



Future Literacy 50-3

Unit 1. Lucky Cake!

Greeks celebrate the New Year in their own special way. They have several customs that are practiced during the celebrations. Like other people around the world, Greeks sing carols. But these carols are called *kalanta*. Children go around the neighborhood and ask for permission to sing the *kalanta*. Singing these Greek carols is meant to bring luck for the new year. There is also a tradition of playing cards. Families gather to play cards for hours, leading straight into the night. Some families have card-playing marathons for the entire holiday. Greeks also exchange gifts with each other. They believe that doing so on the first day will bring prosperity. Usually, adults will give children or the youngest relative money as a gift. Not all the gifts will go to family members, though. Some of the gifts will be donated to charities to honor Saint Basil, an important figure in Greece. He is known as one of the forefathers of the Greek Orthodox Church and a helper of those in need.

Unit 2. Human Towers

Spain has a yearly tradition of building human towers called *castell*. The tradition is said to have originated in the late 18th century by dance groups as a part of Catalan culture. This Catalan tradition brings many people together. They form teams called *colles* and compete to build the tallest and most complex tower by standing on top of one another. The winning team is the one to build the tallest tower and then take it apart without a single fall. To achieve this feat, teams often plan the tower ahead of time so that everyone has a role. Some people form the bottom base of the tower where all the weight must be sustained. These people are important for safety. If someone falls from higher up the tower, the people at the base are there to cushion the fall. Although accidents are rare during this event, ambulances are usually stationed nearby. In 2006, the death of a child after his fall from a tower led to extra precautions that made helmets mandatory for child participants.

Unit 3. Burning Golden Paper

According to Chinese tradition, people believe burning money will send it to the afterlife and into the possession of the departed family member. Doing so will keep the ancestors happy and bring blessings to the living descendants. However, Chinese people do not burn real money. They have special fake money used specifically at funerals. The joss paper or “ghost money” comes in three different colors. Copper is used for newly deceased spirits and spirits of the unknown. Gold is used for the deceased and the higher gods. Lastly, silver is used for ancestral spirits and local deities. Mourners will fold their joss paper of choice to distinguish it from real money as part of the burning ceremony. It’s important to remember that no matter how rich the family is, real money is never burned as burning real money is considered unlucky. However, families can opt to burn other things along with the joss money such as paper replicas of houses, garments, and servants.

Unit 4. Fire Art

Daeboreum is an ancient Korean festival that celebrates the first full moon after Korea’s Lunar New Year. This moon is special because it is believed to be the largest and most bountiful one of the entire year. During *Daeboreum*, many customs are practiced to celebrate the festival. One such tradition is lantern lighting, an old custom that dates back to the early Joseon Dynasty. The lantern lighting is an agricultural tradition that encourages a successful harvest and good health. Another custom is the huge bonfire called the *Daljip*. In the seaside city of Busan, these bonfires are built on the beaches. They are triangular in shape and are very tall. The fire is meant to ward off evil spirits and bring luck to the coming year. In addition, children play a game called *Jwibulnori*. On the eve of *Daeboreum* during the night, a charcoal fire is lit inside tin cans and whirled around on a string. As is the case with the bonfire, the fire in the can is meant to ward off evil spirits.

Unit 5. How We See

Eyes are only 2.5 centimeters in diameter but can help you see everything from a small stone on the ground to the moon far, far away. They are also capable of snapping to focus and staying that way even as your head moves. Eyes perceive images when light bounces off an object and enters the cornea, a clear layer that covers your eyes. The light passes through the pupil and into the lens. Then the lens focuses the light onto your retina which is a very thin lining at the back of your eye. The retina captures the image which is then sent to the brain. Your brain processes the image and you can make sense of what you are seeing. To keep the eyes moist and healthy, the average person blinks more than 10,000 times a day. Each blink spreads tear fluid over the eyes, preventing them from drying out. Similarly, other body parts protect the eye. For instance, eyelashes keep out dust and debris while eyebrows keep sweat from dripping into the eyes.

