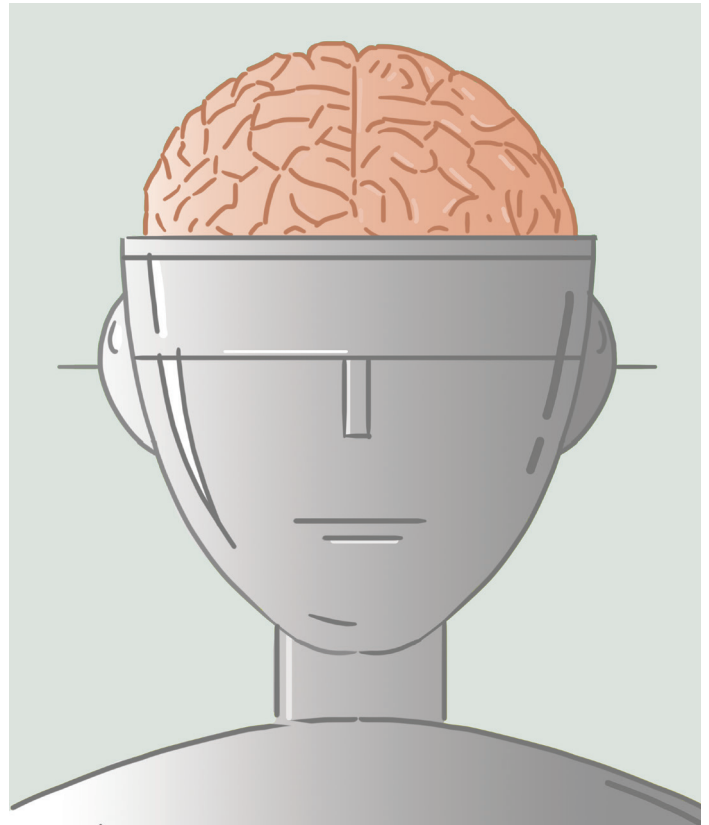# Artificial Intelligence

## Pre-Reading

### A. Warm-Up Questions

1. Discuss what you know about artificial intelligence.

2. Do you believe that machines can behave like humans? Why or why not?

3. What traits do you think humans have that machines do not?

4. Would you like to have a robot? What would your robot do?

5. Have you seen the movies *I, Robot* or *Artificial Intelligence*? Discuss what you've heard about the films.

### B. Vocabulary Preview

Match the words on the left with the correct meanings on the right.

| | | | |
|---|---|---|---|
| _____ | 1. artificial | a) | a sudden or large amount of people or things |
| _____ | 2. reasoning | b) | made by man, not natural |
| _____ | 3. capable | c) | teaching staff from one school or department |
| _____ | 4. onslaught | d) | using intelligence and logic to come up with answers |
| _____ | 5. tournament | e) | to file under a certain category or name |
| _____ | 6. incorporate | f) | able to do something |
| _____ | 7. laboratory | g) | a machine that sucks up dust and other materials from floors |
| _____ | 8. faculty | h) | a sporting or gaming competition with many rounds |
| _____ | 9. classify | i) | to include many different things or parts |
| _____ | 10. vacuum | j) | a room where experiments or research takes place |

# Reading

**ARTIFICIAL INTELLIGENCE**
*An Overview*

1. Can computers think? Do robots have the same characteristics as humans? Which is more intelligent—man or machine? The debate is ongoing.

2. Humans are capable of several traits. Among them are **reasoning**, planning, learning, and communication. Are computers and machines **capable** of the same traits? Essentially, the definition of artificial intelligence is the intelligence that a machine demonstrates. With the **onslaught** of robots, computers, and other technological advances, one might believe the study of artificial intelligence is new. However, people have been working on intelligent machines for years. One of the more famous names associated with the field is Alan Turing. Turing believed that if a machine could pretend to be human, then it was intelligent.

3. One thing that people can do with artificial intelligence is play games. Machines are available that play chess at expert levels. They're not even that costly. Turing wrote the first computer chess program in 1950; however, it wasn't until 1958 that a chess program beat a human for the first time. Over the years, computers began playing in **tournaments** with some wins and some losses. As the years progressed, computers started winning more and more. In 2005, a team of computers beat chess champions Veselin Topalov, Ruslan Ponomariov, and Sergey Karjakin.

4. Many industries, such as airlines and technology, are **incorporating** artificial intelligence into their work. AT&T lists artificial intelligence as one of their research areas. Universities such as Carnegie Mellon, Massachusetts Institute of Technology (MIT), and Stanford University have done research in the field. MIT has CSAIL (Computer Science and Artificial Intelligence **Laboratory**). One of the lab's research areas is an attempt to understand and develop artificially intelligent behavior. A lot of the research is done by **faculty** members who work with students. Some US government agencies help fund CSAIL.

5. As industries experiment and researchers study, the public has become more aware of the possibilities. The movie industry has made several films that usually are **classified** as science fiction. One popular film was *I, Robot*. Another was simply titled *Artificial Intelligence*. People have also started buying toys and tools that display certain traits. The Furby™ was a popular robotic toy that eventually learned to speak English. The Roomba™ is a **vacuum** that is made by the iRobot Corporation. It vacuums without being pushed. If it doesn't need a human to guide it, is it smarter than a human? There are many questions left to be answered in this field.

