



Information Technology

3

CRITICAL THINKING	identifying advantages and disadvantages
READING	taking notes
VOCABULARY	synonyms
WRITING	writing a summary and a personal response
GRAMMAR	parallel structure



UNIT QUESTION

How has technology affected our lives?

A. Discuss these questions with your classmates.

1. How do you use technology in your daily life?
2. Look at the photo. What kind of technology is the child using? What is she doing?



B. Listen to *The Q Classroom* online. Then answer these questions.

1. Sophy says that technology has helped her keep in touch with her friends. What example does she give? Do you agree that technology helps you keep in touch? Why or why or not?
2. Sophy, Yuna, Felix, and Marcus find it hard to imagine life without technology. Do you feel the same way? Can you give an example?

iQ PRACTICE Go to the online discussion board to discuss the Unit Question with your classmates. *Practice* > *Unit 3* > *Activity 1*

UNIT OBJECTIVE

Read the articles and gather information and ideas to write a summary and a personal response paragraph about how technology has affected our lives.

READING 1

Cars That Think

OBJECTIVE ►


You are going to read an article from an automotive magazine about driverless cars. Use the article to gather information and ideas for your Unit Assignment.

PREVIEW THE READING

- A. PREVIEW** Read the title and the first sentence of each paragraph. What is the article's main purpose? Check (✓) your answer.
- to show why driverless cars will be too expensive to buy
 - to suggest that people should buy driverless cars
 - to discuss advantages and disadvantages of driverless cars
- B. QUICK WRITE** Would you feel comfortable in a driverless car? Why or why not? Write for 5–10 minutes in response. Be sure to use this section for your Unit Assignment.
- C. VOCABULARY** Check (✓) the words you know. Then work with a partner to locate each word in the reading. Use clues to help define the words you don't know. Check your definitions in the dictionary.


ACADEMIC LANGUAGE

The corpus shows that **benefits of** is often used in academic writing.
 . . . *the benefits of smartphones include . . .*
 . . . *is one of the benefits of driverless cars . . .*


data (n.)  OPAL


limitation (n.) OPAL


manufacturer (n.)

obey (v.) 

obstacle (n.)

occur (v.)  OPAL

respond (v.)  OPAL

sense (v.)  OPAL

the benefits of (n. phr.) OPAL

 Oxford 3000™ words

 OPAL Oxford Phrasal Academic Lexicon

iQ PRACTICE Go online to listen and practice your pronunciation.
Practice ► Unit 3 ► Activity 2

 OPAL
 Oxford Phrasal Academic Lexicon

WORK WITH THE READING



A. **INVESTIGATE** Read the article and gather information about how technology has affected our lives.



CARS THAT THINK



1 Thanks to modern technology, humans have less to do. Machines make our coffee in the morning and clean our dishes. Robots do the vacuuming, mop the floors, and mow our yards hands-free. But what would it be like if machines drove our cars for us? What if cars could drive us to work while we read the newspaper or worked on the computer? This may sound like science fiction¹. In fact, driverless cars are already on the roads and could soon end up at a dealer near you.

2 Cars today already think for us. GPS navigation systems can give people directions without looking at a map. Sensors² built into cars sound an alarm if drivers get too close to a person or another vehicle. Cameras can see for us at night and steer cars around **obstacles** to avoid accidents. By using GPS, sensors, and cameras together, cars can now park themselves and control drivers when they're about to make a dangerous turn. Now car companies are building driverless cars that will do all of this, and much more.

3 Driverless cars use a lot of the same technological features to make hands-free driving possible. A prototype³ driverless car has sensors and cameras to give the car a 360-degree "eye" to **sense** its full environment. The sensors can "see" turns, red lights, stop signs, and other cars. Its computer uses GPS and other **data** to drive the car safely to its destination. All you need to do is tell it where to go and how you want to drive. Select "cautious," and it will **obey** the speed limit. Or choose "aggressive" and drive faster.

4 According to car **manufacturers**, the **benefits of** hands-free are significant. For one, driverless cars can improve safety. In the United States, over 90 percent of car accidents are the result of human error. Drivers can make bad judgments, get sleepy, and run red lights, but robots don't. In a hands-free car, people can **respond** to email without worrying



¹ **science fiction**: books, movies, etc., about events that take place in the future

² **sensor**: equipment that can detect certain sounds and movements

³ **prototype**: a model or design of something from which other forms are developed

⁴ **automated**: operated by machine, without needing people



Driverless cars may be too “polite” on the highway, where many people speed. A car that is following the speed limit could cause more accidents. In addition, if an accident does **occur**, who is to blame? Do you blame the driver? The car? The car manufacturer? Driving laws are written for human drivers, not robots. Therefore, countries will have to decide who is responsible and write new laws, which won’t be easy.

about hitting another car. Also, driverless cars would use less fuel. They don’t need to be as heavy because they are less likely to crash.

