UNIT OVERVIEW
The theme of this unit is how people all over the world are using technology to solve everyday problems and how new technological advances and innovations will continue to change how people live and work in the future.

- **LISTENING A A Radio Show about AI**: A radio show host interviews a doctor about the role that artificial intelligence plays in our daily lives and how it might be used in the future.

- **VIDEO Can Robots Learn to Be More Human?**: National Geographic Explorer, computer scientist, and robotics expert Chad Jenkins explains how coming breakthroughs in robotics will soon make robots a bigger part of everyday life, helping us perform more tasks in our homes and workplaces.

- **LISTENING B A Conversation about Technology**: Two friends have a conversation about the benefits and the kinds of technology involved in Baltimore’s “Mr. Trash Wheel.” The trash wheel uses the movement of the Jones Falls River along with solar energy to remove trash from the water before it reaches the Atlantic Ocean.

For the final task, students draw upon what they have learned in the unit to give a pair presentation about a new kind of technology that will help solve a problem that they have identified.

For additional information about the topics in this unit, here are some suggestions for online search terms:
Pokémon Go, artificial intelligence, 2001: A Space Odyssey, science fiction, Isaac Asimov, early computers, robots, search engines, smartphones, self-driving cars, computer coding, remote presence device, climate change, fossil fuels, renewable energy, solar power, wind power, Mr. Trash Wheel, Baltimore Maryland, Jones Falls River
Lesson A

**30 MIN**

**VOCABULARY**

**A 1.11 Meaning from Context** *(page 24)*

Have students analyze the timeline before listening to the information. Ask them the following questions to check their understanding of how the timeline presents information:

- What type of information does the timeline present? *(important events in AI history)*
- How does it present this information? *(on a vertical line with specific intervals shown chronologically)*
- How long is each specific interval? *(10 years)*
- How many important events are presented? *(six)*
- How many years are represented on the timeline? *(70)*

**B (page 25)**

Have students work in pairs. Remind them to use context to work out the meanings of the words in blue.

**C (page 25)**

Have volunteers share their answers for questions 1 to 3 with the class.

**D (page 25)**

Point out the parts of speech to students. Make sure they understand what each abbreviation means and that the parts of speech describe how each word is used in exercise A.

**Ideas for... PRESENTING THE VOCABULARY SKILL: Using Collocations**

Have students look at the text in exercise A and underline any collocations they find. Examples are *depending on* and *an important part of.* Throughout the unit, continue to call students’ attention to collocations and have them underline these common phrases in their textbooks for future reference.

**E Critical Thinking: Analyzing** *(page 25)*

After students identify the collocations and answer the questions in a group, ask them to form new sentences using the collocations.

**ANSWER KEY**

**VOCABULARY**

**B (page 25)** 1. reliable; 2. capable; 3. replace; 4. instruct; 5. intend

**D (page 25)** 1. a; 2. d; 3. b; 4. e; 5. c

**E (page 25)** 1. are capable of 2. under (those) circumstances 3. intend to

**LISTENING: A RADIO SHOW ABOUT AI**

**BEFORE LISTENING**

**A Prior Knowledge** *(page 26)*

If possible, pull up search engines or online shopping sites as students share answers.

**TIP** Create a high context learning space by incorporating visuals, videos, music, and movement whenever possible. A variety of stimuli will activate background knowledge and increase learning.

**WHILE LISTENING**

**Ideas for... EXPANSION**

Have students form pairs and cover the caption for the image and guess what it says. Ask “Who are these people? Where are they? What are they doing? How does this photo relate to the listening and the theme of the unit?”

**B 1.12 Listening for Main Ideas** *(page 26)*

Tell students they will listen to a talk radio interview about AI between a host and a guest expert. Have students review the questions and answer choices before they listen to the interview.

**TIP** Briefly introduce students to the concept of talk radio. Explain that many radio stations broadcast shows, hosted by an individual, that feature guest interviews. Topical issues are discussed, and programs are usually divided into short segments.
Ideas for… **PRESENTING THE LISTENING SKILL:**
Identifying Important Details
Review the information in the box as a class. Explain that important details not only help listeners understand and remember the main ideas, but can also help them visualize the ideas.

Ideas for… **PRESENTING THE NOTE-TAKING SKILL:**
Using Abbreviations
Ask volunteers to describe how they use abbreviations when they are taking notes. Have students share other useful abbreviations not listed in the box. Write their ideas on the board for reference.

**C A 11:12 Note Taking**  
(page 27)  
Have students recall any main ideas or details they remember from the radio show before they listen to it again.

**AFTER LISTENING**

**D**  
(page 27)  
Review note-taking strategies as a class. Have volunteers come up to the board and write down the abbreviations they used in exercise C.

**E Critical Thinking: Reflecting**  
(page 27)  
Ask volunteers to summarize the main points of their discussions for the class.

**ANSWER KEY**

**LISTENING**

**A**  
(page 26)  
1.–2. Answers will vary.  
3. Possible answer: Doctors use computers to review a patient’s medical history, to see x-rays, and to prescribe medications.

**B**  
(page 26)  
1. b; 2. b; 3. a

**C**  
(page 27) Possible answers:  
1. See most pop. + reliable sites / Don’t see sites we’re not int’ed in  
2. Can do machine lrn’g / Have knowl. of Internet  
3. Can read much info. quickly / Can see things docs don’t

**E**  
(page 27) Answers will vary.

**SPEAKING**

Ideas for… **PRESENTING GRAMMAR FOR SPEAKING:** Action and Nonaction Verbs
Have students write a “P” by the action verbs that show physical activity and an “M” next to the ones that show mental activity. Ask them to come up with two more examples of action verbs for each category. Then ask them to look at the nonaction verbs and categorize each verb as a state of mind, an emotion, one of the senses, or an indication of possession. Ask them to come up with one more example of a nonaction verb for each category. Review answers and student ideas as a class. Possible answers:

**Action Verbs:**  
1. P: bring, eat, replace, work, build, run, speak  
2. M: decide, worry  
3. P or M: compare, happen, increase, occur, respond

**Nonaction Verbs:**  
1. State of mind: be, remember, think, believe, know, matter, understand, mean, seem  
2. Emotion: love, like, need, prefer, want  
3. One of the senses: hear, see  
4. Indication of possession: own, have

**Ideas for… EXPANSION**

Write on the board: What are your family and friends doing right now? Have students write three sentences with action verbs and three with nonaction verbs to answer the question. If appropriate, encourage students to show photos of their family and friends as they share their answers with a partner.

**A**  
(page 28)  
Explain to students that they should write “C” if the verb form is correct and “I” if it is not. Have students complete the exercise individually and then form pairs to compare answers.