Unit 6. Your Best Bite

Teeth enable us to break down large chunks of food so that they are readily digestible when they reach our stomachs. Not all teeth are the same teeth as they must function in different ways. The front teeth are sharp and are designed to cut and tear. The back teeth are rounded and are suitable for grinding food into tinier pieces. When all of this is done, the food can be easily swallowed. Given that teeth are constantly chewing, small pieces of food get stuck between the teeth and cause decay. To keep teeth healthy, brushing is important. Yearly dentist checkups are also necessary for preventing cavities. A dentist can catch cavities before they develop further and cause decay to surrounding teeth. For better digestion and a lifelong ability to consume foods, make sure to take good care of your teeth.

Unit 7. Special Bodies

Some animals have eight legs and others have none. But the vast majority of all animals have body parts that come in pairs: two eyes, two nostrils, and two ears. The easy answer to this is evolution. For most animals, having a pair of these body parts has enabled them to survive and reproduce, passing on the useful features to the next generation. For example, two eyes are better than one as they allow animals to have better depth perception. Having one eye would be enough to see, but having two eyes makes it easier to detect how close or far things are. Having two ears is also important as it allows animals to determine which direction sound is coming from. With two ears, animals can run away when they hear a predator moving nearby. Nostrils are special because one will act as the dominant nostril that takes in air while the other shrinks in size to take in air slowly while the receptors process scents.

Unit 8. What Is Important?

Racism is a form of discrimination based on race and expresses the belief that one race is superior to another. In the 19th century, scientific theories were proposed to legitimize racist beliefs and to promote colonialism of other countries. In colonial America, African people were enslaved by white people. The underlying racist belief reconfigured black skin as a sign of being “less human” than white people. During this time, white people treated black people as less than human. Even after slavery was abolished, racism continued in America through laws that stated that black people could not go to the same schools or use the same water fountain or bathrooms as white people. Because many of the best schools were white schools and many companies only had white bathrooms, life for black people remained very unfair. In recent years, civil rights movements have changed laws so that African Americans are treated with equal dignity and respect.

Unit 9. Why Do We Need Math?

Numbers and counting are a part of our daily lives. But there was a time before numbers were understood and used by everyone. The numerals 1, 2, 3 etc. are commonly known as 'Arabic' but actually have historical roots in India. Around the year 771 A.D., Arab merchants took some Indian scholars to Baghdad. These Indian scholars were tasked with teaching the new set of numerals (which were invented in India) to Arabs. The Arabs then translated the numbers into their own script in a book. This book was then carried by traders to Europe where the numbers were translated into Latin. Thanks to this book, the world came to know the numbers as Arabic even though the Indian scholars were the first to teach them. Arabic numerals are much easier to use for calculations compared to other number systems. For example, Roman numerals are harder to calculate as there is no 0.

Unit 10. The Number 7

In many religions, the number 7 is a symbolic number and carries a lot of meaning. In Judaism, the number 7 alludes to the infusion of spirituality and Godliness. According to the Torah, the Sabbatical year arrives every seventh year. There are seven days of Passover (a Jewish holiday) when celebrated in Israel. In Christianity, there are seven sacraments in the Christian faith, seven deadly sins, and seven terraces of Mount Purgatory. In Hinduism, there are believed to be seven worlds in the universe. Hindu weddings also practice the ritual of Sacred Seven Vows as the couple unites to become husband and wife. In Islam, there are seven heavens, seven Earths, and seven fires of hell. The number 7 contains so much meaning in religion that it has also influenced mythologies and literature. The *Harry Potter* books, for example, were purposefully constructed as a seventh part series.

Unit 11. How Computers Count

Computers use the binary numeral system to calculate numbers. It uses only two digits: 0 and 1. These also act as “on” and “off” switches in computers with “1” meaning “on” and 0 meaning “off”. The value of any number in a binary system can be calculated by converting them into their corresponding decimal numerals. The key is to remember that each digit’s place value is double that of the next digit to the right. The very rightmost digit starts at 1. For example, 10 in binary numbers equals 2 in the decimal system. That’s because the place value of the 1 is 2. In 100, the decimal value is 4 because the place value is double that of 2. Following this pattern, the binary numeral 1000 is 8 while the binary numeral 10000 is 16. When you have a binary numeral like 101, simply add all the place values together. The binary numeral 101 is $4+1$. The answer is 5!

