

The Spirit of the Rio Grande: The History, Culture, and Environment Del Bosque

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School Setting

Cleveland is a middle school which is going through a "Renaissance" period. We are looking for ways to improve our teaching methods and at the same time meet the individual needs of our students. The school is child-centered and geared toward making students into active learners. Teachers use a variety of methods to encourage students to reach their goals, and thematic units are utilized to integrate curriculum into all academic areas. The school population is as diverse as the New Mexico inhabitants. There are many different races and cultures at Cleveland, and the population continues to change and grow with the growth and expansion of our city. We are located in the North East Heights in a small community environment. The students' social status and backgrounds vary tremendously. The economic level of the population ranges from indigent students to an upper-middle-class level. Approximately thirty-five percent of our students receive free or reduced lunch through federally funded programs. The majority of students are of Anglo decent. Hispanic students are a close second with their numbers increasing rapidly. Native Americans are in the minority, with even less African-Americans. We presently have approximately 890 students at Cleveland Middle School. The students' needs are greater than ever before, both in special education and in regular education. Our goal is to engage students in learning and improve their reading skills. Educating these students is quite a challenge since students today appear to have more problems academically, emotionally, physically and economically than ever before.

Class Setting

Cleveland students are no different than the majority of students in Albuquerque. They come to school with a wide variety of values, beliefs and abilities. Since I generally teach sixth graders, I get the opportunity to shape students' minds and behaviors thereby preparing them for the intense curriculum of middle school and high school. When the students first walk into my classroom, I notice how very young and innocent they look. On their faces, I see signs of puberty just beginning to set in. They are very fearful because they have preconceived notions about the "evils" of middle school students and the environment in general. Suddenly, in middle school, students are

thrown into a less sheltered environment that is both hectic and challenging, and they are expected to act mature and responsible. Yet, they are still "babies" in many ways. While some parents ignore their children's needs and budding maturity, other parents are still not ready or are unwilling to accept the fact that their children are now pre-teens. It is difficult for parents to give their children more freedom and some independence so the children can socialize and make an easier transition into young adulthood.

While viewing my students' folders, I cannot help but notice how different and needy the students appear. These are special education students with a wide variety of disabilities. Poor reading ability appears to be the most handicapping condition for these students. I cannot help but wonder, "Why are these students not functioning at grade level in reading? As a matter of fact, why are they usually two to three levels behind their peers? Shouldn't they have learned to be better readers in Elementary School? Progressively one comes to understand that children in special education require repetitive instruction, much time on task, a variety of methods, and have a difficult time retaining information.

My classroom has a low teacher to student ratio and functions as a cross- categorical environment. This means that the classroom will have a variety of disabilities from educable mentally handicapped to high functioning autistic students. The "norm" however will be learning-disabled students who are of average or near average intelligence. However, most students are below average in one or two academic areas such as reading and math. Generally, the students are poor spellers.

The maturity level of the students is just as varied. Some students are still interested in recess while other students are more concerned with the opposite sex. They vary in age from eleven to fourteen. Like most sixth graders first entering middle school, academics are not foremost in their minds. Many students enter school with a variety of emotional and behavioral problems. Much of my time will be spent dealing with their individual issues.

Academically, the students' test scores range from the third percentile to the ninetieth percentile. However, the student's test scores are generally well below the fiftieth percentile. It all depends on the disability of the students. Teaching special education is very challenging, yet it is very rewarding. You have to love teaching in order to be an effective teacher.

In my classroom, which is self-contained, I teach all subject areas: linguistics, math, science, language arts, history and reading. The

curriculum unit is geared for a sixth grade level student. However, modifications may be made as needed for individual students. It is difficult for me to ascertain which disabilities students will have until I can assess them when the new school year begins. Generally, the majority of my students are two years behind in academics. Therefore, adjustments may be made to fit individual students' needs. Language arts and science can easily be incorporated into most Individual Education Plans. This strategy seems to work best for my particular students.

Rationale

In order to experience the story of the Rio Grande, one must look at its past and present inhabitants, the various cultures of its people, its enticing music, its folklore, and the delicious food and water. All these things come together to form our beloved New Mexico.