# Vocabulary Review 1

## A. Definitions

Write a definition for the four human traits mentioned in the main reading.

1.  reasoning _____

2.  planning _____

3.  learning _____

4.  communication _____

## B. Choose the Correct Word

Choose the word closest in meaning to the vocabulary word used on page 2.

1.  science fiction

    a) story based on a true event
    b) story based on a person's life
    c) story based on an imagined science
    d) story based on a true place

2.  robot

    a) a machine
    b) a human
    c) an animal
    d) a food

3.  traits

    a) physical attributes
    b) distinguishing characteristics
    c) personality flaws
    d) mechanical tasks

4.  onslaught

    a) not many
    b) a few
    c) none
    d) a lot

5.  tournament

    a) a series of games
    b) a series of developments
    c) a series of traits
    d) a series of machines

6.  possibility

    a) something that will happen
    b) something that won't happen
    c) something that may happen
    d) something that should happen

# Pair Work (Partner A)

## A. Reading

Read the short article to the right, but do not show it to your partner. Your partner will ask you questions about your article.

**I, ROBOT**

*I, Robot* is an American science fiction thriller that was released in 2004. Starring Will Smith as the main character, Del Spooner, it takes place in the future. The setting is 2035 and Del is a cop in Chicago who doesn't like technology. He is investigating a crime that may have been committed by a robot. If the robot did murder a scientist who worked for US Robotics, then a threat to all humans may exist. The robots in the movie are NS-5 robots and they are a part of everyday life in 2035. All the NS-5 robots are programmed to follow the three Laws of Robotics, but Spooner suspects one robot broke the law and murdered Lanning. Alex Proyas was the director and it was, in part, based on the book *I, Robot*, written by Isaac Asimov. The movie grossed over 100 million dollars domestically and over 200 million internationally and was considered a box-office success both in the United States and overseas. With those numbers, perhaps people are interested in learning whether or not robots can think and behave as humans.

## B. Sharing Information

Work with your partner. Ask the questions to the right about your partner's reading. Write the answers in your notebook.

1. Who starred as the main character?

2. What kind of robot was he?

3. When does the movie take place?

4. Where is the real son?

5. Why was David a substitute?

# Pair Work (Partner B)

## A. Reading

Read the short article to the right, but do not show it to your partner. Your partner will ask you questions about your article.

**ARTIFICIAL INTELLIGENCE: AI**

*Artificial Intelligence: AI* is an American science fiction drama that was released in 2001. Steven Spielberg directed this film that was based, in part, on the short story by Brian Aldiss called *Supertoys Last All Summer Long*. In the film, the main character, David, is played by Haley Joel Osment. David is an 11-year-old boy…or is he? Although no year is given for the setting, it seems to be in the near future. David is a mecha (a realistic robot controlled by man) created by Professor Allen Hobby, played by William Hurt in the movie. David is the first robot to have genuine feelings, especially for his "mother" who adopted him as a substitute for her real son who is suffering from a terrible disease. The real son is being held in suspended animation while the parents wait for a cure. Later, the son is cured and David's life changes forever. The movie made over 78 million domestically and over 150 million internationally. It raises the question, can robots feel?

## B. Sharing Information

Work with your partner. Ask the questions to the right about your partner's reading. Write the answers in your notebook.

1. Who starred as the main character?

2. What kind of robots are they?

3. When does the movie take place?

4. Where does the movie take place?

5. Why was the movie considered a success?

# Writing

Based on your thoughts on the main reading and the pair work readings, write a paragraph of opinion about artificial intelligence. Start with the phrase: *I think artificial intelligence is (positive / negative).*

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

# Vocabulary Review 2

## A. Matching

Match the words in the left column with the best definition in the right column. If you don't know the answer, scan the pair work readings again and try to guess the meaning from context.

| | | | | |
|---|---|---|---|---|
| _____ | 1. | thriller | a) | study, examine |
| _____ | 2. | drama | b) | alternate |
| _____ | 3. | investigate | c) | made |
| _____ | 4. | suspect | d) | make available to the public |
| _____ | 5. | gross | e) | a movie with a lot of emotion |
| _____ | 6. | genuine | f) | real |
| _____ | 7. | substitute | g) | a drug or treatment that fixes a disease |
| _____ | 8. | cure | h) | think |
| _____ | 9. | release | i) | a movie with a lot of suspense |

## B. Vocabulary in Context

Answer the following questions using full sentences.

1. Do you prefer thrillers or dramas? Why?

   _____

   _____

   _____

   _____

2. What kind of jobs gross a lot of money annually?

   _____

   _____

   _____

   _____

3. Would you rather be a cop who investigates or a doctor who cures? Why?

   _____

   _____

   _____

   _____

   _____

# Group Work

Work with a partner. Fill in the Venn diagram for the two movies discussed in this chapter. See if you can add a third circle to the diagram by researching another movie about artificial intelligence.

*I, Robot*

*Artificial Intelligence:*
*AI*