- 5 Although driverless cars sound perfect, there are **limitations**. For instance, automated⁴ cars cannot anticipate the unexpected like humans can. They might not recognize when a police officer tells traffic to stop or pull off the road.

- 6 In the end, consumers will decide if driverless cars are to become the cars of the future. Some might not want to give up control of the wheel. Others may want driving to be as easy as making coffee. Car manufacturers already believe in the driverless car, and today even Uber is testing its own cars for its popular ridesharing program. Prototype driverless cars have already driven millions of miles accident-free, but only time will tell if consumers believe they should.

B. VOCABULARY Complete each sentence with the vocabulary from Reading 1.

data (<i>n.</i>)	obey (<i>v.</i>)	respond (<i>v.</i>)
limitation (<i>n.</i>)	obstacle (<i>n.</i>)	sense (<i>v.</i>)
manufacturer (<i>n.</i>)	occur (<i>v.</i>)	the benefits of (<i>n. phr.</i>)

VOCABULARY SKILL REVIEW

In Unit 1, you learned how to identify word forms with a dictionary. Circle the nouns and underline the verbs in Activity B.

1. Even though cars have headlights, accidents are more likely to _____ at night because drivers can’t see as well.
2. The police expect drivers to _____ the speed limit on highways. If drivers go too fast, they may get a ticket.
3. In many buildings, the lights can _____ when people enter a room, and they turn on by themselves.
4. If my computer turns off by accident, I don’t worry about losing my work because the _____ is already saved.

5. The car _____ has decided to build a car that runs on gasoline and electricity because its customers want vehicles that use less fuel.
6. My boss expects me to _____ to his emails right away. If he doesn't hear from me, he gets upset.
7. Having flexibility and enjoying comfort are two of _____ driving to work. But a disadvantage is getting stuck in traffic.
8. If you don't pay for a membership to the website, you can't read all the articles. There's a(n) _____ on how much information you can access without paying.
9. Sand is a real _____ when driving in the desert. It makes it difficult to control the speed and direction of the car.

iQ PRACTICE Go online for more practice with the vocabulary.
Practice > Unit 3 > Activity 3

C. IDENTIFY Read the sentences. Then number them in the order that the ideas appear in the article.

- ___ 1. Driverless cars are not perfect machines.
- ___ 2. Today's cars can already do many tasks automatically.
- ___ 3. Car manufacturers believe hands-free driving has advantages.
- ___ 4. The future success of driverless cars will depend on consumers.
- ___ 5. New cars and driverless cars use similar technology.

D. INTERPRET Circle the main idea of the article.

- a. Modern technology is making daily tasks easier for people to do.
- b. Car manufacturers say that driverless cars will use less gasoline.
- c. Driverless cars might cause more accidents on roads and highways.
- d. In the near future, driverless cars may change the way people drive.

E. EXPLAIN Answer the questions. Write the paragraph number where the answer is found. Then discuss your answers with a partner.

1. How would driverless cars save fuel? Paragraph: 4

They can be lighter because they are less likely to crash.

2. How many miles have the prototype cars already driven accident-free?

Paragraph: ____

3. What do modern cars use to park themselves? Paragraph: ____

4. What limitations do driverless cars have? Paragraph: ____

F. CATEGORIZE Read the statements. Write *F* (fact) or *O* (opinion).

____ 1. Using a driverless car has several important benefits.

____ 2. Driverless cars are safer than traditional cars.

____ 3. Hands-free driving requires modern technology.

____ 4. Over 90 percent of car accidents in the U.S. are due to human error.

____ 5. Driverless cars use sensors and GPS to navigate.

____ 6. Hands-free driving sounds like science fiction.

____ 7. Driving laws are not written for robots.

____ 8. It will be difficult for countries to write new laws for driverless cars.



CRITICAL THINKING STRATEGY

Identifying advantages and disadvantages

It is important to **identify** the **advantages** and **disadvantages** of a topic as you read. Using a chart can help you organize ideas into advantages and disadvantages. This will help you to compare and evaluate them better when writing and help you make a more informed opinion about the topic.

iQ PRACTICE Go online to watch the Critical Thinking Video and check your comprehension. *Practice > Unit 3 > Activity 4*

G. CATEGORIZE Complete the graphic organizer using your own words. Identify the advantages and disadvantages of driverless cars. Write the paragraph number where the answer is found.