Unit 12. Our Numbers vs. Roman Numbers

The numbers we use in everyday life are commonly referred to as Arabic numbers. All numbers in this system are a combination of 10 digits: 1, 2, 3, 4, 5, 6, 7, 8, 9, and 0. Meanwhile, Roman numerals are used on a system of fives. This is due to the fact that people start counting on their hands, which has five fingers. Roman numerals use an additive system and do not have a 0. I, V, X, L, C, D, and M are used to represent the values of 1, 5, 10, 50, 100, 500, and 1000 respectively. Putting a numeral with a smaller value after another numeral means to add the values together. For example, XI would equal 11. On the other hand, if a smaller value comes before the bigger value, it means to subtract the smaller value from the larger one. IX would be the same thing as subtracting 1 from 10, equaling 9.

Unit 13. Unusual Jobs

Smokejumping was first proposed by a U.S. Forest Service Intermountain Regional Forester named T.V. Pearson in 1934. He proposed the idea as a means of combatting remote fires. This would reduce the amount of hiking and travel through difficult terrain that would be necessary to reach the fire. By flying in firefighters to nearby positions, they could then parachute in to extinguish the flames. The first smokejumping experiments took place in 1939 in Washington's Methow Valley. This was to test that firefighters could actually parachute into different types of forests and rugged terrain. The experiments were successful, and the following year saw permanent smokejumping operations in Winthrop, Washington and Ninemile Camp, Montana. Today, smokejumpers are able to reach wildfires in extremely remote areas, putting them out before they grow larger and become a serious threat to the public. Smokejumping is also used in other countries such as Canada, Mongolia, and Russia.

Unit 14. Discovering Careers

In today's world, the jobs you can have are as varied and exciting as ever! With new technologies and a global society, the job market constantly evolves, offering opportunities that did not exist a few years ago. Here is a look at some of the kinds of jobs you might find interesting:

Tech Jobs: With everyone using smartphones and computers, jobs in technology are booming. Software developers create apps and games we love, while cybersecurity experts protect our information from hackers. There are also jobs for web designers who make websites look fantastic and user-friendly.

Environmental Jobs: As we work to protect our planet, jobs in environmental science are growing. This includes careers in renewable energy, like designing wind turbines or solar panels, and conservationists who work to save endangered animals and their habitats.

Arts and Entertainment: Actors, musicians, and dancers entertain us, while museum curators and art dealers help preserve and share culture and history.

Unit 15. Yum! Chocolate

Chocolate is made from cacao trees. It is used in many desserts like cakes, candy, and ice cream. After the beans are fermented, they are dried, cleaned, and roasted. The shell is then removed to produce the cacao nib. These nibs are ground up and heated until they all melt into a liquid called chocolate liquor. The liquor can be poured into molds and cooled down to make different shapes for various products. It can be used in factories to make any kind of chocolate treat. To make chocolate bars, the chocolate is mixed with sugar and milk. Then, the ingredients are put through a process called conching. Conching means to crush the chocolate into very small pieces and to keep it warm so that it stays in a liquid form. This process takes several hours. The last step is to temper the chocolate. Tempering is when chocolate is heated, then shaken, and then cooled several times.

Unit 16. Why People Work

People work for different reasons. Some people work to achieve happiness and others do it to make a difference in the world. Some people work to feel like they belong somewhere. People can even meet their best friends at work. Some researchers have found that organizations like companies can enable their employees to be completely fulfilled by finding meaning and purpose in their work experience. For employers, this is very important because such employees are much more likely to focus on their work and stay with the company long-term. However, it is very difficult for people who haven't decided what they want to do to find work. To solve this problem, it helps to be honest with yourself. Ask questions about what motivates you and what kind of job you imagine yourself doing in the next 10 years. Jobs can quickly take up most of your life and become a part of your identity. So, make sure to spend plenty of time exploring your career options.