Unit 1. Heritage Sites and Satellites

(1) Satellites are objects that are made and put into space by people. They collect, (2) receive, and send (3) information, (4) including pictures. Satellite images of (5) Earth are used by (6) archaeologists to find important (7) heritage sites. These images make finding and (8) protecting these sites much easier.

Archaeologists study the (9) history of humans. They look for (10) objects left in the ground by people in the past. These are often (11) bones, tools, and works of art. Researchers often find these things at heritage sites. Heritage sites are places that were very important to a (12) culture of the past. Over time, the weather (13) damages these areas, and people build over them. They are covered up and (14) forgotten, so they are hard to find. Satellites images help archaeologists to find heritage sites. They look for changes in the land that don't seem (15) normal. Once they find those (16) spots, they can study them.

Satellite images also help experts protect sites from robbers. From 2002 to 2013, archaeologist Sara Parcak and her team looked at satellite images of (17) Egypt. They found more than 250,000 (18) holes in the ground. People had dug the holes looking for (19) valuable things to steal. Satellite images help show when and where the holes were made, so (20) experts know which sites to protect.

Unit 2. Mysteries of the Past

Experts on (1) ancient cultures have learned many things about the past. However, they have not been able to (2) explain some ancient (3) mysteries.

The Nazca Lines are (4) enormous (5) drawings of (6) patterns, animals, and other shapes. They are (7) located on the (8) ground of a high (9) desert in Peru. Someone made them long before airplanes were (10) invented. However, they are so big that they are best seen from high in the air. In fact, (11) modern people first (12) noticed them in the 1920s when airplanes began flying over the area. Today, we still are not sure who made the Nazca Lines and why.

Puma Punku is a (13) monument in Bolivia made of cut (14) stones. It was built no later than about 600 CE. The very large stones fit perfectly together like a (15) puzzle. Some have right (16) angles and are as (17) smooth as glass. They look like they were cut by modern machines or lasers. This is quite an (18) achievement for the time. The monument shows a deep understanding of stone-cutting and geometry. It is still (19) unknown how the stones were cut and moved.

Many researchers have (20) attempted to answer the questions that remain about these sites. However, none have been able to prove that their ideas are right. Maybe one day, we will know the truth.

Unit 3. The Oldest Game

Archaeologists have found (1) paintings and writings that tell us about many ancient games. A few of these are similar to games people still play. (2) Examples include (3) checkers and chess. But there is one old game that is (4) truly (5) unique. It is called Go.

Go comes from the Japanese. Two players (6) place (7) stones on a (8) board. They try to (9) capture the other player's stones. The Chinese call this game Weiqi. The history of Weiqi in China goes back over 2,000 years.

Some (10) scholars (11) believe it is 4,000 years old. Over time, the game (12) spread to Korea, and then it (13) reached Japan around 700 CE. However, Go really became (14) popular in Japan only in the 1600s. At that time, four Go schools were built. Students from these schools (15) competed in (16) national competitions. The Japanese leader at the time, the (17) Emperor, named the winner the Go (18) Minister for a year!

Today, Go is still played all over the world. Two astronauts, one American and one Japanese, even played it in space. Go's long history is why it is so special. It is thought to be the oldest board game that people have (19) continuously played up to the (20) present day.

Unit 4. The Dead Sea Scrolls

Around 1947, some boys were (1) taking care of their (2) goats in the desert near the (3) Dead Sea, which is between Israel and Jordan. One of the boys (4) climbed up a (5) hill to look for a (6) missing goat. He saw a (7) cave and thought the goat was inside, so he (8) threw a (9) rock into the cave to make it come out. The rock made a (10) strange sound inside the cave. It (11) sounded like something breaking, so the boys went into the cave to look. They thought they might find something (12) important, and they were right.

The boys saw that the rock hit one of (13) several large (14) jars. Inside the jars, they found seven very old (15) scrolls* with writing on them. Archaeologists (16) figured out that the scrolls had been written about 2,000 years before. People looked in many other caves (17) nearby, and they found more scrolls in eleven different caves.

Over time, more than 600 scrolls were found. Researchers think the scrolls were written between 200 BCE and 200 CE. Many scholars from all over the world study these ancient (18) treasures even today. The Dead Sea Scrolls, as they are called, help us understand (19) events that happened (20) long ago.