Advantages of driverless cars	Disadvantages of driverless cars
<ul style="list-style-type: none"> • <u>They can help people stay safe.</u> <p>Paragraph: <u>4</u></p>	<ul style="list-style-type: none"> • <u>They can't anticipate unexpected things like people can.</u> <p>Paragraph: <u>5</u></p>
<ul style="list-style-type: none"> • _____ <p>Paragraph: ____</p>	<ul style="list-style-type: none"> • _____ <p>Paragraph: ____</p>
<ul style="list-style-type: none"> • _____ <p>Paragraph: ____</p>	<ul style="list-style-type: none"> • _____ <p>Paragraph: ____</p>
<ul style="list-style-type: none"> • _____ <p>Paragraph: ____</p>	<ul style="list-style-type: none"> • _____ <p>Paragraph: ____</p>

H. DISCUSS Work with a partner. Discuss how the advantages and disadvantages of driverless cars would affect transportation in the future.

iQ PRACTICE Go online for additional reading and comprehension. *Practice > Unit 3 > Activity 5*



WRITE WHAT YOU THINK

A. DISCUSS Discuss the questions in a group.

1. Why do you think car companies want to make driverless cars?
2. Compare and evaluate the advantages and disadvantages of driverless cars. Would you consider buying a driverless car? Why or why not?

B. COMPOSE Choose one of the questions from Activity A and write a paragraph in response. Look back at your Quick Write on page 56 as you think about what you learned.

READING SKILL Taking notes

Taking notes while you are reading will help you become a more active reader. To take notes, write on the text and next to the text. Your notes should help you identify important ideas. You should:

- underline or highlight topics and main ideas
- underline supporting details and the most important words and phrases
- focus on content words like nouns, verbs, and adjectives
- summarize the main idea of each paragraph in the margin—don't use complete sentences

Reviewing your notes can help you remember important concepts. Use your notes to prepare for a class or an exam.

A. ANALYZE Read the second paragraph of Reading 1 below. Look at the student's notes in blue. Then discuss the questions with a partner.

Cars today already think for us. GPS navigation systems can give people directions without looking at a map. Sensors built into cars sound an alarm if drivers get too close to a person or another vehicle. Cameras can see for us at night and steer cars around obstacles to avoid accidents. By using GPS, sensors, and cameras together, cars can now park themselves and control drivers when they're about to make a dangerous turn. Now car companies are building driverless cars that will do all of this, and much more.

"Smart" cars
think for us

1. What types of words did the student underline?

2. Look at the words and ideas the student did not underline. Why are they less important?

3. Look at the note in the margin. What does the note summarize?

4. What is the main idea of the paragraph? How do you know?

B. RESTATE Reread Reading 1. Take notes using ideas from the Reading Skill box and Activity A on pages 62–63. Then compare your notes with a partner.

iQ PRACTICE Go online for more practice with taking notes.
Practice > Unit 3 > Activity 6

READING 2


Classrooms without Walls


OBJECTIVE ▶


You are going to read an article from a newspaper about using tablet computers in schools. Use the article to gather information and ideas for your Unit Assignment.

PREVIEW THE READING


- A. PREVIEW** Read the title and look at the photographs. Then read the first sentence of each paragraph. What do you think the title means by “classroom without walls”?
- B. QUICK WRITE** Do you think computers help children learn better? Why or why not? Write for 5–10 minutes in response. Be sure to use this section for your Unit Assignment.
- C. VOCABULARY** Work with a partner to find the words in the reading. Circle clues in the text that help you understand the meaning of each word. Then use a dictionary to define any unknown words.

adapt (v.)  OPAL


digital (adj.)  OPAL


discover (v.) 

feedback (n.) 

global (adj.)  OPAL


in favor of (prep. phr.)

interactive (adj.)  OPAL

monitor (v.)  OPAL

reliable (adj.)  OPAL

revolutionize (v.)

 Oxford 3000™ words

 Oxford Phrasal Academic Lexicon

iQ PRACTICE Go online to listen and practice your pronunciation.
Practice > Unit 3 > Activity 7

