Unit 1. Severe Weather



Severe Weather
are a kind of severe weather that occurs in all climates.
They build where warm fronts of low and cold fronts of high
pressure are forced together.
Thunderstorms are the most storms.
They create thunder and
A warm front rises through a cold front and makes a tall cloud.
Warm air and cool air together inside the cloud and create
static
Suddenly, electricity shoots out of the cloud as a bolt of lightning.
It is so powerful that it makes a loud crash of thunder.
Sometimes, a severe thunderstorm causes
They start when a sudden drop in air pressure creates a vortex.
Tornadoes can form whenever a warm front meets a cold front.
But so many tornadoes touch down in the Midwest which is called Tornado
Alley.

Hurricanes are the strongest and most dangerous storms.
They are caused by a warm low pressure system that evaporates water from
oceans.
In the United States, hurricanes are given names, and they vary in
from category one to five.
The strongest hurricane on record in the United States was Camile.
She was a category 5 storm that blew winds over 300 km/h and destroyed entire
cities along the Gulf of Mexico.



Unit 2. Four Seasons



Four Seasons		
From sunny summer to frosty winter, we have four seasons.		
Earth's orbit and tilt on its make four different levels of sun		
energy, creating four seasons.		
When Earth's axis the of the sun, it cannot receive		
many		
That is why winter is the coldest of the four seasons.		
Snow covers the ground, and temperatures fall zero.		
However, children can build snowmen or skate on the ice.		
As Earth moves closer to the sun, it receives more sunrays.		
Thus, the days get longer and warmer.		
The birds start chirping6 in spring as nature wakes up from winter's sleep.		
Green leaves grow in the trees and fields while happy children ride bicycles.		
Soon, summer comes with hot and humid weather.		
The reason is that Earth's axis is facing the sun.		

Of all four seasons, Earth receives the most sunrays in summer.
Sunflowers reach for the sun and families visit seaside beaches to
As Earth keeps moving, autumn turns summer's green to many of
orange, yellow, and brown.
Summer is now over, and leaves fall to the ground.
Farmers harvest their crops, and the markets are filled with food.
Everyone is now ready for winter.



Unit 3. Rainforests of the Sea



Date:		

Rainforests of the Sea
Coral reefs are the rainforests under the sea.
They provide views of tropical fish and
They are the homes of a large number of sea creatures.
Many people think coral reefs are sea plants or even rocks.
However, coral reefs are formed from millions of tiny animals that are called
coral polyps.
Coral polyps live together in groups.
They produce a substance that turns into hard
The hard skeletons fill up the reefs over time.
Corals can grow in tropical water where the sunrays reach them.
The reason is that corals depend on algae for their nutrients.
Corals get their nutrients from the of algae's photosynthesis, in
which sunlight is

Coral reefs are one of the precious parts of our		
They provide food and shelter for thousands of ocean plants and animals.		
It is believed that a quarter of all the ocean's animals live with coral.		
Coral reefs also provide good for the tiny fish and shrimp known		
as the cleaners of the sea.		
These tiny creatures clean the sea by eating parasites on larger fish.		
Today, coral reefs are endangered because of pollution and fishing.		
We should think of some ways to preserve them for both sea creatures and		
humans.		



Unit 4. What Flowers do



What Flowers do
Flowers are used to events and to make things beautiful.
Some flowers are even eaten as or drunk as tea.
But the most important thing that flowers do is to produce seeds that become
new plants.
To make fruits, each plant needs to be pollinated.
But most flowers cannot themselves.
Insects help them. Flowers attract insects with their beautiful and
the smell of sweet nectar.
Insects land on flowers to drink this sweet
When they land on flowers, pollen sticks to their bodies.
Pollen is a powder found on flowers.
When insects fly from flower to flower, they the pollen.
The pollen from different flowers mixes together and fertilizes them.

After a flower is pollinated, new seeds form in its
And these seeds will become new plants when farmers plant them in the ground.
Some of them can easily become new plants after the wind blows and spreads
them around.
By the time the seeds begin to form, the flower dies, but its ovary develops into
a fruit, nut, or grain.
Some are fruits such as apples.
Others are hard, dry nuts or grains of wheat.