I have a personal interest in New Mexico. I am one of those rare creatures that they call a native New Mexican. I am proud to be a New Mexican because of our states' rich cultural heritage. Evidence of its many cultures is everywhere, from its pueblo style houses to its red chili ristras, to its tin work and Santos. I am a fifth generation New Mexican from Spanish decent. Since childhood I have heard stories of my "antepasados," primarily my great-great grandfather Donaciano Vigil who was the second territorial governor of New Mexico. My parents shared our history with me thus helping to instill pride in my lineage, and pride in my culture thereby helping me to build a great self-image.

Although many of us have acculturated and become "Americanized," our beliefs and values remain predominately Hispanic. One of the values that we cling to revolves around preserving the land and valuing the use of water. Water has become a very important commodity. And through the middle of Albuquerque flows the Rio Grande. The Rio Grande is the main river in New Mexico—approximately two thousand miles long. No longer is it turbulent, nor does it look clean and blue. This river which gives us life is the primary reason we are able to call New Mexico home. As our professor Enrique Lamadrid states, "El Agua Es la Vida." How foolish of us to think that we can take and take from its aquifer and that its supply of water is limitless. This neglect cannot be ignored. We must continue to preserve the cultural lifeways that have kept us healthy in the past. This curriculum seeks to highlight the importance of our eco-system and encourages our children to become preservers of the land and its water use.

We are fortunate to have an oasis here in the desert called the Bosque.

We are able to view first hand the flora and fauna, and the creatures which inhabit this forest. Creatures depend on a healthy, balanced eco-system in order to thrive. Many creatures, flora and fauna have become extinct and others are facing similar situations. Our children must be exposed to the importance of caring for the environment and its inhabitants in order for future generations to also benefit from its beauty. For these reasons, I wish to teach my students about the Rio Grande's eco-system. I want students to learn about the rio's past and present inhabitants and I want for students to appreciate their culture, and also to have respect for the culture and language of other people. This curriculum unit is designed to educate students about the Rio Grande and to familiarize them with the Bosque, and also to instruct them on the environment of the Rio Grande.

The curriculum unit I am proposing to teach is a nine- week thematic unit that will integrate many subject areas into the curriculum; however, I will primarily focus on science and language arts. Other subjects will be touched on to give an holistic approach to the unit. We will look at the geographical location of the river, and the route the river travels to reach its destination. We will touch on the history and culture of the past inhabitants and continue with the plants and insects of the Bosque. We will be using the *Bosque Curriculum Guide* for many lessons. Music and poetry of the region will also be integrated into the language arts curriculum. I would also like for my students to be aware of the importance of water. And I would like for them to realize that even great rivers like the Rio Grande can dry up if we do not limit our water intake and that in the end it will affect us all. In order to hold student's interest and keep them involved, my objective is to provide students with an interesting and captivating curriculum and to make them active learners.

Background

History

The arrival of the Paleo-Indians marks the beginning of the inhabitants of the Rio Grande. These people were hunters and gatherers and moved from place to place in small groups. Their exploitation of the region's plants and animals was minimal and the area probably recovered quickly. Plants were used for food and medicinal purposes, while others were used in the construction of shelter, weapons and for making baskets. There were cottonwoods with swamps and marshes in and around the Bosque. The river was wide and interspersed with cottonwoods and aquatic and semi-aquatic plants (Scurlock 132).

Next, came the predecessors of New Mexico's Pueblo Indians. They

cleared areas for agriculture and began farming. By the time the Europeans arrived there were many farming villages along the central valley of New Mexico. When Don Francisco Vasquez De Coronado arrived in New Mexico there were fields of maize and areas full of cottonwood groves. The natives' homes were built of mud, some of stone, and some were two stories high. With the colonization in 1598 more water was diverted for farming, and within two centuries an estimated one hundred thousand acres was being cultivated (132).

By the year 1839 Josiah Gregg, an explorer, wrote that there was little timber to be found in the Bosque except for the cottonwoods. The timber that was present had been nearly wiped out. It had been used for fuel because there was no other firewood except in the mountains and people had to travel a long distance to reach it.

In the mid-nineteenth century a German physician and naturalist visited the area and wrote some detailed observations about New Mexico. He found sagebrush, chamisa and other shrubs but apparently no grass was left because of overgrazing by sheep. He found few cottonwoods in and around Albuquerque. He mentioned some cottonwoods east of the Rio Grande (133). This would be our present day Bosque.