WORK WITH THE READING



A. **INVESTIGATE** Read the article and gather information about how technology has affected our lives.

Home



Sign in

Classrooms without Walls

- 1 Ali and his classmates sit next to each other in an eighth-grade science class in Saudi Arabia. They are not listening to their teacher or taking notes in their science journals. Ali is watching a video about cells on his iPad. Other students are using an app to design their own science experiment. When they need help, they type a quick message to their teacher, who **monitors** them from his computer.
- 2 In the U.S., young students are learning about world geography not through maps but through real people online. Using the Global Book Series app, schoolchildren from other countries create and upload presentations about their countries with photos and videos. American students then access this **digital** library on their tablets and go on tours of cities in Russia, Belgium, and New Zealand from people who actually live there. They watch them, they hear them, and the places feel much more real than maps ever would. In return, American students then share their own tours of cities in the U.S.
- 3 In today's world, tablet computers are **revolutionizing** education. More schools are using tablets instead of paper or books. Many governments predict the best jobs will require students to have strong computer skills. They want their students to be prepared for the future, where jobs in science and technology will dominate¹. Countries around the world are investing millions in technology for education, and putting tablets in children's hands is one step toward their goal.
- 4 Why are more and more educators **in favor of** tablet education? According to them, one of the biggest advantages is tablets allow students to be more creative. Experts agree that tablets should not just be for note-taking. Instead, they should be used to help students make their studies and their ideas come to life.
- 5 As an example, students in a history class in the United Arab Emirates (UAE) are using an app to **discover** and "rebuild" an ancient city. To start, they take a video tour of the ancient city of Petra. With tablet technology, they can "walk through" it as if they were really there. Next, they use an app to design their own city. Finally, with special software², they turn their designs into a presentation and share them instantly on their screens. The students use creativity to solve their own problems. Experts believe this motivates students to learn more.



Children using tablets in the classroom

¹**dominate**: to control or have a lot of influence over something or somebody

²**software**: the programs used by a computer for doing particular jobs

6 Another advantage of tablet education is that learning is more **interactive**. Without tablets, students are limited to communicating with their teacher and the other students in their classroom. With tablets, they have access to a much larger, **global** community. In Canada, teacher Kristen Wideen works with another teacher in Singapore. Their students have used Twitter and Skype to share math problems and tweet about tadpoles³. The benefit is their students get a more global perspective than they would with just a book. They have a much bigger audience for their ideas.



7 Studies have shown that having tablets in the classroom can improve students' test scores. A study of 266 kindergarten students in the United States showed that students with tablets scored higher on every reading test, compared to students without them (Bebell et al. 2012). Another study in California reported that middle school students with iPads did 20 percent better on their math tests, compared to students who just used a textbook (Bonnington 2012). Part of this is because tablets allow teachers to help students instantly. When students' scores on an online test are low, teachers can direct them right away to a video or website for extra instruction. Students can also email or text their teachers for help and get instant **feedback**.

8 Still, no technology is perfect. Many students are often expected to complete tablet assignments at home. One problem is that not all families have Internet access. Other times, Internet connections are slow or stop working. This can put children at a disadvantage. For this reason, governments around the world are also investing millions in fast, **reliable** Internet for schools and cities, but this will take time.

9 For teachers, another disadvantage is that students can get easily distracted⁴ on their tablets. After they complete their assignments, some students end up playing a game or texting a friend. They stop concentrating on the teacher and the classroom. This can be frustrating to teachers. It can make students miss important information. Too much distraction can also have a negative impact on students' grades.

10 How can these kinds of problems be solved? For one, teachers are going to need more training in using tablet instruction. Second, schools will have to make sure that children are accessing the right content at the right time. And parents must also learn to **adapt** to technology they never had in school. But, if students, parents, and teachers can work together, the "classroom without walls" could become the classroom of the future and prepare children even better for our connected, digital world.

References

- Bebell, Damian, Sue Dorris, and Miko Muir. 2012. "Emerging results from the nation's first kindergarten implementation of iPads." Research Summary. Auburn: Auburn School Department.
- Bonnington, Christina. January 20, 2012. "iPad a solid education tool, study reports." Retrieved from <https://www.wired.com/2012/01/ipad-educational-aid-study/>

³**tadpole**: a small creature that lives in water and is the young form of a frog

⁴**distract**: to take someone's attention away from what they are trying to do

VOCABULARY SKILL REVIEW

Look at the sentences with the vocabulary words. Which vocabulary words in bold are adjectives? Which are nouns?

B. VOCABULARY Here are some words from Reading 2. Read the sentences. Then match each bold word with its definition below.

- ___ 1. Libraries are using **digital** technology. Many library books are now available as e-books, which people can download onto their computers.
- ___ 2. Although some parents are **in favor of** tablets in the classroom, other parents complain that children already spend too much time on screens.
- ___ 3. People can find **reliable** information on websites from professional organizations, but personal websites are less trustworthy.
- ___ 4. It is a good idea for parents to **monitor** how much time their children spend online because they can easily lose track of time.
- ___ 5. When my teacher sends me **feedback** on my essay, I read his comments and try to make changes to improve it.
- ___ 6. Most smartphones have screens that **adapt** to light. When it is dark outside, the screen changes so it is less bright.
- ___ 7. Apps have **revolutionized** early childhood education. Babies used to learn colors and shapes from books, but now many learn them from apps.
- ___ 8. The Internet has helped to grow a **global** community of users who communicate and work together from all parts of the world.
- ___ 9. There are many computer games online that let students review math in fun and **interactive** ways.
- ___ 10. In college, Sultan **discovered** that he liked art and engineering, so he decided to get a degree in architecture.