Unit 5. Butterflies and Moths



Butterflies and Moths
Butterflies and moths look very similar.
They get in the same way.
They drink juice from flowers and fruits called and water from the
ground.
But how can you tell the differences between moths and butterflies?
Both moths and butterflies start as little eggs and grow into
Caterpillars have long, soft bodies with short legs.
Some caterpillars have hair or
Most caterpillars are green or brown, and their colors help them hide from other
animals.
This is called
Caterpillars mostly eat leaves.
Later, a caterpillar makes a hard around its body.
Inside the shell, the caterpillar changes into a butterfly or moth.
This change is called metamorphosis.

During metamorphosis, the caterpillar wings and changes its
body.
Then, a butterfly or moth breaks the shell and comes out.
Butterflies' wings are usually colorful in order to other butterflies.
The bottoms of their wings are camouflage colors.
Moths are usually brown, gray, or white.
Butterflies like to fly during the day.
Moths like to fly at night.
Moths use the moonlight to help them fly.



Unit 6. Stars and Planets



Stars and Planets
We can see many gleaming at the night sky.
They are stars and planets.
A star is a huge ball of burning gas which makes energy called light.
Most stars look like bright dots because they are so far away.
The very hot stars are blue, the ones with heat are yellow, and
the coolest stars are red.
The brightness of a star depends on how much light it produces.
The hotter a star is, the brighter it
The closer a star is to Earth, the brighter it to us.
The sun is one of billions of stars in the
The color of the sun is yellow.
This means the sun is only medium hot for a star.
However, the temperature at its is more than 13 million degrees
Celsius.

The sun is a small star to the other stars in the universe.
But it is much bigger than Earth.
Planets are also in space.
A planet is a large object that moves around a star.
Different from a star, a planet gives off no light of its own.
It shines only because of light reflected from the sun.
Earth is one of the planets that move around the sun.



Unit 7. Volcanoes



Volcanoes
Have you ever wondered how volcanoes are made?
Volcanoes erupt when molten rock comes out from the Earth's mantle.
When molten rock comes out, it is called lava.
Every time comes out and, the volcano becomes
bigger.
Over thousands of years, the hard lava makes mountains.
The deep inner part of the Earth is moving.
The area under the surface of the Earth is filled with molten rock called magma.
When parts of the Earth move, they make pressure, which magma
up through the Earth's crust.
This is the lava we see when a volcano erupts.
Lava is extremely hot. Its temperature can be from 700°C to 1,200°C.
An volcano shows signs that it may soon.
Lava and gas may come out, or there could be near the volcano.

The Ring of Fire is a very larg	ge circle of volcanoes.		
It runs from Japan up through Alaska and Canada and down to California.			
It often causes earthquakes.			
They are very dangerous for	many people.		
But sometimes the heat from	volcanoes makes energy that people use to	ive.	
And lava and	from volcanoes turn into rich	that	
can grow food and forests.			



Unit 8. Sound



Date:		

Sound	
What do a guitar, a human voice, and	have in common?
They are all sounds. And sounds are all created by v	ribrations in matter.
A vibration happens when energy makes the atoms	in matter
The shaking causes waves.	
Sound waves can move through any kind of matter	er, including air, water, and
even rock.	
But when there is no matter, there is no sound.	
An area without matter is called a	
Outer space is a vacuum because there is no air.	
This is why use wireless technology to	talk to each other in outer
space.	
We can hear sounds by using our ears.	
We can hear because of a thin drum that vibrates w	hen a sound wave
our ears.	
Some sounds are very fast, high-pitched waves wh	nile other sounds are slow,
low-pitched waves.	

Sound waves create music,, and all of the noises we can hear.
Sound travels 1,230km/h at a really fast speed.
But some things go faster than sound.
Fighter jets can break the sound by going faster than 1,230km/h.
This creates loud sonic booms.
A bolt of lightning is also faster than sound.
That is why we see lightning before we hear the sonic boom caused by thunder.



