

Future Literacy 50-1

Unit 1. Meet the Meerkats

The meerkat is a small animal that is about the size of a squirrel. They have small, narrow faces and big eyes. They have bushy brown fur, too. You can find meerkats in the deserts and grasslands in the southern regions of Africa. Meerkats are a part of the mongoose family and live in families. The families sometimes have as many as 40 meerkats! These families live underground to protect themselves from the heat and from predators. These underground homes are called burrows. Each burrow can have many different tunnels and rooms to live in. Like human families, meerkats also work together. They gather food together during the day. Meerkats like to eat beetles, caterpillars, spiders, and scorpions. They also keep an eye out for predators and care for the younger members.

Unit 2. Winter Sleep

Hibernation is a state when an animal's body is slowed down. This means that the animal appears to sleep for long stretches of time. There are a few reasons that animals hibernate during the winter. One reason is a drop in temperature. Because animals have to use more energy to keep warm in the winter, they hibernate to save as much energy as they can. Another reason is a lack of food. If there is not enough food to eat, animals hibernate while they wait for food to become plentiful again. Bears are one of the few large mammals that hibernate in the winter. However, they can hibernate for longer periods compared to other animals. While some animals may wake up regularly, bears can hibernate for 100 days without eating or passing anything. Because of this, the U.S. National Park Service calls bears "super hibernators".

Unit 3. Octopus Hide and Seek

The wilderness is a dangerous place, even for wild animals. That's why some animals change color. This is called "camouflage". Animals camouflage by changing their appearance to blend in with their environment. For example, the arctic fox has a coat of white fur during the winter but changes color to a brownish hue during the warmer seasons. Another example of camouflage is when animals use their unique markings to confuse predators. Zebras are a common example. Their stripes might make them stand out to human eyes. However, their stripes confuse color-blind lions who cannot easily differentiate zebra stripes from long grass. There is also a type of camouflage called "method". Animals that use the camouflage method look like other objects to hide themselves. What looks like an ordinary tree branch might actually be an insect aptly named "the walking stick." While camouflage might just be another interesting phenomenon from a human's perspective, it is an important survival strategy for many wild animals.

Unit 4. Cool Dad

For some animal species, the dads are particularly notable for their dedication to their offspring. In the case of the emperor penguin, the male parent will usually take care of the eggs until they hatch. While the female penguin leaves in search of food after laying the egg, the male penguin keeps the egg warm inside a brood pouch. During this time, he cannot move around or go hunting for food. It's no surprise that these fathers can lose up to 30% of their weight while they incubate the egg! That's not all – if the egg hatches before the female penguin can return, it's the male penguin's job to feed the young hatchling. Another example is the male seahorse. The seahorse is a unique species because the male is the one to get pregnant, not the female. The male seahorse will carry about 1500 eggs in its pouch for 45 days before the eggs hatch. However, the fatherly duties end there as the baby seahorses are left to fend for themselves afterward.

Unit 5. Healthy Hands

Washing your hands may seem like a simple act. However, this simple act has many important benefits. Firstly, they prevent the spread of germs. From the moment you wake up in the morning, your hands touch many different surfaces, collecting germs and dust along the way. We touch doorknobs and handrails which are touched by many other people throughout the day. So, if one person leaves germs on a doorknob, the next person to touch it might get the germs even if their own hands were clean. This is why it's important to wash your hands before a meal since the germs on your hands could get on your food and into your mouth. It's also important to practice the correct method of handwashing. Make sure to wash your hands in running water and to use soap. Make sure to get the soap on both sides of your hands, wrists and between your fingers. You should also clean under your nails by gently rubbing the tips of your fingers on the palm of your other hand. Take your time by counting to 15. The final step is to rinse and dry your hands with a clean towel.