Unit 5. Rising Sea Levels

(1) Climate change is (2) causing (3) islands to (4) disappear. As the Earth warms, ice (5) melts and (6) flows into the sea. Sea (7) levels (8) rise. This is a huge (9) problem for island (10) nations because they are close to sea level. Some islands are already (11) decreasing in size. They are beginning to (12) sink (13) beneath the water.

Scientists say the seas have risen by about six centimeters since 2000. This may not seem like a large amount. However, if a big hurricane happens, waves rise even higher. This (14) affects lands near sea level by causing (15) floods.

In the western (16) Pacific Ocean, at least eight (17) tiny islands have already disappeared. Rising sea levels, along with land being worn away by water and wind, are now (18) threatening other nearby islands. The Maldives, in the Indian Ocean, is also at risk (19) due to sea level rise. Around 1,200 coral islands make up the Maldives. If the water rises just one meter, these tropical islands will disappear.

When islands sink, people are forced to move to other, higher islands. Some nations are even buying land in different countries where their people can move. This threat caused by sea level rise is (20) serious. Only time will tell what the future will hold for these island nations.

Unit 6. A “Must-See” of India

The BBC, a news (1) channel in England, asked its (2) viewers to (3) suggest places around the world that people (4) must see before they die. From the suggestions, the BBC (5) made a list of the top fifty places. Of course, the Taj Mahal is on the list. It is (6) number ten. There is a different place in India that was higher on the list. It is the (7) Golden Temple in the city of Amritsar. It was number six.

The Golden Temple sits in the middle of a small lake, which is a (8) special place to Sikh Indians. The city’s name, Amritsar, means “(9) pool of honey.” A Sikh (10) legend says that during a great (11) battle near the pool, a (12) bottle of honey was sent down from the (13) sky. The (14) soldiers drank this (15) liquid, and it gave them the (16) strength to keep fighting.

Seeing the Golden Temple is an amazing (17) experience. For one thing, it is truly golden. The walls of the temple are made of marble covered with thin (18) sheets of copper and gold. There are also many (19) jewels covering various parts of the temple. Tourists are welcome to go inside and enjoy its beauty. They only need to show respect for the temple and the people who (20) worship there.

Unit 7. The Amazon

The Amazon is a (1) rainforest that (2) covers a large part of (3) South America. No other place in the world has such a (4) variety of plants and animals. (5) In fact, most living things on Earth (6) depend on the Amazon in some way.

This rainforest has the largest number of plant species in the world. In just three (7) acres of rainforest, you can find over 750 kinds of trees and 1,500 other kinds of plants. Because of all this plant life, the Amazon rainforest has been called the "(8) lungs of our (9) planet." It makes more than 20 percent of the (10) oxygen the Earth needs. (11) In addition, 25 percent of all (12) medicines are made from rainforest plants.

The Amazon River makes it (13) possible for so much life to (14) survive. It is the second longest in the world and flows from the Andes (15) Mountains to the Atlantic (16) Ocean. The mouth of the Amazon River is over 320 kilometers (17) wide! With all this water, it is not (18) surprising that the river also has a large number of water (19) creatures. There are more than 5,600 species of fish in the river, which means the Amazon is home to the biggest variety of (20) freshwater fish in the world.

Unit 8. The Kingdom of Bhutan

Bhutan is a tiny but very special (1) nation in the Himalayan Mountains. It has a (2) population of around 820,000 people. Its name means “high land.” However, many people in Bhutan call it “Druk Yul,” meaning “land of the (3) thunder (4) dragon.”

Bhutan has a king. The King of Bhutan is very (5) strict. (6) For example, the (7) country (8) limits (9) visitors from other nations so it can keep its (10) traditional way of life. Very few people can visit Bhutan. Other (11) rules are about what people wear. Those who work for the country or in schools must wear the national clothing. Women wear an (12) ankle-length dress. The traditional dress for men is a knee-length (13) robe, tied at the waist. Traditional (14) scarves are also worn by men. You can usually tell a man’s (15) position by the color of his scarf. For example, (16) judges wear green ones.

For a long time, people in Bhutan were not (17) permitted to watch television or use the internet. Bhutan was one of the last countries in the world to get television. In 1999, the King said that having television was needed to help make Bhutan more modern. He also said it was important for the country’s (18) happiness. Bhutan (19) certainly is a (20) unique place.

