

## Reading Future Create 2

### Unit 1. Heritage Sites and Satellites

Professor Sarah Parcak got her doctorate in archeology and Egyptology from Cambridge University. However, she did not have to go out and dig the ground up or go into the jungle or desert to find artifacts. She has been working on a project to confirm ancient relics<sup>1</sup> using infrared<sup>2</sup> satellite images since 2003. So far, the images have found 17 pyramids buried in the Nile River in Egypt. She said this in an interview with the BBC: "To excavate<sup>3</sup> a pyramid is the dream of every archaeologist. Space technology is making dreams come true. The new technology has given us an important perspective on the size of ancient monuments."

In traditional archaeology, it is difficult to know where to begin digging up artifacts<sup>4</sup> when the existence of the historical site has not been identified in any literature. However, using satellite infrared photography technology, it is now possible to selectively focus on, and excavate major sites. Egyptian authorities also say they will be able to find out where to focus their attention to use security measures to prevent artifacts from being stolen, so they will be able to protect historical sites more effectively.

Satellite archaeology is a new frontier in archaeology, also called satellite remote sensing. Professor Parcak is a pioneer in satellite archaeology. She went to the place where the pyramid was found by the infrared images and excavated the site to confirm its existence. She has found more than 1,000 tombs and 3,000 ancient dwellings buried underground, as well as in pyramids, and many of them have already been excavated, confirming the images are correct. The image used by Professor Parcak's research team is a picture taken from a satellite in orbit about 435 miles from Earth. This satellite is capable of capturing targets as small as 3 feet in diameter on the surface of the Earth.

Many of the sites excavated from the satellite's remote exploration were hard for archaeologists to get to. One of the most popular is the discovery of ancient Mayan civilizations in the Peten region of Guatemala. Peten is a mountainous and tropical area that was the most difficult to get to of the Maya's civilizations. NASA and a University of New Hampshire research team found Mayan sites in the middle of the jungle using the high-resolution Earth observation satellite 'IKONOS.' In 2008, Peru, with the help of satellite QuickBird, discovered a huge relic, a pyramid at the bottom of the Nazca River.

<sup>1</sup> relic: n. an object, tradition, or system from the past that continues to exist

<sup>2</sup> infrared: adj. describing light at the red end of the spectrum, which cannot be seen by human beings, and which gives out heat

<sup>3</sup> excavate: v. to dig a hole or channel in the ground, or to make a hole or channel by removing earth

<sup>4</sup> artifact: n. an object, such as a tool, that was made in the past

## Unit 2. Mysteries of the Past

Eduardo Herrán Gómez de la Torre, a pilot and researcher, flew over the Nazca Desert, in Peru. Beneath him, there were over 200 line drawings, covering a total area of 450 square kilometers, ranging from 80 meters of condors—a type of bird, 188 meters of lizards, long lines, geometric figures, spiders, and monkeys.

He assumed that the Nazca line he had discovered was probably the work of the ancient Paracas civilization, which lived in the area from 100 BCE to 800 CE. The Paracas civilization was famous for its fine arts and fabrics.

UNESCO said the Nazca lines, which stretch across 450km<sup>2</sup> of the Peruvian coast, was created between 500 BCE and 500 CE years ago. It is said to have been preserved because the area receives less than 0.4 inches in annual rainfall and has very little wind. The drawings, depicting animals, plants, and geometric shapes, make up the main forms. It is said that the forms were probably used in astronomical<sup>5</sup> rituals<sup>6</sup>.

However, Edward Ranney, a photographer whose forthcoming book, *The Lines*, centers upon the geoglyphs, suspects the designs may have served a different purpose. “Though their purpose is not definitively known, [the designs] clearly served a ceremonial purpose, and were continually used and recreated over several centuries, perhaps to honor sacred mountains and sources of water,” Ranney said in a recent interview with the art blog PetaPixel. “It was previously thought they were astronomically and calendrically aligned, which could be true in some cases, but now that idea is not widely accepted.”

But no one knows exactly why, when, or how the Nazca line was created.

