | | | |
| Female | 23,853 | 46% | 0.46 | 46% | 18% | 14% | 22% |
| Male | 25,256 | 50% | 0.50 | 50% | 17% | 14% | 19% |
| Ethnicity | | | | | | | |
| African American | 5,340 | 40% | 0.40 | 40% | 21% | 18% | 22% |
| American Indian or Alaska Native | 75 | 49% | 0.49 | 49% | 17% | 13% | 20% |
| Asian | 863 | 56% | 0.56 | 56% | 17% | 10% | 17% |
| Hispanic or Latino | 4,243 | 44% | 0.44 | 44% | 19% | 17% | 20% |
| Native Hawaiian or Pacific Islander | 72 | 44% | 0.44 | 44% | 28% | 10% | 18% |
| White (non-Hispanic) | 36,097 | 50% | 0.50 | 50% | 17% | 13% | 20% |
| Two or more races | 2,418 | 47% | 0.47 | 47% | 18% | 14% | 21% |
| Migrant | | | | | | | |
| Migrant | 211 | 30% | 0.30 | 30% | 25% | 26% | 18% |
| English Learner | | | | | | | |
| English Learner | 1,916 | 31% | 0.31 | 31% | 24% | 23% | 22% |
| Economically Disadvantaged | | | | | | | |
| Economically Disadvantaged | 29,173 | 45% | 0.45 | 45% | 19% | 16% | 21% |
| Students with Disabilities | | | | | | | |
| Students with Disabilities | 5,841 | 36% | 0.36 | 36% | 20% | 22% | 22% |



8

RE924643799_1

Which statement **best** suggests a central idea of the article?

- A** MIT engineers are working to create robots that can imitate a range of human abilities.
- B** MIT engineers are determined to create robots that can compete in a variety of games.
- C** MIT engineers have decided that robots are incapable of performing some human tasks.
- D** MIT engineers expect that robots will soon be able to defeat humans in any competition.



Released Item Performance

Kentucky Summative Assessments

Spring 2023

Grade 8

Reading

Item: RE924643799

Book Question Number: 8

Standard: RI.8, RI.8.2

Item Type: MC

Key: A

| Student Group | Number of Students | Percent Correct | Average Item Score | Item Breakout Statistics - Answer Choice Options | | | |
|-------------------------------------|--------------------|-----------------|--------------------|--|-------|-------|-------|
| | | | | A (%) | B (%) | C (%) | D (%) |
| All Students | 49,113 | 55% | 0.55 | 55% | 29% | 10% | 5% |
| Gender | | | | | | | |
| Female | 23,851 | 55% | 0.55 | 55% | 30% | 10% | 5% |
| Male | 25,258 | 55% | 0.55 | 55% | 28% | 11% | 6% |
| Ethnicity | | | | | | | |
| African American | 5,341 | 46% | 0.46 | 46% | 31% | 15% | 7% |
| American Indian or Alaska Native | 75 | 52% | 0.52 | 52% | 36% | 9% | 3% |
| Asian | 863 | 62% | 0.62 | 62% | 28% | 7% | 4% |
| Hispanic or Latino | 4,242 | 52% | 0.52 | 52% | 28% | 13% | 7% |
| Native Hawaiian or Pacific Islander | 72 | 50% | 0.50 | 50% | 36% | 8% | 6% |
| White (non-Hispanic) | 36,096 | 57% | 0.57 | 57% | 29% | 9% | 5% |
| Two or more races | 2,419 | 54% | 0.54 | 54% | 28% | 11% | 6% |
| Migrant | | | | | | | |
| Migrant | 211 | 45% | 0.45 | 45% | 29% | 20% | 6% |
| English Learner | | | | | | | |
| English Learner | 1,917 | 37% | 0.37 | 37% | 30% | 21% | 12% |
| Economically Disadvantaged | | | | | | | |
| Economically Disadvantaged | 29,171 | 51% | 0.51 | 51% | 30% | 13% | 7% |
| Students with Disabilities | | | | | | | |
| Students with Disabilities | 5,842 | 37% | 0.37 | 37% | 33% | 18% | 12% |



9

RE924648904

Short Answer Directions: Read the question carefully. Then enter your answer in the space provided.

Explain how the author supports the argument that the reader does not need to worry about “robots taking over the world.” Support your answer with evidence from the text.