- a. (v.) to change because the situation or environment you are in has changed
- b. (adj.) that you can trust
- c. (adj.) involving direct communication both ways, between the computer and the person using it
- d. (v.) to find or learn something new or unexpected
- e. (adj.) using an electronic system to record or store information
- f. (v.) to change something completely
- g. (prep. phr.) supporting and agreeing with something or somebody
- h. (n.) information about something that you have done or made which tells you how good or successful it is
- i. (adj.) covering or affecting the whole world
- j. (v.) to check, record, or watch something regularly for a period of time

iQ PRACTICE Go online for more practice with the vocabulary.
Practice > Unit 3 > Activity 8

C. RESTATE Take notes on the main ideas of each paragraph in Reading 2. Then write the number of the paragraph that each statement summarizes.

- 7 1. Tablet computers may improve students' scores on reading and math exams.
- ___ 2. Tablets are helping students in the UAE be more creative and learn more.
- ___ 3. Having a poor Internet connection or no Internet can cause problems for students at home.
- ___ 4. Governments are investing in tablet education to prepare students for the future.
- ___ 5. Students, teachers, and parents must all work together to make tablet education successful.
- ___ 6. Some teachers complain that they lose their students' attention because of tablets.
- ___ 7. Tablets allow students to communicate with students from countries around the world.

D. CATEGORIZE Take notes on the supporting details of each paragraph in Reading 2. Then read the statements. Write *T* (true) or *F* (false). Then correct each false statement to make it true according to the article.

- ___ 1. Tablets can be used in history and science classes.
- ___ 2. The Global Book Series is only used by American schoolchildren.
- ___ 3. In the future, most available jobs will be in science and education.
- ___ 4. Students in the UAE use apps to explore and design cities.
- ___ 5. Kristen Wideen is a teacher in Singapore who uses tablets in her classroom.
- ___ 6. Middle school students in California scored 20 percent better on reading tests because of tablets.
- ___ 7. Some students don't benefit from tablets because they don't have Internet at home.

E. IDENTIFY Read these sentences from Reading 2. Then answer the questions. Find the sentences in the reading to help you.

1. (Paragraph 1) When **they** need help, they type a quick message to their teacher, who monitors them from his computer.

Who does *they* refer to? _____

2. (Paragraph 3) **They** want their students to be prepared for the future, where jobs in science and technology will dominate.

Who does *they* refer to? _____

3. (Paragraph 4) According to **them**, one of the biggest advantages is tablets allow students to be more creative.
Who does *them* refer to? _____
4. (Paragraph 5) With tablet technology, they can “walk through” **it** as if they were really there.
What does *it* refer to? _____
5. (Paragraph 6) **They** have a much bigger audience for their ideas.
Who does *they* refer to? _____
6. (Paragraph 7) A study of 266 kindergarten students in the United States showed that students with tablets scored higher on every reading test, compared to students without **them**.
What does *them* refer to? _____

F. EVALUATE Read these sentences from Reading 2. Underline the words that show the author’s tone (i.e., how the author feels about the topic). Then circle the best description of the tone.

1. They watch them, they hear them, and the places feel much more real than maps ever would.
 - a. approving
 - b. disapproving
2. Without tablets, students are limited to communicating with their teacher and the other students in their classroom.
 - a. critical
 - b. factual
3. Still, no technology is perfect. Many students are often expected to complete tablet assignments at home.
 - a. idealistic
 - b. realistic
4. But, if students, parents, and teachers can work together, the “classroom without walls” could become the classroom of the future and prepare children even better for our connected, digital world.
 - a. doubtful
 - b. hopeful

G. COMPOSE Do you believe tablets should replace books in schools? Write a paragraph of 5–8 sentences giving your opinion.

H. **EXTEND** Discuss the questions in a group. Look back at your Quick Write on page 63 as you think about what you learned.

1. Some people believe tablets can cause children to become addicted to technology. Do you agree? Why or why not?
2. What job would you like to have in the future? Do you think you will need strong computer and technology skills to perform this job?