Puma-Punku means “the door of Puma.” It is part of a large temple complex located in an alpine region at an elevation of 2,485 miles above sea level, 37 miles from the capital of Bolivia. It is believed to have been made between 536 and 600 CE. The stone is a mixture of red sandstone and andesite. Archeologists believe that it was once decorated with shining metals, colorful ceramics, and bright fabric, and used by priests for spiritual rituals.

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<sup>5</sup> astronomical: adj. connected with astronomy

<sup>6</sup> ritual: n. a set of actions or words performed in a regular way, often as part of a religious ceremony

### Unit 3. The Oldest Game

Baduk is a game in which two people compete to own a house. Players take turns placing the white and black stones on a square plate. A stone may be placed at 361 intersection<sup>7</sup> points on the grid that has 19 parallel lines running horizontally and 19 parallel lines running vertically.

The goal of the game is to enclose more space in your stones than the opponent<sup>8</sup> does. Rules are very simple, but they require very deep strategic thinking. It is a game that is estimated to require the highest intelligence among the various board games created by humans.

It is called 'Igo,' shorted to 'Go,' in Japanese, 'Weiqi' in Chinese, and 'Go' in English. Although China is the game's birthplace, it has been called 'Go,' from the Japanese language, since the 20th century because Europe and America mostly adopted East Asian civilizations through Japan. While Korean players are now known for their success in the game, Japanese baduk players first made their mark in the early days when baduk became popular overseas.

Although it is not known exactly when and where Baduk originated, it is estimated to have been introduced sometime between the 5<sup>th</sup> century and 7<sup>th</sup> century. It became popular in the form of pure baduk, gaining traction in Japan in the 1950s. Today, it is a popular pastime in East Asian countries, including Korea, China, Taiwan, and Japan, and is widely recognized as an Asian board game worldwide. The rules vary somewhat from country to country, and there are national competitions held in each country, as well as a world championship. Most of the world champions have come from Korea, China, and Japan.

It was adopted as an official sport at the 2010 Guangzhou Asian Games. In October 2015, there was a match between the world's greatest human professional player and AlphaGo, developed by DeepMind; just like the AI chess match between the world's best chess player and IBM's Deep Blue, the AI, AlphaGo, beat the human player.

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<sup>7</sup> intersection: n. a point or set of points where two lines cross

<sup>8</sup> opponent: n. a person you are competing against, esp. in politics or sports

## Unit 4. The Dead Sea Scrolls

The Dead Sea Scrolls refers to over 900 different religious texts, including the Hebrew Bible. The Scrolls were found in 11 different caves in the area called Qumran, east of Jerusalem, from 1947 to 1956, west of the Dead Sea. The date of these documents has great religious and historical value as they are estimated to be the second-oldest manuscripts of work from religious texts. It is the best copy of the Old Testament, and most of the documents are now kept in the Israel Museum in Jerusalem.

The first of the Dead Sea Scrolls were discovered between in November 1946 and February 1947, by a young, Bedouin shepherd, Muhammed edh-Dhib, who herded goats and sheep. The Dead Sea document was located approximately 125 meters away from Qumran's dwelling<sup>9</sup>, and pieces were then found strewn across 11 caves. No document has been found in any dwellings where people lived.

The most popular story is that the shepherd threw stones into a cave to find a lost animal, hitting a pot which broke, and there was a piece of parchment<sup>10</sup> in it. This was the moment when the Dead Sea document, called the greatest discovery in biblical<sup>11</sup> archaeology in the 20<sup>th</sup> century, was found.

It is estimated that the scrolls were created around 400 BCE to 50 CE. Therefore, they were hidden in caves for over 2,000 years; scientists say it is because the dry climate in this area that the scrolls survived in good condition.

The scrolls were brought to an antique merchant, Ibrahim 'Ijha, who then brought them to Bethlehem, to an archival market run by antique merchants. From there, they were acquired by an archaeologist and professor, E.L. Sukenik. Contained within the documents were the 'Isaiah Scroll,' the 'Habakkuk Commentary,' and the 'Community Rule.'

The Archbishop of St. Mark's monastery in the old city of Jerusalem looked at the documents and consulted Dr. John Trevor, a researcher at the American Schools of Oriental Research (ASOR), who said this after examining the documents: "I repeat that in my opinion you have made the greatest manuscript discovery of modern times—certainly the greatest biblical manuscript find. What an incredible find!"