Released Item Performance

Kentucky Summative Assessments

Spring 2023

Grade 8

Reading

Item: RE924648904

Book Question Number: 9

Standard: RI.8, RI.8.8

Item Type: SA

Key: Rubric

| Student Group | Number of Students | Percent Correct | Average Item Score | Item Breakout Statistics - Score Percentages | | |
|-------------------------------------|--------------------|-----------------|--------------------|--|-------------|-------------|
| | | | | Score 0 (%) | Score 1 (%) | Score 2 (%) |
| All Students | 25,664 | 49.4% | 0.99 | 22% | 58% | 21% |
| Gender | | | | | | |
| Female | 12,431 | 56.5% | 1.13 | 14% | 58% | 27% |
| Male | 13,232 | 42.9% | 0.86 | 29% | 57% | 14% |
| Ethnicity | | | | | | |
| African American | 2,826 | 38.4% | 0.77 | 34% | 55% | 11% |
| American Indian or Alaska Native | 39 | 51.3% | 1.03 | 15% | 67% | 18% |
| Asian | 486 | 64.2% | 1.28 | 9% | 53% | 38% |
| Hispanic or Latino | 2,335 | 44.3% | 0.89 | 27% | 58% | 16% |
| Native Hawaiian or Pacific Islander | 42 | 50.0% | 1.00 | 24% | 52% | 24% |
| White (non-Hispanic) | 18,719 | 51.5% | 1.03 | 19% | 58% | 22% |
| Two or more races | 1,216 | 47.4% | 0.95 | 24% | 58% | 19% |
| Migrant | | | | | | |
| Migrant | 107 | 31.8% | 0.64 | 45% | 47% | 8% |
| English Learner | | | | | | |
| English Learner | 1,237 | 29.7% | 0.59 | 47% | 47% | 6% |
| Economically Disadvantaged | | | | | | |
| Economically Disadvantaged | 15,553 | 44.7% | 0.89 | 27% | 57% | 16% |
| Students with Disabilities | | | | | | |
| Students with Disabilities | 4,122 | 26.6% | 0.53 | 52% | 43% | 5% |

| Reading Short Response Rubric | |
|--------------------------------------|--|
| Score Point 2 | <ul style="list-style-type: none"> • The student completes all components of the question and communicates ideas clearly. • The student demonstrates an understanding of the concepts and/or processes. • The student provides a correct answer using an accurate explanation as support. |
| Score Point 1 | <ul style="list-style-type: none"> • The student provides a partially correct answer to the question and/or addresses only a portion of the question. • The student demonstrates a partial understanding of the concepts and/or processes. |
| Score Point 0 | <ul style="list-style-type: none"> • The answer is totally incorrect or irrelevant. |

Anchor Set

A1

robots can be helpful like the snake bot its used in the army. when people hear the word robot they might think about this big thing that might take over the world.]

Anchor Annotation, Paper 1 Score Point 0

The student provides a totally irrelevant answer (robots can be helpful like the snake bot its used in the army. when people hear the word robot they might think about this big thing that might take over the world).

A2

The author explians that robots cant take over the world becuse he give infromation that they are made of wires and sercet bords they are programed to act like humans.

Anchor Annotation, Paper 2 Score Point 0

The student provides a totally irrelevant answer (becuse he give infromation that they are made of wires and sercet bords they are programed to act like humans).

A3

There worried that robots aregoing to take over the world because the game chess isn't better than the block game, jenga.

Anchor Annotation, Paper 3 Score Point 0

The student provides a totally irrelevant answer (because the game chess isn't better than the block game, jenga).

In paragraph 7 the text states that “Rodriguez says that the contraption is ‘good enough to beat a human,’ and it would still be fun, even if it is slow. But the researchers say that an expert could still beat it.” he’s saying that it’s good enough to play but it can still be beat by humans.

Anchor Annotation, Paper 4
Score Point 1

The student shows a partial understanding of how the author supports the argument that the reader does not need to worry about "robots taking over the world" (by reassuring the reader that the robot has not reached that state of advancement yet.). The student provides some text support with a very general explanation (What he means by this is that while robots are being programmed to play games, they are not advanced enough to harm humans).

The author supports this argument by reassuring the reader that the robot has not reached that state of advancement yet. In paragraph 8 the author states, "Take hearts that while AI systems are great at board games like chess, they still need some work before easily clobbering us at a physical game of blocks." What he means by this is that while robots are being programmed to play games, they are not advanced enough to harm humans.

Anchor Annotation, Paper 5
Score Point 1

The student shows a partial understanding of how the author supports the argument that the reader does not need to worry about "robots taking over the world" (by reassuring the reader that the robot has not reached that state of advancement yet.). The student provides some text support with a very general explanation (What he means by this is that while robots are being programmed to play games, they are not advanced enough to harm humans).