Unit 6. Ouch! Cavities

Cavities are holes in your teeth that form as a result of decay. The decay is caused by plaque, a sticky substance made up of germs that stick to your teeth. When this happens, your mouth will produce acids in an attempt to destroy the plaque. Unfortunately, the acid can also destroy the enamel, which is the outermost layer of your teeth. The acid will continue to hurt your teeth until they reach the nerve ends. If this happens, there will be a lot of pain in that area of your mouth. That's why it's important to visit the dentist regularly to check for plaque and cavities. A dentist can treat cavities before they get any worse by drilling the decay from your teeth. To repair the hole, they use a material called filling. But dentists can't fix everything. If the damage to the tooth is too severe, they may have to remove the entire tooth. That's why it's always better to prevent cavities. There are three simple ways to achieve this. First, brush your teeth after each meal using toothpaste. Secondly, make sure to use floss. Thirdly, avoid eating or drinking sugary things like candy or soda. Take good care of your teeth and you'll never have to be afraid of the dentist!

Unit 7. Feeling Sleepy?

Sometimes, it can be difficult to go to sleep. This is especially true for school-age kids and teenagers who have hectic schedules. There are also many distractions from sleep, such as homework, sports activities, and smartphones. Children can behave differently compared to adults when they are tired. While adults might act grumpy, sleepy children can become hyperactive or unable to pay attention during class. Luckily, there are ways of making sure that children consistently get the right amount of sleep. For example, it's very important to keep a bedtime schedule. Because using mobile devices or computers or watching television can keep people's brains busy, one should make sure to stop looking at a screen at least an hour before going to bed. Younger kids shouldn't be allowed to keep these devices in their bedrooms, especially during bedtime. Meanwhile, teenagers should avoid drinking coffee and energy drinks to feel more awake. This will only further ruin their sleeping pattern and eventually lead to more fatigue.

Unit 8. Eat Healthy Colors

Eating fruits and vegetables is an excellent way to stay healthy. However, it can sometimes be difficult to eat as many fruits and vegetables as we would like. For some people, fruits are often only consumed as snacks or desserts instead of an important part of their meals. Luckily, there are a few strategies to increase the number of servings of fruits and vegetables. The first tip is to eat them for breakfast. Fruits are especially good for breakfast as they go well with cereal or pancakes. Simply add an apple or orange slice to your plate. You can even make a fruit smoothie. Smoothies are especially convenient because they are easy to make and can last throughout the day. Another tip is to eat more when you can. For instance, if you've decided to fix yourself a fruit salad for lunch, try to add more vegetables and fruits than you normally would. The same rule can be applied to other dishes such as vegetable curry or even a meaty dinner like steak. Just make sure to leave room next to the steak for an extra serving of broccoli!

Unit 9. Origami

Origami is the art of paper-folding without gluing, cutting, or taping the paper. The name itself is derived from the Japanese words for “folding” and “paper,” but its history also comes from Korea and China. It’s no surprise that paper-folding would have Chinese origins as paper was invented in China around 105 AD. A common custom was to fold money into gold nuggets, which were thrown into the fire at the end of a funeral ceremony. Modern Chinese paper folding focuses on representing inanimate objects like boats and boxes. On the other hand, traditional Japanese origami includes a lot of subjects borrowed from nature. A classic example would be the paper crane. More contemporary modern works have reimagined the art by strategically cutting the paper to imitate soft feathers on top of the classic crane shape. Like all art forms, origami is evolving, but the beauty of the art continues on.

Unit 10. Cartoon Animals

If you’ve ever watched a Disney movie, you’ve probably seen your fair share of animals. The most famous cartoon animal from Disney is, of course, Mickey Mouse. Other notable cartoon animals include Bambi, Thumper, Flounder, Sebastian, and all the characters from *The Lion King*. These Disney classics are especially wonderful to see as they were all traditional animals. Traditional animations take a lot of time and labor as the artists need to draw every single frame. On the other hand, computer animations don’t require as many steps. Most of the animated cartoon animals you see today are made on computers. Sven the reindeer from *Frozen* and Remi from *Ratatouille* are some of the newest additions to the Disney animal lineup. Whether they were drawn by hand or created on a computer, the artists in charge of making the characters have to have a good eye and a good understanding of what animals look like as well as the way they move around.