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<sup>9</sup> dwelling: n. a place where people live

<sup>10</sup> parchment: n. the dried, pale skin of some animals which was used in the past for writing on, or a paper made to look like this

<sup>11</sup> biblical: adj. in or relating to the Bible

## Unit 5. Rising Sea Levels

The rise in sea levels is speeding up due to climate change and pollution, and it is a sign of a very serious disaster to come.

By 2100, the sea level on the California coast will be 120 inches higher, according to recent estimates using the amount of pollution being produced and the decreasing size of the glaciers<sup>12</sup>. This is 30 to 40 times faster than the rate of sea level rise experienced in the last century.

In fact, California residents are already suffering from the impact of rising sea levels, as floods destroy hundreds of miles of roads, railways, harbors, airports, power plants, wastewater treatment plants, coastal swamps, sand dunes, and beaches.

Another area which is under severe threat is the island of Tuvalu. Located in the South Pacific Ocean between Australia and Hawaii, Tuvalu is a small island nation with an average altitude<sup>13</sup> of less than 3 meters. Since 1993, the sea level has risen by more than 3.5 inches. Of the nine islands that make up the country, two islands have already been submerged<sup>14</sup>, and if rising continues, Tuvalu and its people may disappear into the ocean.

Part of the problem is that as the seawater becomes higher and higher, it becomes harder to find land to grow crops and harder to find sources of fresh drinking water. People have made efforts to avoid flooding by building a seawall and planting salt-resistant mangroves<sup>15</sup>. However, in 2013, it became a climate emergency, and a national crisis was declared; the people of Tuvalu began to immigrate to neighboring countries.

Including the Maldives, the largest resort on Earth, and the Republic of Kiribati, in the center of the Pacific Ocean, 44 island countries are on the verge of being submerged, lost beneath seawater. The Republic of Kiribati is said to have secured its first immigrant territory on the island of Fiji, which is over 1200 miles away from the country.

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<sup>12</sup> glacier: n. a large mass of ice that moves slowly over land, esp. down the side of a mountain, often moving rocks with it and changing the shape of the land

<sup>13</sup> altitude: n. height above sea level

<sup>14</sup> submerge: v. to go below the surface of an area of water

<sup>15</sup> mangrove: n. a tropical tree, found near water, whose twisted roots grow partly above ground

## Unit 6. A “Must-See” of India

Located in Punjab, northwest India, in the city of Amritsar, The Golden Temple is the largest Sikhistan shrine<sup>16</sup>. Covered in pure gold and weighing approximately 880 pounds, the BBC has placed The Golden Temple as a higher “must-see” priority than the Taj Mahal.

Also known as the ‘Darbar Sahib,’ The Golden Temple offers free, simple, vegetarian meals, as well as beds, to anyone. They do not care what religion or nationality people are. This is because Sikh ideals<sup>17</sup> are primarily to “respect the rights of all people, regardless of rank, gender, caste, class, color, or creed<sup>18</sup>.” Free meals are available 24 hours a day at a place called the ‘Free Kitchen,’ and you can sleep freely in The Golden Temple. Tea is also served 24 hours a day. There is no entrance fee; each person is free to donate any amount of money if they’d like.

Though there are no set rules to enter, guards may find you are inappropriately dressed and ask you to wear a ‘dhoti,’ a traditional men’s garment which is wrapped and knotted around the waist. It is also considered respectful to dress in humble clothes which do not draw attention with bright colors. This is because it may distract the ‘sangats,’ the religious men and women of the temple.

It is also best to wear light, flowing clothes to the temple, because the weather can be uncomfortably warm. And dress for modesty, covering your hair using a shawl, or chunni—a long scarf—and cover your skin out of respect.

Additionally, before entering, take off your shoes and socks and wash your feet under running water at the entrance. Your shoes are collected and checked by a temple worker. Enter the temple barefoot.

Amritsar, where the Golden Temple is located, is turning into a modern city. It has recently spent a great deal of money expanding its major roadways to grant visitors better access to the Golden Temple.

