Scope and Sequence

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1 The Internet

Warm-up

A Work with a partner. Look at the pictures and discuss the questions.

a.

b.

c.

d.

1. How often do you use the internet each day?
2. What types of devices are required for people to use the internet in their home?
3. Name as many business activities as you can that rely on the internet.
4. How would you find information if you lost access to the internet for an extended period of time?

B Match the pictures to the correct statements.

1. _____ An internet router is needed in my house so that my family has Wi-Fi access.
2. _____ There is a network in the city that connects businesses together over the internet.
3. _____ People use social media to connect with each other, and they can do it with their smartphones.
4. _____ Many businesspeople use their office computers to contact clients via voice calls and video conferences.

Vocabulary

A Below are words related to the internet. Listen and repeat them.

invent	security	communicate	network	unique	revolution
online	device	monitor (v.)	collectively	sensor	efficiently

B Match the words with their definitions.

invent	security	communicate	network	unique	revolution

1. _____ a major event that changes the way things are done
2. _____ to come up with something new
3. _____ safeness; freedom from danger
4. _____ to cause information to be passed between people or things
5. _____ being unlike other people, places, things, or ideas
6. _____ a connected system resembling a web or net, usually used for communication

C Complete the sentences with the correct words. Change the form of the words if necessary.

online	device	monitor (v.)	collectively	sensor	efficiently

1. My electric car has a(n) _____ that lets me know when there is something in front of the car.
2. My smartphone is the most important _____ that I own, and I use it to do so many things.
3. These students _____ make up the graduating class of 2023.
4. While I was in the hospital, machines _____ things like my blood pressure and heart rate.
5. The internet allows people to search for information very quickly and _____.
6. If you want to order food for delivery, we can do it _____ with my smartphone.

Reading 1

A Read the article about the history of the internet.

The Origin of the Internet

Today, the internet is something that most people take for granted. However, the reasons for its origin might surprise you. Rather than being created for all of the things we use it for now, it was invented[1] because of national security[2] in the United States during the Cold War. The idea was to provide a secure way for
5 the US armed forces to communicate[3] in case of a nuclear war.

Back in the 1950s, computers were very large, expensive machines. Their size alone made it necessary for buildings to have separate rooms to store them in! Because of this, there weren't many computers available for people to use, and those
10 who needed them often had to travel long distances to use them.

Around 1964, an engineer named Paul Baran came up with an idea to create a network[4] where computers could communicate with each other. However, his idea was unique[5] in that there would be no central point in the network. All of the computers
15 could communicate with any other computer on the network. If any one computer was taken out in a nuclear strike, it would not affect the others' ability to communicate.

In 1965, two computers in different locations were able to communicate with each other for the first time. Jump ahead thirty years to 1995, and the internet revolution[6] was already taking place. We now use the internet for practically everything!

B Choose the correct answer for each question.

1. What was the reason for the invention of the internet?
   a. To create a very large market for shopping online
   b. To allow businesses to communicate with each other easily
   c. To allow the US military to communicate in case of nuclear war
   d. To keep the US military from being a victim of a nuclear strike

2. In what year did two computers first communicate with each other?
   a. 1950   b. 1964   c. 1965   d. 1995

3. What is a group of computers that are all connected together called?
   a. A network   b. A revolution   c. A monitor   d. A strike

4. What can be inferred from this reading?
   a. The internet was used regularly in the 1960s.
   b. People today rely on the internet for many things.
   c. The internet revolution was a very violent event.
   d. The physical size of computers hasn't changed much over the years.

Language Focus

The **passive voice** is used when the writer or speaker does not know or want to emphasize the person or object doing an action. Instead, the person or object being acted upon is more important.
To form the passive voice, begin the sentence with the object from the active voice sentence. Use the correct form of the verb *to be* along with the past participle of the action verb used in the active voice to form the passive.

Example:
- During the Cold War, the United States invented the internet because of national security. (Active voice)
  → The internet *was invented* because of national security in the United States during the Cold War. (Passive voice)

Rewrite the following sentences from the active voice into the passive voice.

1. The engineer created a new device.
   _____

2. The technician fixed the problem with my computer.
   _____

3. The internet provides a lot of information for students.
   _____

Reading 2

 A **Read the article about the internet of things (IoT).**

The Internet of Things

We use our smartphones to communicate with our friends and family, play games, get information, and even shop **online**[7]. While these pocket-sized **devices**[8] keep us connected, we are also surrounded by other devices that are also connected to the world and are constantly **monitoring**[9] it. All these devices are **collectively**[10] known as the internet of things (IoT).

5 What are these IoT devices? Some of them are not widely known about or even noticed, such as implants that monitor people with heart problems and special devices that keep track of animals on farms. Others are right in

10 front of us every day, from smart watches to many of the electric cars on the road.

The way these devices work is through the use of **sensors**[11]. Just as we can hear and see as we move about the world, these

15 devices can also detect temperature, actions, locations, and even images. As they take in information, they share that data in real time. Most of the time, this is done without any input from people.