Unit 11. Colors

It's easy to forget just how powerful colors are. Many people learn to draw with crayons and paint before they learn to write words. But color is more than just a tool for children to play and express themselves with. Colors have the ability to change our mood. Certain colors can be calming while others are more distracting and irritating. Imagine walking into a room that is covered in neon wallpaper. It's a very different feeling compared to a room with beige walls and ceilings. There is even a practice called "color therapy," which uses colors to help patients with their moods. Practitioners shine different colored lights on a person's body to change their mood. Colored lights are also used in phototherapy. It's a treatment that shines blue light on babies suffering from jaundice. The light gives more oxygen to the baby's blood and can help treat the jaundice. In short, colors have many benefits and can even be used to save lives.

Unit 12. Art with Sand

A cool thing about sand art is that it can be big, like giant sculptures on the beach, or small, like drawings. Sometimes, artists even use sand to tell stories or to show important things about their culture. For example, Native Americans and Australian Aboriginals have used sand to share their traditions and tales for hundreds of years. Nowadays, you might see sand art in different forms. In sandcastle competitions, people build incredible things out of sand and water. Also, there is something called sand animation, where artists draw with sand on a light table and make it look like the pictures are moving, usually with music playing in the background.

Unit 13. Different Kinds of Transportation

When we need to move from one place to another, it might be difficult to just walk there on foot. That's why we have means of transportation that people can use to travel very far distances. There are three kinds of transportation. The first is land transportation. Any vehicles that move on the road can be considered a form of land transportation. This includes cars, buses, and trains. The second is water transportation. Water transportation is especially important when moving to areas that are unreachable by land. If there are no bridges or roads to an area, you can use boats or water scooters depending on the distance. The last one is air transportation. Airplanes are the most common example. People travel to different countries on airplanes. This may take many hours but is much faster than going by land or water.

Unit 14. Traffic Signs

Traffic signs are used to tell pedestrians and drivers information they need to safely navigate roads. They give information on things like where people can drive or walk and whether to stop or slow down. These signs are designed to give information that can be easily understood. Some signs include one or two short words like "Stop" or "No Parking." Others have pictures of arrows or animal crossings. Signs help prevent accidents and arguments on the road. Traffic lights have a similar function. All drivers can understand that red means "stop," yellow means "slow down" and green means "go." Red and green are used to present the same message on both pedestrian crosswalk lights and traffic lights for drivers. This way, people know when it's their turn to cross the road or wait for others. These signs and lights may seem very simple, but they are important in keeping everyone safe.

Unit 15. Right or Left?

If you live in London or Tokyo, chances are that you are used to driving on the left side of the road. The same would be the case if you lived in Sydney. But what if you live in San Francisco or Seoul? You drive on the right side of the road. Each country decides which side of the road you must drive on. Whether you drive on the right side or left side, the logic behind this rule is very simple. It makes sure that drivers don't crash into each other. It can sometimes be confusing if you go to a country that drives on a different side of the road than the one you are used to back home. But it's very important to remember which one the correct side is. Otherwise, you may end up in an accident.

Unit 16. Roundabouts

Roundabouts on the road. While roundabouts can free up congestion and reduce traffic, it may be a little intimidating to encounter one for the first time. There are a few very basic rules to follow if you ever have to use a roundabout. First, always stay in your lane. Once you are inside the circle, you should not switch lanes until you have completely exited the roundabout. Secondly, you should never stop in a roundabout. Stopping on a straight road without warning is dangerous. Stopping suddenly in a traffic circle may be even more dangerous because the driver behind you may not see you in time. Lastly, avoid driving next to oversized vehicles. The vehicles need extra room to turn, so it's dangerous to be right next to one in a roundabout. Roundabouts were created to make intersections safe and more efficient for everyone.