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<sup>16</sup> shrine: n. a place where people come to worship, usually because of a connection with a holy person or a mysterious religious event or object

<sup>17</sup> ideal: n. a principle or a way of behaving that is of a very high standard

<sup>18</sup> creed: n. a formal statement or system of esp. religious beliefs

## Unit 7. The Amazon

Covering about 40 percent of South America, the Amazon basin<sup>19</sup> is located in the countries of Brazil, Bolivia, Peru, Colombia, Ecuador, Suriname, and Venezuela. The basin is a wet area that drains into the world's longest river, the Amazon River. Most of the Amazon basin is covered by Amazonia – the Amazon Rainforest. It rises in the Andes Mountains; its highest point is mount Yerupaja, at 21,786 feet (6,635 m). It forms upstream in Peru, flows through Brazil, and into the Atlantic Ocean.

The Amazon is the world's largest, densest rainforest, covering over 2 million square miles. It accounts for about 30 percent of the Earth's forest and the 20 percent of the Earth's surface water.

The Amazon jungle is the largest source of oxygen in the world because of its vast amount of vegetation<sup>20</sup>. Plants use photosynthesis<sup>21</sup> to create a quarter of the Earth's total oxygen content; therefore, the Amazon is referred to as the “lungs of our planet.” The ecology of the Amazon basin is so massive that it is home to 20 percent of all plant species, 10 percent of animals, and 25 percent of birds worldwide. Accordingly, the Central Amazon Conservation Complex is listed as a UNESCO World Natural Heritage site.

However, the rainforest is rapidly disappearing because of human development, including both indirect causes, such as climate change, and direct damage, such as deforestation. Large amounts of deforestation, underground resource development, and agriculture have already wiped out 15 to 20 percent of the rainforest.

The Amazon's ecosystem is now facing a major threat, and if destruction continues, the rainforest could die out in as little as 172 years. This would have a tremendous impact on the global environment; if the Amazon rainforests are gone, the lack of oxygen will make it difficult for many creatures to survive, and the global temperature will rise sharply, as climate change intensifies<sup>22</sup> due to the increased carbon dioxide concentration in the atmosphere. The ice of the Arctic<sup>23</sup> and Antarctic<sup>24</sup> will melt even faster, the height of the sea will rise higher, and many parts of the land will disappear.

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<sup>19</sup> basic: n. the area of land from which streams run into a river, lake, or sea

<sup>20</sup> vegetation: n. plants in general, or the plants that are found in a particular area

<sup>21</sup> photosynthesis: n. the process by which a plant uses the energy from the light of the sun to make its own food

<sup>22</sup> intensify: v. to make something stronger or more extreme, or to become stronger or more extreme

<sup>23</sup> Arctic: n. the large and extremely cold area around the North Pole

<sup>24</sup> Antarctic: n. the very cold area around the South Pole that includes Antarctica and the surrounding seas

## Unit 8. The Kingdom of Bhutan

Bhutan is a country in the eastern Himalayas between China and India, in southern Asia. Its official name is the Kingdom of Bhutan. The country's name is derived from the Sanskrit word for 'end of Tibet,' and it is called 'Druk Yul'—Land of Thunder Dragon. Dzongkha, meaning the language of the fort, is the national language of Bhutan. Much of the country is mountainous<sup>25</sup>, sitting at more than 6,500 feet above sea level.

Visitors to Bhutan are limited because the Bhutan government is highly protective of their people's way of life. The number of foreigners who visit the kingdom annually is around 200,000. This is quite different from most countries, which encourage tourism to improve their economy. For comparison, the city of Seoul sees approximately 13.5 million tourists annually.

Bhutan is a country that uses an index of measurement called GNH (Gross National Happiness), instead of the usual concept of GDP (Gross Domestic Product), which is a monetary measure of a country's' goods and services. The Bhutan Kingdom is the happiest country in the world, but it is also the poorest. However, there are things the country of Bhutan values that the rest of the world may take into better consideration<sup>26</sup>.