Unit 9. Rocky Mountains



Date:		

Rocky Mountains
Rocky Mountains are the longest mountain in North America.
They begin in Canada and all the way down to Mexico.
They stretch for 3,000 miles (4,800 kilometers).
They run through five states.
They are Montana, Idaho, Wyoming, Utah, and Colorado.
The Rocky Mountains are made up of rugged mountain ranges with
deep
These make them a good home for many different animals and
plants.
Black bears, grizzly bears, mountain lions, and wolverines live in the Rocky
Mountains.
Geese, eagles, owls, and turkeys spend winters in the mountains.
grasses and wildflowers grow in the valleys.
Along the lower mountains are evergreen trees such as aspens and yellow pines.

The Rocky Mountains also provide many natural resources for Americans.		
Various metals and minerals are found in the rocks of the mountains.		
The most metal found in the Rocky Mountains is copper.		
Copper is used in products like electrical, computers, pots, and		
pans.		
Natural gas is also an important that comes from the Rocky		
Mountains.		
It is an important source of energy.		
The Rocky Mountains have various animals, plants, and natural resources.		
So, much of the land in the Rocky Mountains is protected in national parks.		



Unit 10. The Great Wall of China



The Great Wall of China		
The Great Wall of China is the longest wall ever built.		
Although parts of it have been destroyed, it almost 6,437		
kilometers.		
It looks like an sleeping dragon when it is seen from the sky.		
However, it was not built all at		
Many centuries ago, China was made up of several		
These kingdoms built walls around their land to protect themselves from their		
unfriendly neighbors.		
In the 3rd century B.C., Shi Huangdi seized power and the other		
kingdoms.		
He became China's first emperor.		
Then, he ordered the wall to be built and had new sections made as needed.		
Thousands of workers worked for many years to complete the wall.		
Slaves,, and even farmers were sent to build the wall.		

This wall was not completed under Shi Huangdi of the Qin Dynasty.		
It was built by various dynasties over a few centuries.		
Each played a role in building extensions and repairing the wall.		
Most of the wall that stands today was constructed during the Ming Dynasty		
(1368~1644).		
There are no more northern for the wall to guard against.		
However, the Great Wall is still great.		
Thousands of people visit the wall.		
Today, the wall has become a symbol of the might of ancient China.		



Unit 11. George Washington: The First President



Date	:		

George Washington: The First President
George Washington is one of the best known presidents of the United States.
He was born to a family in Virginia in 1732.
Although his father died when George Washington was 11 years old, he received
a good education.
George Washington achieved many things for his
He knew the that Virginia and the other colonies belonged to
England.
When he was twenty years old, he joined the and served as a
good leader.
After he left the military, he became a devoted politician.
However, he is most remembered for his service during the Revolutionary War.
He served as a and the commander of the Continental Army
during the American Revolution.
The colonists were against the taxes the British were demanding.

They won the war against the British in 1783.
After that, America was free from the British.
In 1789, George Washington was elected the first of the United
States.
He served as president for eight years.
In 1797, George Washington left the government and spent the rest of his life
as a simple farmer.
George Washington is remembered as a military hero and a man
of
The capital of the United States, Washington, D.C., is named after him.



Unit 12. Martin Luther King



Date:		

Martin Luther King			
Martin Luther King, Jr. was a great man who worked for racial and			
civil rights in the United States.			
He was born in Atlanta in 1929.			
There was a lot of in the United States at the time.			
African Americans were not allowed to shop in the same stores as white people.			
Their children were not allowed to go to the same schools as white children			
either.			
Dr. King decided to lead a of city buses.			
African Americans had to give their seats to whites on the bus.			
The boycott ended in victory in 1956.			
Soon afterward, Dr. King led many demonstrations that protested			
the unfair of African Americans.			
Dr. King's nonviolent and peaceful actions helped to bring about the Civil Rights			
Act in 1964.			