Unit 9. The Water Cycle

Where does your water come from before it (1) arrives in your home? Is your (2) glass of water (3) as new as this morning or as old as the (4) dinosaurs? Is it even older that the dinosaurs? Water on our (5) planet is (6) constantly moving around and around, like a (7) wheel turning. This is called the water (8) cycle, and it has no (9) beginning (10) or (11) end.

The (12) process begins with the (13) oceans, which are the (14) largest bodies of water on Earth. In the first part of the cycle, the sun (15) heats the water on the ocean's (16) surface, and then the warm water (17) evaporates into the air. The water in the air (18) eventually comes together to form very large clouds, and wind then moves the clouds over land. When clouds finally meet cold air, the water comes down (19) in the form of rain or snow. Some of this rainwater will stay on the land, but most of the water goes down into rivers and (20) streams. Finally, it goes back to the oceans, where the process begins again.

The water cycle is billions of years old. So think again about the age of that water in your cup! It's much older than you many have thought.

Unit 10. Weather Control

Bad weather can (1) spoil people's (2) outdoor plans. More importantly, too much or too little rain often causes huge (3) damage and (4) loss of life. So (5) scientists have long been testing ways of (6) controlling the weather. The most common (7) technique is called "cloud (8) seeding."

(9) Imagine scientists want to create rain in a dry (10) region. First, they (11) select the place and time. Then, using airplanes, they (12) spray small (13) pieces of material such as dry ice into clouds. If (14) successful, this causes (15) raindrops to form and rain to fall. In 1947, U.S. scientists seeded clouds to help (16) put out a (17) forest fire.

(18) Since then, the technique has been tried around the world. Sometimes the goal is to prevent rain from spoiling an event. Chinese (19) officials wanted the Beijing Olympics to be rain-free because the Olympic stadium had no (20) roof. In 2016, Russian scientists wanted to prevent rain on the May Day holiday. In both countries, they seeded clouds before the big events, so the sun would shine at the right time.

Cloud seeding does not always work. Sometimes there are no clouds, or the clouds are too thin. But when it succeeds, it is an exciting way for people to save money and lives by taking control of the weather.

Unit 11. Weird Weather

You may have heard the (1) phrase “raining cats and dogs.” This means that it is raining (2) heavily. But have you ever heard the phrase “raining frogs?” The people in Odzaci, Serbia, are now very (3) familiar with this phrase.

On a Sunday (4) afternoon in June 2005, the people of Odzaci knew a (5) storm was coming. However, when the wind (6) brought the storm clouds over their town, they didn’t get rain. (7) Instead, (8) countless (9) frogs fell from the sky!

The people were very surprised by this (10) strange weather. However, (11) according to weather scientists, this kind of weather is not so (12) unusual. In fact, there have been stories of raining frogs for hundreds of years. Scientists think that this is caused by (13) tornadoes. As a tornado (14) passes over water, it (15) sucks up the frogs living there. Then, as it passes over land and starts to lose (16) energy, it lets go of the frogs. This does not only happen to frogs. There have been (17) reports of everything from fish to ants, and even (18) turtles and ham (19) sandwiches.

So the next time someone says it’s raining cats and dogs, you’d better (20) check to see what they mean!

Unit 12. The Blue Sky

On a (1) clear day, the sky looks (2) bright blue. But in the early (3) evening, it looks red and orange. The color of the sky (4) depends on the time of day, your (5) location, and the weather.

Light comes to Earth from the Sun. The blue color you see on a clear day is (6) caused by blue light (7) waves coming through the air. The air is a (8) mix of small (9) gas particles and other, bigger particles like (10) dust, ash, and salt from oceans. Particles (11) absorb and (12) reflect some light waves more than others. Blue light waves are shorter and smaller. (13) During the day, when sunlight is more (14) direct, blue waves are absorbed by particles. Then they are (15) quickly reflected in all (16) directions. This (17) prevents us from seeing other colors, making the sky look blue.

In the evening, sunlight is less direct, so light waves have to (18) travel farther through the (19) atmosphere to reach our eyes. The blue light waves have been reflected away before they reach us. This lets the longer yellow and red light waves through, making a yellowish-red (20) sunset. There are a lot of salt particles in the air over oceans. They absorb and reflect red and yellow light waves. That is why you can see beautiful sunsets at the beach.

Unit 13. The Best Second Language

Today, there are (1) nearly seven thousand languages spoken. Being able to speak more than one language is certainly a useful skill. Choosing which (2) foreign language to learn depends on what you hope to gain.