1. Don't base your happiness on the value of money. This value is perhaps best illustrated by Bhutan's choice to measure their value as a country using the GNH system. The GNH Index gives values for such things as living standards, health and education, and cultural and mental wellbeing.
2. Bhutan does have a gap between the rich and the poor, but there is no large difference. There are no homeless people, orphanages<sup>27</sup>, or nursing homes in the kingdom. It also has free education and free medical care.
3. Don't dream of becoming a great power or a rich man. It is a common belief that great power leads to great corruption<sup>28</sup>, as one loses sight of what is truly important in the search for material goods and control.
4. Protect nature and do not rush for happiness. Bhutan's government stipulates<sup>29</sup> that forests constitute a minimum of 60 percent of its territory, and its people believe that trees are inhabited by natural spirits, so they protect and respect their forests.
5. Modern styled living destroys sustainability. Television, internet, and cell phones were introduced in Bhutan in the 2000s, but only in the capital and largest city, Thimphu. Gradually, television and internet are being introduced in other areas. As many young people leave the country to look for work in the city, Bhutan's appearance is gradually changing.

<sup>25</sup> mountainous: adj. having many mountains

<sup>26</sup> take something into consideration: phrasal v. to think carefully about a particular fact when deciding or judging something

<sup>27</sup> orphanage: n. a home for children whose parents are dead or unable to care for them

<sup>28</sup> corruption: n. illegal, bad, or dishonest behavior, especially by people in positions of power

<sup>29</sup> stipulate: v. to state exactly what must be done



## Unit 9. The Water Cycle

The Earth's water is always moving. It travels the Earth on a loop called the water cycle. The water cycle refers to the continuous movement of water that exists above and below the Earth's surface. It does not ever begin or end because it is always in motion, 'circulating.' In a sense, water is to the Earth as blood is to human beings.

Water comes in three different states: liquid, vapor<sup>30</sup>, and solid (ice). The amount of water in the system is always the same. The water cycle is important because the circulation prevents the land from getting hotter than necessary and also naturally creates fresh water, which every creature needs to survive.

The precipitation<sup>31</sup> (rain) which falls from the clouds to the surface moves through various paths. It is stored in the soil, transformed into water vapor through evaporation, and through plant tissues, and evaporates to return to the atmosphere. This process of transferring water from the land to the atmosphere is called evapotranspiration<sup>32</sup>. Some water soaks into the soil, but much precipitation is collected into rivers or streams by flowing over the surface of the earth, or else water leaks through the soil, underground.

The rainfall that penetrates through the soil goes groundwater through a process called infiltration. This groundwater fills underground spaces, and some of it evaporates or flows back to the surface. Surface water and groundwater move from high to low points under the influence of gravity eventually flow out to sea.

Once enough evapotranspiration occurs, the atmosphere is saturated with water vapor which condenses<sup>33</sup> into droplets<sup>34</sup> that fall in the form of rain. The water cycle continues, with vapor once more returning to the atmosphere through evapotranspiration.

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<sup>30</sup> vapor: n. a gas that escapes from a liquid or solid, esp. as a result of heating

<sup>31</sup> precipitation: n. water that falls from the clouds toward the ground, esp. as rain or snow

<sup>32</sup> evapotranspiration: n. the process in which water moves from the earth to the air from evaporation (= water changing to a gas) and from transpiration (= water lost from plants)

<sup>33</sup> condense: v. to make a text shorter by using fewer words to express the same idea

<sup>34</sup> droplet: n. a very small drop of a liquid

## Unit 10. Weather Control

Can one make it snow and rain at will? Not exactly. But there is technology which can artificially control the weather. 'Weather' refers to the phenomena occurring in the atmosphere, it is not the same as 'climate,' which refers to the likelihood<sup>35</sup> of atmospheric phenomena occurring in a specific period and region. Rain, clouds, fog, hail and other atmospheric phenomena are 'meteorological phenomena', or 'weather,' whereas a region such as Florida, U.S., has a warm, humid, sunny 'climate.'

Weather modification techniques stem from<sup>36</sup> the desire of humans to improve our agricultural gains—the amount and quality of crops produced. As the age of agriculture began, weather became an important factor in human life, and 'climate science' became active after the 16<sup>th</sup> century in hopes of better controlling crop outcome.

One of the most remarkable technologies today is artificial rainfall technology. This technology increases precipitation, thus reducing damage to crops caused by drought<sup>37</sup>. Also, artificial snowfall can be created using the same principle as artificial rainfall, producing a positive effect in the winter leisure industry, making for improved skiing or snowboarding conditions.