The Civil Rights Act said that African Americans had to be treated the same way		
as everyone else.		
His of justice won him the Nobel Peace Prize in 1964.		
Dr. King was shot by someone in 1968.		
His was mourned by the world.		
Today, people still remember his dream, a dream that his children would live in		
a nation where they would not be judged by the color of their skin but by the		
of their character.		



Unit 13. Immigrants to America



Date:		

Immigrants to America
The United States is a nation of
In fact, most Americans have someone in their family who was an
immigrant.
Over the years, immigrants from all over the world have made to
the United States.
After Christopher Columbus landed on the continent of America, the first
immigrants went to this new land in the 1600s.
Some were adventurers who wanted to make quick fortunes, and others were
people looking for religious freedom.
During the 1700s, many people went to America from Western European
countries.
They moved to America because of the land and the better
opportunities than they could expect at home.
Not all immigrants went to America because they wanted to.
Millions of African Americans were brought there against their will and were
forced into slavery.

It was only at the end of the Civil War that they became free.	
the middle of the 1800s, more people were immigrating to the	
United States.	
People from Southern and Eastern European countries to explore	
the western parts of the United States.	
Soon, Asians also went there to find work.	
As the result of continuing immigrants, many different groups	
and their different cultures can exist in the United States.	



Unit 14. The Civil War



Date:		

The Civil War
In the spring of 1861, a deadly conflict between the northern and
southern parts of the United States.
It was the Civil War.
Eleven southern states wanted to leave the United States of America over the
issues of slavery and states'
They wanted to continue owning slaves, who on cotton
plantations, and did not want the federal government to with
their local laws.
Both the North and the South thought the war would be short.
The South's strength was its
Southern soldiers were good at riding horses and using guns.
The South also had many well trained officers.
The North had a larger population and more resources than the South.
The North had factories that could make better weapons and uniforms for its
armies.
The South did well at the beginning of the war.

However, after President Lincoln issued the	Emancipation Proclamation which
abolished slavery, the conditions turned to t	he North's favor.
The South lost to the North at the Battles of	Vicksburg and Gettysburg in 1863.
Finally, the war ended with the	of the South's General Lee in 1865.
Even though the cost of the war was huge, re	econstruction started
African Americans got citizenship.	
Best of all, Americans could	the Constitution and stay as one
united country.	



Unit 15. Recycling: A Way to Save



Date:		

Recycling: A Way to Save		
People need natural resources to live.		
However, our natural resources are quickly disappearing.		
If we using oil so quickly, some scientists say we will not have		
enough for everyone by 2020.		
What is a way to use natural resources?		
Recycling can be an answer.		
Recycling means to reuse materials by changing them into new products.		
It also the amount of going into landfills.		
Recycling saves energy.		
It takes less energy to recycle materials than to produce new items.		
Saving energy means that we cause less air, acid rain, and		
greenhouse gases.		
, many communities around the world are trying to recycle.		
It is easy to do.		
First, find out which materials can be recycled.		
Paper, glass, and plastic are the most common.		

Then, place the different materials in containers.
Put them out for collection or take them to a recycling center.
It is also important to buy recycled products or those that can be recycled.
By buying recycled products, we can help to save energy and natural resources
at the same time.
No one would want the world with dirty air, polluted water and dry and
soil.
You can make a difference.
It is never too late to take action.
Get started now!



Unit 16. Who Is Santa Claus?



Who Is Santa Claus?
Who is Santa Claus?
Why do people think that he children's socks with
on Christmas Eve?
The Santa Claus story is based upon St.
Nicholas, a Christian bishop from Lycia.
He was born in the 4th and was known for giving gifts to the
poor and children.
The name Santa Claus is an American version.
It comes from Sinterklaas, which was the Dutch name for Saint Nicholas.
When Dutch arrived in New Amsterdam in the 17th century, they
brought with them their practice of leaving shoes out for St. Nicholas to fill with
gifts.
The name Sinterklaas later changed into Santa Claus.
During the 19th century, Santa Claus became a rich in children's
literature.