If you want a larger (3) connection with the world through travel, English may be the best choice. It is the top language for (4) international (5) communication. If you add (6) native and non-native speakers, English is spoken by 1.5 billion people worldwide. However, English (7) spelling and (8) grammar can be (9) confusing.

One-sixth of the world's people are native speakers of Chinese- and not just in China. Chinese speakers live all over the world, (10) especially in Southeast Asia. Knowing this language is becoming more useful in (11) business and the sciences as China (12) increases in (13) influence. Chinese has two main (14) disadvantages: It has many different (15) dialects, and it is (16) difficult to write.

Spanish has more native speakers than English. It is also one of the most popular choices for learners. One reason may be its (17) fairly simple grammar. Knowing Spanish also opens up parts of Europe as well as Mexico and (18) Central and South America.

What do you want to do in the future? Which language will help you reach your goals? (19) Consider these questions, and make the best (20) decision for you.

Unit 14. Words from Greek Myths

Over time, different languages are used for communication between nations. Greek is not a (1) major (2) international language today. But it once was, and it left a (3) lasting influence on European languages.

From about 120 BCE to 1450 CE, (4) trade flowed along the (5) Silk Road. This was the trade (6) route connecting Asia and (7) Africa to (8) Europe. The gate into Europe was Greece. Knowing Greek became (9) essential for traders. As goods traveled across Europe, so did the Greek language.

(10) Legends and (11) myths from Greece spread as well. Stories such as The Odyssey, about a Greek man who went on a long and difficult (12) trip, and (13) characters (14) such as Hercules, a strong man who was (15) part god, became (16) well known. Words from Greek myths began (17) appearing in the (18) common languages of Europeans. We can still see some examples in English today. If you're starting a long journey, you're starting and "odyssey". A delicious drink is called "nectar," the drink Greek gods enjoyed. And a "Herculean task" is one that would be challenging even for Hercules.

(19) Eventually, traders stopped traveling over land on the Silk Road and began using ships. Greek became less important. Local languages became more popular. But the words from Greek myths (20) remained.

Unit 15. A New Language for the World

hen people of different cultures can (1) speak the same language, it leads to better understanding. It can mean a greater chance of (2) existing together (3) peacefully. However, trying to decide on a worldwide common language has (4) actually caused a lot of (5) arguments. Too many people (6) strongly prefer their (7) own language.

Dr. L. L. Zamenhof thought the best (8) solution would be for everyone to learn a new language. He decided to (9) invent one himself. Dr. Zamenhof wanted the new language to be very (10) logical. This would make it very easy to learn. He also wanted it to (11) express the (12) full range of (13) human emotions. He believed that this would allow people of different cultures to communicate with one another. (14) At the same time, they could keep their (15) original languages and their (16) pride. No one would feel that their native language was better than any other. The first book (17) describing the new language, called Esperanto, was published on July 26th, 1887.

Esperanto has achieved limited success. It is spoken by about two million people today. But many others are working toward Dr. Zamenhof's goal through computers and universal language programs. These (18) continue to get better and better. (19) Perhaps the world will still achieve the (20) peaceful existence that Dr. Zamenhof dreamed of.Nature is full of symmetrical objects. Look around you. What other examples of symmetry can you find?

Unit 16. A Family of Words

You have (1) probably noticed that Korean words like “kimchi” or Japanese words like “bonsai” are used in the English language. These are called (2) loanwords. A loanword is a word (3) taken from another language without (4) being changed much. Many languages have them. Words are often loaned because the thing or (5) concept named by the word is new to the speakers of the (6) borrowing language.

(7) For example, there is no English word for kimchi. This is because that food was not known in English-speaking countries (8) until fairly (9) recently. (10) Therefore, the word was borrowed from Korean. (11) Similarly, Korean borrowed “pizza” from English speakers, who had borrowed it from Italian.

Loanwords help (12) explain why there are many words with different (13) sounds from their (14) spellings in English. The loanword “ballet” is an example. You cannot hear the “t” sound in “ballet.” This word comes from French. In French the final “t” in a word is not (15) normally (16) pronounced.

Where do most loanwords in English come from? (17) According to one study, most come from French (29%), Latin (29%), and German (26%). The others come from Greek (6%), and then all other languages (10%). These other languages have (18) definitely given English a (19) richer (20) vocabulary.