Silver Iodine is most commonly used in weather modification technology; it is used to induce<sup>38</sup> artificial rainfall. At the Beijing Olympics, large amounts of silver iodide were shot into the air using rockets, creating a concentration of iodide in the atmosphere of 0.05%. This forced the rain to come early—it was predicted to fall on the Olympics' opening day. Scientists caused it to rain early, therefore keeping the Olympics' opening ceremony dry.

However, because of the lack of research on the negative effects of weather modification technology, some people are against trying to control the weather. In fact, China failed to control its annual precipitation despite its frequent use of artificial rainfall, so it is not an exact science. Though China succeeded in making it rain before the Olympics, later on, bad wind conditions occurred, impacting the safety and performance of the athletes.

Presently, weather modification technology can only be used at a proper location when conditions are favorable—the atmosphere has to have appropriate temperature and humidity.

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<sup>35</sup> likelihood: n. probability

<sup>36</sup> stem from: phrasal v. to develop or come from something

<sup>37</sup> drought: n. a long period when there is little or no rain

<sup>38</sup> induce: v. to cause something to happen

## Unit 11. Weird Weather

Charles Fort, who has documented a great deal of unusual phenomena throughout his lifetime, wrote in his book *The Book of the Damned* in 1919:

"A shower of frogs which darkened the air and covered the ground for a long distance is the reported result of a recent rainstorm at Kansas City, Missouri." This case of falling frogs was recorded in *Scientific American* on July 12<sup>th</sup>, 1873, and in his book, Fort went on to say, "for accounts of small frogs, or toads, said to have been seen to fall from the sky, [a skeptical] writer says that all observers were mistaken: that the frogs or toads must have fallen from trees or other places overhead."

Such events, for example, fish, frogs, and worms 'raining' down, have been recorded in various documents, and the most likely reason is that whirlwinds<sup>39</sup>, tornadoes, or some similar meteorological event has sucked frogs from the ground to the sky, and gravity has caused them to drop to the ground again. However, Fort argued that was not a good enough explanation.

"It is so easy to say that small frogs that have fallen from the sky had been scooped up by a whirlwind, but it does not explain why other debris on the bottom of the pond, such as mud, water plants, and shoes, does not fall with the frogs. Also, a pond going up would be quite as interesting as frogs coming down. Whirlwinds we read of over and over—but where and what whirlwind? It seems to me that anybody who had lost a pond would be heard from."

The most likely reason frogs are not observed as they get sucked up into the sky is because such an event only occurs during very dangerous situations, such as bad storms or tornadoes, and potential witnesses are all indoors to keep safe. The explanation of the missing debris of the pond can be explained by the wreckage<sup>40</sup> left after these events—due to the high volume of debris, it is unlikely that one could tell what debris came from a pond from what debris was created from the tornado or storm. Additionally, the nearby pond from which the frogs came might not be found because the meteorological event destroys everything in its path, including the pond.

Because strong winds are strong enough to lift frogs, tornadoes are the most likely culprit<sup>41</sup> behind this phenomenon.

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<sup>39</sup> whirlwind: n. a storm with strong winds that move in a circle

<sup>40</sup> wreckage: n. what is left of something badly damaged

<sup>41</sup> culprit: n. anything that causes harm or trouble

## Unit 12. The Blue Sky

The reason why the sky is blue is that the sunlight is scattered into various colors as it collides<sup>42</sup> with the various gas molecules—such as nitrogen, oxygen, etc.—which make up the atmosphere of the Earth. The sky looks blue because the blue or violet light spreads much more than the other colors.

To know why the sky looks blue, first, you need to understand two things: blue is a short wavelength color, and red is a long wavelength color.

As sunlight shines toward the Earth, it spreads throughout the atmosphere. The blue light of short wavelength collides with air particles (nitrogen, oxygen, etc.) and spreads in all directions.

The red light has a low rate of collision with the air particles, and so it can go as far as it passes through the air.

The sunlight enters our eyes through the atmosphere, and the sky appears blue because blue light, which happens on a short distance wavelength, enters our eyes first and from all directions.

When we look at the sunset, we see red and orange because the blue light is being scattered out of sight. In the evening, the sun shines through the atmosphere from a longer distance and light other than red is mostly scattered away.