WORK WITH THE VIDEO



A. **PREVIEW** Do computer programs and apps affect your daily life? How? Share your opinion with a partner.

VIDEO VOCABULARY

aspect (n.) one of the qualities, or parts of a situation, idea, problem, etc.

determine (v.) to make something happen in a particular way

confirm (v.) to say or show that something is true; to make something definite

recover (v.) to return to a normal state after an unpleasant or unusual experience or a period of difficulty

take over (v. phr.) begin to have control of or responsibility for something, especially in the place of somebody else



iQ RESOURCES Go online to watch the video about algorithms.
Resources > Video > Unit 3 > Unit Video

B. **IDENTIFY** Watch the video two or three times. Then answer the questions.

1. What is an algorithm?

2. Why do credit card companies use algorithms?

3. How are algorithms used by hospitals?

4. How did a computer algorithm affect American markets in 2010?

5. What problem may algorithms cause in the future?

C. **EXTEND** Do you see ads targeted at you on the social media sites you use? Do you think algorithms such as these can have negative consequences? Write a paragraph of 5–8 sentences in response.



WRITE WHAT YOU THINK

SYNTHESIZE Think about Reading 1, Reading 2, and the unit video as you discuss these questions. Then choose one question and write a paragraph in response.

1. How much control should people have over the technology they use? Why?
2. What positive and negative effects can technology have on people's lives?

VOCABULARY SKILL Synonyms

Synonyms are words that have similar meanings. Learning synonyms will increase your vocabulary and will give your writing more variety.

- People's lifestyles have changed because of new technology.
- People's habits and behaviors have changed because of new technology.

Be careful when choosing synonyms because they do not always have exactly the same meaning. A synonym can have a more general meaning or a more specific meaning.

- **General:** Drivers are expected to follow the rules of the road.
- **Specific:** Drivers are expected to obey the rules of the road.

Follow is more general because it means to do what you are told. *Obey* is more specific because it suggests you *must* do what you are told.

TIP FOR SUCCESS

A **thesaurus** is a book that lists synonyms. Remember that words can have multiple meanings. When you check a thesaurus, make sure you look for the correct synonym for the word.

A. RESTATE Rewrite each sentence by replacing the bold word or phrase with a synonym from the box.

benefits	discover	experiments	occurs
data	eventually	limitations	

1. The GPS navigation system stores **information** about highway exits and speed limits.

The GPS navigation system stores data about highway exits and speed limits.

2. When an accident **happens**, the police must decide who is responsible.
-

3. Are there any **disadvantages** to using robots for everyday tasks?
-

4. Engineers are trying to **find** new ways to increase Internet speeds.
-

5. Researchers have created **tests** that study how driverless cars respond to accidents.

6. It may be difficult for consumers to accept driverless cars, but **in the end**, they may become popular because they have many **advantages**.

B. CATEGORIZE Read each pair of sentences. Look at the synonyms in bold. Write *G* next to the sentence that uses a more general synonym. Write *S* next to the one that uses a more specific synonym.

1. a. G Driverless cars may give people the **opportunity** to read while driving.
b. S Driverless cars may give people the **freedom** to read while driving.
2. a. Sensors can tell the car if an accident **is going to** occur.
b. Sensors can tell the car if an accident **is about to** occur.
3. a. Tablet computers **are revolutionizing** education on a global scale.
b. Tablet computers **are changing** education on a global scale.
4. a. The students must **complete** their homework from home.
b. The students must **do** their homework from home.
5. a. Tablets allow teachers to give students feedback **instantly**.
b. Tablets allow teachers to give students feedback **quickly**.

iQ PRACTICE Go online for more practice with synonyms.
Practice > Unit 3 > Activity 9

OBJECTIVE ►

At the end of this unit, you will write a summary paragraph and a personal response paragraph. These paragraphs will include specific information from Reading 2 and your own ideas.

WRITING SKILL Writing a summary and a personal response

A **summary** paragraph tells the reader the main ideas of a reading in your own words. A good summary begins by restating the main idea of the reading. It gives a basic outline of the reading and includes supporting details that are necessary to understand the main points. A summary uses synonyms and similar language to restate ideas from the reading.

A summary is often followed by a **personal response** paragraph. A personal response paragraph gives your personal reaction to the reading. It often includes ideas that you agree or disagree with and gives reasons why you agree or disagree.

A. **WRITING MODEL** Read the model summary and personal response to Reading 1. Then answer the questions on page 73.

According to the article “Cars That Think,” in the near future, driverless cars may change the way people drive. The cars use technology that is already in many modern cars, such as GPS, sensors, and cameras. The sensors see the road and make decisions about turns and stops, and the GPS navigation system tells the car where to go. Car manufacturers say driverless cars are safer and use less gasoline. However, they cannot understand real-life situations, like obeying police instructions, as well as humans can. Also, it is not clear who is at fault when a driverless car causes an accident. The success of these cars will eventually depend on consumers, not car manufacturers.