His mythology gained more through poems such as A Visit From
Saint Nicholas.
The most modern version of Santa Clause, who wears red clothing and black
boots and has a white on his face, was invented by an
advertisement for Coca-Cola in 1939.
Santa Claus has many different names depending on the language and place.
He is called Father Christmas in England and Pere Noel in France.
He is also known Shengdan Laoren in China.
What is Santa Claus called in your country?



Unit 17. The Ten Suns



The Ten Suns
A long time ago, the god of the sky, Di Jun, lived with his wife and ten suns.
The suns never went outside together.
Because their heat would be too much to
Each morning, Di Jun's wife took one sun to the eastern
Then, her sun walked across the sky.
The people on the were thankful for the sun and
gifts to Di Jun and his wife.
One day in the morning, one sun said, "The walk could be fun if I had some
company."
The ten suns all to go out together and went out to the sky.
The suns were laughing and talking with each other.
They were having fun.
When came, the people were shocked to see all the suns.
The crops, and the rivers and lakes dried up.
The people and animals also became weak.

Di Jun called his suns to come back, but they did not listen.
The suns did not know what they were causing.
The ten suns were destroying everything on the ground.
With tears in his eyes, Di Jun shot nine out of his ten suns.
The suns became crows. Soon, only one sun was left in the sky.
Each day, the sun takes his walk.
And each morning, the other nine sons greet their brothers as crows and wait
for their parents' forgiveness.



Unit 18. Tikki Tikki Tembo



His mother was very shocked, so it took even more time to tell her
to bring the ladder.
"Find the ladder for Tikki Tikki Tembo Nosa Rembo Chari Bari Ruchi Pip Peri
Pembo," cried his mother.
So, when Tikki Tikki Tembo was, it took a very long time for him
to recover from his because he had been in the well so long.
Fortunately, this taught the Chinese people a lesson in their
naming

Unit 19. Using Estimation Strategies



Date:		
	•	

Using Estimation Strategies
You may read an article about twelve thousand that visited the
Everglades in Florida.
Or you may hear the news that millions of comma butterflies moved north of
Edinburgh.
In these, how can the or scientist figure out their
numbers?
It is almost impossible to count the birds or butterflies in a large population.
Scientists and reporters can figure out numbers by using estimation strategies.
An estimation is an calculation of a quantity or value.
It using clues to make a sensible guess or estimate.
For example, suppose you need to count the that are in a large
jar.
You can use a lesser number or an amount of something as a to
estimate a greater number or amount.

In this case, take out five beads from the jar first.		
Next, guess how many times you need to grab five beads to empty the jar.		
Then, you can figure out the number of beads without counting them one by		
one.		
This is the same way that scientists and reporters the number of		
birds in a large population in an area.		
They choose a benchmark number of birds in a small area.		
Then, they figure out the approximate number of all the birds in the entire area.		



Unit 20. They Travel in Fives



They Travel in Fives
The animals living in Alaska wanted to go to see the Northern Lights.
"There are only thirty seats left," said Leader Polar Bear.
"Then, half should be for us penguins, and the rest can be for the polar bears,"
said Leader Penguin in a voice.
The polar bears and penguins needed to take the floating pieces of ice to get a
closer look.
But how could they count to thirty?
All the animals looked at each other in confusion.
"Okay, all the polar bears get on the ice," Leader Polar Bear.
The polar bears stepped onto the ice.
Some fell into the water and did not know what to do.
No one knew how many polar bears or penguins could on one
piece of ice.
And, sadly, no one knew how to count to thirty.
Then, a young polar bear the leaders and said, "If five animals
ride on one piece of ice, it will be easier to count."

"Five!" an angry penguin.
"If five animals are on one piece, six pieces of ice will thirty," the
young polar bear responded.
The animals gathered six pieces of ice.
It was easy to see how they should share the six pieces of ice.
To make the numbers even between the polar bears and the penguins, three
pieces were for the polar bears, and three were for the penguins.
"One, two, three, four, five," the animals in one voice.
Six pieces of ice—five animals on each piece of ice— made a of
thirty animals that sailed to see the light show.