How does this benefit people directly? Well, smart sensors in our homes allow things to be to

20 be run very **efficiently**[12] so that energy isn't wasted. For example, home heating or air conditioning can be turned off automatically when we leave, and then turned back on before we arrive home from work. If you forget where you parked your car, the IoT can help you find it. And if the milk in your refrigerator runs low, it can even order bottles of milk for you.

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As the IoT continues to expand, we will likely begin to see it almost everywhere. It can benefit farmers by monitoring their crop's growth, and it can also benefit the planet by reducing energy consumption.

B **Choose the correct answer for each question.**

1. Which IoT device is less commonly known, according to the article?
   a. Smartphone   b. Electric car   c. Heart monitor   d. Air conditioner

2. What do IoT devices use to collect data?
   a. Watches   b. Sensors   c. Data   d. Vehicles

3. Which of the following statements is NOT true?
   a. IoT devices can be used to track farm animals.
   b. Heaters cannot be considered IoT devices.
   c. Electric cars can give drivers information about recharging batteries.
   d. IoT devices can provide useful data in real time.

4. What can be inferred from this article?
   a. All new homes being built will use IoT technology.
   b. The IoT can help people run their lives more efficiently.
   c. Most IoT devices are very expensive, but the prices are dropping.
   d. People who use IoT devices tend to be more knowledgeable about technology.

Language Focus

The verb **keep** can be a main verb, an auxiliary verb, and a phrasal verb in a sentence. When used as an auxiliary verb, it is used to describe an action that is continuing.

1. *Keep* as a main verb
   • I always *keep* my smartphone in my pocket.   • I *kept* the food in the refrigerator.

2. *Keep* as an auxiliary verb
   • *keep* + V-ing: *keep* snowing, *keep* flying, *keep* eating, etc.
   • *keep* + something + V-ing: *keep* the car running, *keep* the ball rolling . . .
   • *keep* + somebody + V-ed: *keep* us connected, *keep* me satisfied . . .

3. *Keep* as a phrasal verb
   • *keep* out   • *keep* off   • *keep* in   • *keep* away
   • *keep* track of   • *keep* count of

Fill in the blanks with the correct phrase. Change the form of the verb *keep* if necessary.

keep track of	keep	keep away	keep running	keep occupied

1. We _____ our clothes dry by putting them in the tent.
2. _____ from that wild animal so you won't get bitten by it.
3. This website _____ the number of visitors that come to it.
4. _____ the machine _____ while I check it for problems.
5. Pictures books _____ the children _____ during the long car ride.

Listening

05 **A** **Listen to the conversation.**

Tom: What were you just doing on your phone?

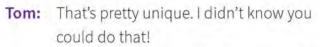**Jane:** I was monitoring the camera at the front door of my home.

Tom: Really? You can do that?

Jane: Yes! It's a great security feature of my house.

Tom: So you can access the camera online?

Jane: Yes. Someone rang the doorbell, and when that happens, the camera communicates with me. It was just someone delivering a package.

Tom: That's pretty unique. I didn't know you could do that!

Jane: Really? I'm surprised. You've heard of the internet revolution, haven't you?

Tom: Of course I have, but I thought that was just smartphones and computers.

Jane: Not at all! Lots of the devices in my house are connected to my home network. When I'm away, I can access these devices, or they can send me information automatically.

Tom: What's that called?

Jane: Well, the devices that connect to the internet this way are collectively known as the internet of things.

Tom: That's really cool. How does your camera know when someone is at the door?

Jane: It has a motion sensor, so it knows when a person is there. However, I only have it communicate with me when someone rings the bell.

Tom: I'll bet the person who invented that has made a lot of money!

Jane: I'm sure. The whole idea, though, is that IoT helps me run my busy life more efficiently.

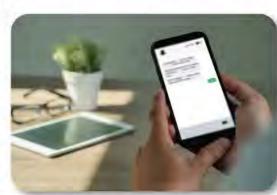**Tom:** I should look into it, too. I need all the help I can get!

B **Circle *True* or *False* for each statement.**

1. The woman was shopping for something online.   **True / False**
2. The man can access his front door camera from his smartphone.   **True / False**
3. The man does not know very much about IoT.   **True / False**
4. The woman has many devices connected to her home network.   **True / False**
5. The front door camera has a sensor that detects heat.   **True / False**
6. Some of the devices the woman has send her information automatically.   **True / False**

Listening Exercises

06 **A** **Listen and choose the statement that best describes each picture.**

1.

2.

07 **B** **Listen and choose the best response for each question or statement.**

1. a. Yes, my air conditioner is connected to Wi-Fi.
   b. No, the cameras are not working now.
   c. I can check online to see if they have any.

2. a. The camera doesn't show anybody.
   b. Let's ring the doorbell.
   c. I locked the door already.

3. a. No, I'm not at home right now.
   b. I don't work remotely anymore.
   c. Yes, I can do it from my smartphone.

4. a. No, I don't like waiting in line.
   b. Yes, I search the internet daily.
   c. Sure, they play games on the internet.

Discussion

Work with a partner. Discuss and find out what these terms mean. Then, tell each other which devices you think are the most useful for your daily life.

TCP/IP:	HTTPS:
URL:	VPN:
cloud computing:	wearable technology:
asset tracking:	big data:
The most useful devices for my daily life are:	