I was surprised to read about cars that can drive themselves. To me, it sounds like something from a futuristic movie, not real life. I understand why some people would like to own a driverless car, but I don’t agree that they are the cars of the future for two reasons. First of all, I personally think that people would prefer to be in control when driving. People know that they are better at reacting to unexpected situations than a machine. They would feel terrible if their driverless car caused an accident that they could have avoided if they were in control. Also, I think people would worry about the car’s computer making mistakes. Computers can shut down, get viruses, and have errors. Nobody wants to experience these problems when they drive.

1. Which sentence summarizes the main idea of the reading?

2. Read these sentences from Reading 1. Write the sentences from the model on page 72 that summarize them.

a. The sensors can “see” turns, red lights, stop signs, and other cars. Its computer uses GPS and other data to drive the car safely to its destination.

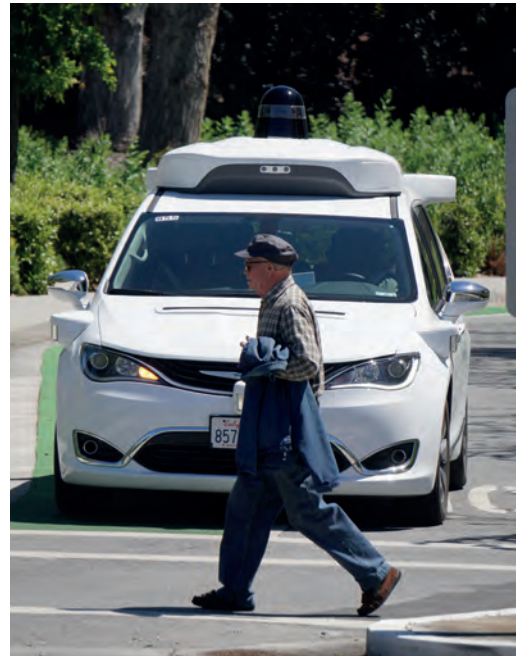
b. In addition, if an accident does occur, who is to blame? Do you blame the driver? The car? The car manufacturer?

c. In the end, consumers will decide if driverless cars are to become the cars of the future.

3. Does the writer of the model summary have a positive or negative reaction to driverless cars? How do you know?

4. What reasons does the writer give to support his or her opinions?

5. Do you agree with the writer?
Why or why not?



B. RESTATE Answer the questions to gather ideas for your summary paragraph about Reading 2. Write complete sentences.

1. Why are governments around the world supporting tablet education?

2. Why are teachers in favor of using tablets?

3. How have tablets affected students' test scores?

4. What are some disadvantages of students using tablets?

5. What will students, teachers, and parents need to do to make tablet education successful?

6. How does the author feel about the idea of putting tablets in all schools in the future?

C. EVALUATE Answer the questions to gather ideas for your personal response paragraph about Reading 2. Write complete sentences.

1. What is your personal reaction to using tablets in schools?

2. Is your reaction positive or negative? Why?

3. Do you agree with the author that tablets could better prepare students for future jobs in science and technology? Why or why not?

iQ PRACTICE Go online for more practice with writing summaries and personal responses. *Practice > Unit 3 > Activity 10*

GRAMMAR Parallel structure

Parallel structure means using the same word form or grammatical structure to list ideas that come in a sequence. Using parallel structure makes your writing clearer and more effective. Use the conjunctions *and*, *but*, and *or* to connect parallel ideas. Look at the examples of parallel and nonparallel structures.

Parallel: Now students are taking tests *and* quizzes on their tablets.

noun noun

Not parallel: Now students are taking tests and there are quizzes on their tablets.

Parallel: Machines make our coffee *and* clean our dishes.

verb verb

Not parallel: Machines make our coffee and our dishes are cleaned.

Parallel: People can tell the car to drive cautiously *or* aggressively.

adv. adv.

Not parallel: People can tell the car to drive with caution or aggressively.

iQ RESOURCES Go online to watch the Grammar Skill Video.
Resources > Video > Unit 3 > Grammar Skill Video

A. IDENTIFY Read these sentences from the readings. Underline the parallel structures and identify the word forms. Circle the conjunctions.

1. Robots do the vacuuming, mop the floors, and mow our yards hands-free.

2. Sensors built into cars sound an alarm if drivers get too close to a person or another vehicle.

3. They might not recognize when a police officer tells traffic to stop or pull off the road.

4. More schools are using tablets instead of paper or books.

5. Students can also email or text their teachers for help.
6. Other times, Internet connections are slow or stop working.
7. But, if students, parents and teachers can work together, the “classroom without walls” could become the classroom of the future.

B. COMPOSE Combine each pair of sentences into one. Use *and*, *but*, or *or* and parallel structure.

1. They are not listening to their teacher. They are not taking notes in their science journals.

They are not listening to their teacher or taking notes in their science journals.