The author supports the argument that robots won't take over the world by explaining that robots may be smart enough to take over the world, they just aren't strong enough. Paragraph 8 states " ..while AI systems are great at board games like chess, they still need some work before easily clobbering us at a physical game of blocks." Chess is a strategic game that requires intelligence while Jenga is a more physical, interactive game.

Anchor Annotation, Paper 6
Score Point 1

The student shows a partial understanding of how the author supports the argument that the reader does not need to worry about "robots taking over the world" (by explaining that robots may be smart enough to take over the world, they just aren't strong enough). The student provides some text support, but the explanations are incomplete (Chess is a strategic game that requires intelligence while Jenga is a more physical, interactive game).

We don't need to worry about "robots taking over the world" because of how long it takes to teach a robot simple human behavior/habits. In paragraph 3, Nima Fazeli says, "You need to physically interact with it to actually get enough information to make a decision." In paragraph 6 it also says that, "The learning is what the robot can do thanks to artificial intelligence, although the engineers had to give it some basic information first they told it that the goal of the game was to remove blocks and then place them on top. But the other stuff is autonomous." This means that if robots want to surpass us humans and take over the world, they'll need many years of experience and learning by physical interaction with people in order to learn our behaviors and how our society works.

Anchor Annotation, Paper 7
Score Point 2

The student clearly explains how the author supports the argument that the reader does not need to worry about "robots taking over the world" (because of how long it takes to teach a robot simple human behavior/habits). The student uses appropriate text evidence and offers insightful interpretations (This means that if robots want to surpass us humans and take over the world, they'll need many years of experience and learning by physical interaction with people in order to learn our behaviors and how our society works).

The author of the text emphasizes that the reader doesn't need to worry about a future event where, "robots take over the world". The author explains mostly about how the robot that MIT built was capable of playing *Jenga* like a human, but he also mentions how a human could defeat it, to explain why this isn't a breakthrough in AI dominating us. The author states that a *Jenga* professional could probably defeat the machine, and that the robot was only created to not receive superhuman performance in paragraph 7 and 8. In paragraph 8, the author also says, "Take heed that while AI systems are great at board games like chess, they still need some work before easily clobbering us at a physical game of blocks." Implying that overall, robots are capable of many things but they are still unable to compete with humans in physical games, meaning that AI, despite its feats, is a long way from dominating us.

Anchor Annotation, Paper 8
Score Point 2

The student clearly explains how the author supports the argument that the reader does not need to worry about "robots taking over the world" (The author explains mostly about how the robot that MIT built that was capable of playing *Jenga* like a human, but he also mentions how a human could defeat it, to explain why this isn't a breakthrough in AI dominating us). The student uses appropriate text evidence and offers insightful interpretations (Implying that overall, robots are capable of many things but they are still unable to compete with humans in physical games, meaning that AI, despite its feats, is a long way from dominating us).

The author supports the argument that readers don't need to worry about "robots taking over the world" by bluntly stating that robots excel in games requiring critical thinking and strategic precision but still need work to better play games that require physical ability, control of force, etc. along with mental aspects like strategy and computative understanding. In paragraph 8 of "MIT is Teaching a Robot to Beat You at Jenga," Rob Verger states, "Take heart that while AI systems are great at board games like chess, they still need some work before easily clobbering us at a physical game of blocks [Jenga]." What is meant by this is that robots are extremely capable of outsmarting humans, but "taking over the world," would require a combination of brute strength and the aforementioned cunning and capable capacities. Until computers can fully control their use of physical force, mental acuteness, and do it both efficiently and simultaneously, humans shouldn't worry about robots of any kind taking over the world.

Anchor Annotation, Paper 9
Score Point 2

The student clearly explains how the author supports the argument that the reader does not need to worry about "robots taking over the world" (by bluntly stating that robots excel in games requiring critical thinking and strategic precision but still need work to better play games that require physical ability, control of force, etc. along with mental aspects like strategy and computative understanding). The student uses appropriate text evidence and offers insightful interpretations (What is meant by this is that robots are extremely capable of outsmarting humans, but "taking over the world," would require a combination of brute strength and the aforementioned cunning and capable capacities. Until computers can fully control their use of physical force, mental acuteness, and do it both efficiently and simultaneously, humans shouldn't worry about robots of any kind taking over the world).



Investing in Kentucky's Future, One Student at a Time