When autumn comes, the sky looks a little different due to higher atmospheric pressure, also known as barometric pressure<sup>43</sup>, which causes the blue to come through stronger. This is why the sky in fall looks higher and bluer.

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<sup>42</sup> collide: v. to hit something violently

<sup>43</sup> barometric pressure: n. the amount of force at any point on the earth's surface caused by the weight of the air

## Unit 13. The Best Second Language

A first language is the language which you are taught at home, from birth; also known as your 'native language,' it is usually the language of both your parents and your society. A second language is a foreign language learned after and in addition to your first language. Generally, the term 'second language' is a generic<sup>44</sup> term for all other languages that aren't English. In the era of globalization, speaking English is essential, and learning a foreign language other than English is also becoming important. The most common second language choices are Chinese, Spanish, French, and Japanese.

Let's take a look at some of the most popular second languages being learned in different regions.

Although the traditional second language to learn in many English-speaking parts of the world is French, second languages being taught have recently become more diverse, depending on the region. For example, Spanish is the most popular second language in the United States. This is because the Spanish-speaking country of Mexico is on the US's southernmost border, and in some of the United States, especially southern states like Texas, there are more Spanish-speaking people than English-speaking people.

French is still the most popular second language in Canada and the UK. In Canada, French is one of the official languages, because the country of Canada contains the province of Quebec and Quebec's people primarily emigrated from France. Therefore, Quebec's first language is French, and English is taught as a second language.

Although French was the most popular second language in Australia and New Zealand because of the long history of British immigrants, the number of people learning Japanese and Chinese has grown due to these countries' increasing economic cooperation with Asia. This is because Asia is relatively close by, and has a good international trade reputation<sup>45</sup>.

In the UK, people learn a lot of German due to the UK's proximity to Germany. German and French are the most popular second languages in Western Europe, while Italian is more popular in Eastern and central Europe.

In Latin America, Portuguese is the second language studied the most.

In East Asia, Korean, Japanese, and Chinese are popular second languages; additionally, they often learn German, Italian, French, Russian, and Spanish.

In the case of China's northeastern region, Mongolia, and North Korea, they teach Russian.

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<sup>44</sup> generic: adj. not specific to any particular thing

<sup>45</sup> reputation: n. the general opinion that people have about someone or something

## Unit 14. Words from Greek Myths

Many words have come into common use in English from the Greek language. This is largely due to the Silk Road—an ancient trade route which connected two great civilizations<sup>46</sup>—Rome and China. This trade route allowed the exchange of goods as well as culture, stories, and language.

One example of a word that has come from Greek mythology into everyday English use is ‘mentor,’ which comes from the ancient Greek epic poem ‘Odyssey,’ written by Homer near the end of the 8th century BCE. In the poem ‘Odyssey,’ Mentor is a character who teaches and guides the King’s son. Just like the traits<sup>47</sup> of the character in the poem, the meaning of the word mentor is retained in the English language as either a noun: ‘an experienced and trusted advisor,’ or as a verb: ‘to advise or train.’

‘Atlas’ is another example of how a character from Greek mythology has become a commonly used word in English. Today, ‘atlas’ means a book of maps or charts; however, the word originated in a Greek tale in which the character, ‘Atlas,’ was a Titan (like a god) who was forced to hold up the heavens for all of eternity. Atlas also played a role in the epic myth of Heracles.

Additionally, although ‘nectar’ can now refer to a lot of different types of delicious drinks, particularly if the drink is made of a syrupy fruit juice, but ‘nectar’ was once described in mythology as a magical drink belonging only to the Olympian gods. It was a terrible crime to try and steal the god’s nectar. Attempting to steal the nectar of the gods’ was punished by sending to an afterlife<sup>48</sup> where they would suffer from hunger and thirst forever.

A fair bit of the English language can find its roots in Greek, not just the myths but the ancient language in general; there are a great deal of Greek root words found in English. A clue to the meaning of an English word can often be found by looking at the root word. For example, ‘oct,’ meaning eight (from Greek ‘okta’, ‘okt’), a root word in words such as ‘octopus’—having eight legs, and ‘octagon’—having eight sides.