2. They turn their designs into a presentation. They share them on their screens.

3. After they complete their assignments, some students end up playing a game. Some students end up texting a friend.

4. Do you blame the driver? Do you blame the car? Do you blame the car manufacturer?

5. Drivers can make bad judgments. They can get sleepy. They can run red lights.

6. Driverless cars are already on the roads. They could soon end up at a dealer near you.

iQ PRACTICE Go online for more practice with parallel structure.

Practice > *Unit 3* > *Activities 11–12*

UNIT ASSIGNMENT Write a summary and a personal response paragraph

OBJECTIVE ►

In this assignment, you are going to write two paragraphs. In the first paragraph, you will write a summary of Reading 2. In the second paragraph, you will write your personal response about the use of tablets in the classroom. As you prepare your paragraphs, think about the Unit Question, “How has technology affected our lives?” Use information from Reading 1, Reading 2, the unit video, and your work in this unit to support your paragraphs. Refer to the Self-Assessment checklist on page 78.

iQ PRACTICE Go online to the Writing Tutor to read a model summary and personal response paragraph. *Practice* ► *Unit 3* ► *Activity 13*

PLAN AND WRITE

A. BRAINSTORM Follows these steps to help you gather your ideas.

1. For your summary paragraph, write the main idea of Reading 2 in your own words.

Main idea: _____

2. For your personal response paragraph, write your thoughts about schools using tablet-based instruction. Think about these questions as you write:
 - Are there ideas or opinions that you agree or disagree with?
 - Do you think the school tablet experiment will work?
 - Did anything in the reading surprise you?

B. PLAN Follow these steps to plan your paragraphs.

1. For your summary paragraph, look at the sentences you wrote in Activity B on page 74. Circle the details that support the main idea.

iQ RESOURCES Go online to download and complete the outline for your summary paragraph. *Resources* ► *Writing Tools* ► *Unit 3* ► *Outline*

2. For your personal response paragraph, look at the sentences you wrote in Activity C on page 74.

iQ RESOURCES Go online to download and complete the outline for your personal response paragraph. *Resources* ► *Writing Tools* ► *Unit 3* ► *Outline*

C. WRITE Use your planning notes to write your paragraph.

1. Write your summary paragraph first. Then write your personal response paragraph.
2. Look at the Self-Assessment checklist below to guide your writing.

iQ PRACTICE Go online to the Writing Tutor to write your assignment.

Practice > Unit 3 > Activity 14

REVISE AND EDIT

iQ RESOURCES Go online to download the peer review worksheet.

Resources > Writing Tools > Unit 3 > Peer Review Worksheet

A. PEER REVIEW Read your partner's paragraphs. Then use the peer review worksheet. Discuss the review with your partner.

B. REWRITE Based on your partner's review, revise and rewrite your paragraphs.

C. EDIT Complete the Self-Assessment checklist as you prepare to write the final draft of your paragraphs. Be prepared to hand in your work or discuss it in class.

SELF-ASSESSMENT	Yes	No
Does the summary paragraph give the main idea of Reading 2 and include supporting details?	<input type="checkbox"/>	<input type="checkbox"/>
Does the personal response paragraph include reasons for the writer's opinion?	<input type="checkbox"/>	<input type="checkbox"/>
Are parallel structures used correctly?	<input type="checkbox"/>	<input type="checkbox"/>
Is there a variety of synonyms used?	<input type="checkbox"/>	<input type="checkbox"/>
Do the paragraphs include vocabulary from the unit?	<input type="checkbox"/>	<input type="checkbox"/>
Did you check the paragraphs for punctuation, spelling, and grammar?	<input type="checkbox"/>	<input type="checkbox"/>

D. REFLECT Discuss these questions with a partner or group.

1. What is something new you learned in this unit?
2. Look back at the Unit Question—How has technology affected our lives? Is your answer different now than when you started the unit? If yes, how is it different? Why?

iQ PRACTICE Go to the online discussion board to discuss the questions.

Practice > Unit 3 > Activity 15



TRACK YOUR SUCCESS

iQ PRACTICE Go online to check the words and phrases you have learned in this unit. *Practice* > *Unit 3* > *Activity 16*

Check (✓) the skills you learned. If you need more work on a skill, refer to the page(s) in parentheses.

- CRITICAL THINKING** I can identify advantages and disadvantages. (p. 61)
- READING** I can take notes. (p. 62)
- VOCABULARY** I can recognize and use synonyms. (p. 70)
- WRITING** I can write a summary and a personal response. (p. 72)
- GRAMMAR** I can use parallel structure. (p. 75)

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- OBJECTIVE** ▶ I can gather information and ideas to write a summary and a personal response paragraph about how technology has affected our lives.
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