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<sup>46</sup> civilization: n. a highly developed culture, including its social organization, government, laws, and arts, or the culture of a social group or country at a particular time

<sup>47</sup> trait: n. a characteristic, esp. of a personality

<sup>48</sup> afterlife: n. the life that some people believe begins after death, esp. in heaven

## Unit 15. A New Language for the World

Esperanto is a language created by Ludwik Lajzer Zamenhof in 1887. Zamenhof was aiming to create an easy-to-learn, neutral language to be used for international communication. Esperanto is in continuous use in the world, even though it is not officially recognized as a language by any country. It is estimated some two million people speak it as a second language in 115 countries all over the world.

Born in Poland in 1859, Zamenhof was the son of a Jewish teacher. He and his family lived in a Russian territory, where Polish, German, Jewish, and Russians all lived. Zamenhof thought, because of the many different languages in his home territory, communication was not smooth, people didn't understand each other clearly and this led to endless conflicts and difficulties in the community. Zamenhof read a biblical legend 'The Tower of Babel,' in which the language of all people started out the same, but one day it was changed because of a punishment from God, and this strengthened his belief that if mankind could unify in language, racial prejudice<sup>49</sup>, conflict, and inequality would disappear.

He decided to make a language that would be easy for anyone to learn and easy to use to communicate well. So, he began to draft 'Lingwe uniwersala.' On July 26, 1887, the first book teaching Esperanto (*Unua Libro*), which contains the *Lingvo Internacia* (International Language), was published. This book, which is written in Russian, contains 920 roots from Esperanto, 16 grammar rules, Bible passages translated into Esperanto, and a poem written in Esperanto.

In 1908, the World Esperanto Association was founded, but early Esperanto users in Western Europe were branded as communists, and Germany's leader, Hitler, suppressed use of the language due to the fact that it was bringing his enemy, the Jewish people, together. Additionally, in Japan, leftist<sup>50</sup> intellectuals went through great hardships while trying to distribute the materials.

It is not certain when Esperanto came to Korea, but in 1906, a Japanese magazine described Emperor Gojong as praising Esperanto for its convenience. It is said that Hong Myeong-hee, a novelist who wrote "Imkeokjeong," studied in China in 1910 and taught lessons in Esperanto in 1920.

Zamenhof was successful in creating a highly useful language and over time, Esperanto may become as universal and uniting as he hoped. Today, Esperanto is used in travel, communication, cultural exchanges, letters, language education, and more.

<sup>49</sup> prejudice: n. an unfair and unreasonable opinion or feeling, especially when formed without enough thought or knowledge

<sup>50</sup> leftist: n. a supporter of the political left

## Unit 16. A Family of Words

Loanwords are words that are used only in their native language—words taken directly from other languages and used without translation or with minimal translation in other languages. ‘Bus,’ ‘computer,’ ‘piano,’ and ‘coffee’ are good examples of loanwords from the English language used in Korean, and all proper nouns, foreign names, or place names are loanwords. Examples include city names, such as Chicago or Toronto, country names, such as the United States or Canada, and brand names such as Coke or Disney.

Many languages adopt<sup>51</sup> loanwords from other languages when those words carry great political or cultural influence. This is because we exist in a globalized community, which is a cultural hub actively formed with words containing new ideas and objects. As a result, words can be quickly borrowed from the neighboring language community to better express ‘foreign’ concepts. From ancient times to modern times, languages have used many loanwords from Chinese, Japanese, English, and many other languages.

Colonialism<sup>52</sup> may also affect the language of the occupied country. When one country comes to occupy or ‘take over’ another, the ruling class’s language mixes with and influences the subjugated class’s language. Such was the case with the French language, which was influenced by French after the Norman Conquest of England. Another case is the Filipino language which was influenced by Spanish due to Spain’s occupation of the country.

Letters and words are also passed along with the spreading of religions. For example, Muslims preached Arabic letters and Roman Catholics preached the English alphabet.

Proper names, such as words, names, and place names, relating to special products or things unique to the area are borrowed despite having little political or cultural influence. Two examples are the Korean word “kimchi,” a Korean food made from salted and fermented vegetables, and the German word “waltz,” a type of formal dance. These loanwords are used because there is no better way to describe these foreign concepts in any way other than in their original language.

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<sup>51</sup> adopt: v. to accept or start to use something new

<sup>52</sup> colonialism: n. a policy or system in which a country controls another country or area