In 1846 Henry Smith Turner noted that the cottonwoods were being depleted and that there were some efforts to preserve the Bosque south of Albuquerque. Again in the twentieth century, Harvey Ferguson, an Albuquerque writer, mentioned that the areas in the flood plain did not appear to be altered. There were cottonwoods, small lakes, and aquatic and semi-aquatic vegetation such as cattails and salt grass. Summer flooding was common covering the entire flood plain (134).

In the late 1800s the Anglo farmers arrived which increased the acreage of irrigated land around the Rio Grande. Because of the increase in irrigation the flood plain became water logged. This then caused an increase in the sediment load due to overgrazing and an increase in farming. The sediment then caused a decrease in the flow of the Rio Grande. The intense irrigation caused an increase in the alkalinity of the soil. To alleviate flooding in these areas, dams and drainage canals and a more complex irrigation system were put into effect. However, the result was a change in the vegetation and hydraulics of the region. Russian olives and salt cedar trees were introduced since these trees have deeper roots and can tolerate a much higher alkaline content. There began a decrease in cottonwood trees that needed periodic flooding to exist. Soon Russian olive trees and salt cedar became naturalized into the environment of the Bosque.

With continued changes in the riparian environment people grew concerned and The Rio Grande Nature Center was established (136-140).

In 1929 the area saw its last great flood. Albuquerque was flooded and much of the existing infrastructure was destroyed. Because of the damage to property the river was confined to its present state. The river was no longer able to flood the plains. This one element has had a tremendous effect on the reproduction of young cottonwood saplings. As cottonwoods decreased, exotics increased. Some

Naturalists wanted to remove the exotic trees. While others, felt that change was inevitable and we should preserve the environment as it is today (DeBuys 4-7). The Rio Grande Nature Center continues to plant exotic trees and only beautiful old Cottonwoods remain. There is much speculation about what we should or what we should not do. However, the fact remains, it is our responsibility to preserve the natural beauty, the eco-systems, and the spirit of the Rio Grande.

Culture

We have three dominant cultures in New Mexico: Native Americans, Latinos and the Anglos. The first to arrive were the Native Americans. Imagine being a Native American and seeing and appreciating the wild boundless beauty of New Mexico. They witnessed the overflowing, meandering Rio Del Norte with the beautiful White and Black Rock Canyons. The Natives must have stood in awe at these landscapes. It must have been a sight, with the sun glistening on the water and the magnificent sunsets that cast their glow on the Sandias. These landscapes are what New Mexico is all about. No wonder these early inhabitants worshipped the earth.

Native Americans

According to Paul Horgan, the Native Americans of the Southwest believed in many gods. They believed that the sun was their father, and that the sun had two mothers which had come from the underworld to create the sun. They created the sun out of shells and stones. The mothers then carried the sun to the east and dropped him behind a mountain, and soon he began to rise. The sun wore a mask that covered his whole body. In the evening the sun went down to the underworld and the world grew dark. The sun needed a companion so the moon was created in much the same way. It was placed in the same path as the sun to follow the sun's path by night. Since more light was needed at night, the stars were created from crystals and shone brightly. The clouds were believed to have been their dead ancestors. They had come back to bring them good things like rain,

hope and also answer their prayers. Lightning came from mischief they said. They tell a story about two twin gods Masewi and Oyoyewi whose father was called the Sun. Once they came to earth to visit an empty village. While there, the twin gods mischievously stole some bows and arrows, but they did not escape unnoticed, for they were seen by the people that lived in the village. The people chased them, and shot arrows at them. A whirlwind caught them and took them and threw them back to their world, but Masewi was able to send an arrow flying through the sky and it made a very loud sound. This became the first lightning bolt. The thunder was an ancient goddess and the wind could be either a man or a woman. People prayed in many different ways, but they always used corn meal to spread on anything they wanted to bless, (the corn meal was believed to have life since it came from a living plant). They would hold it to their lips and breath into it the essence of their life (24-6).

The Native Americans had many rituals and beliefs and their land was considered holy. The Rio Grande was considered to be a living thing with a spirit of its own. It gave life; therefore, it was blessed. The men had ceremonies in which they bathed in the river. And when they bathed they would always remember to bless and thank the river for giving them life. Horgan states it best when he says:

Horgan states it best when he says, The Pueblo Indians ordered the propriety of their life to the landscape that surrounded them. This act was implicit in all their sacred beliefs. It recognized the power, nearness and blaze of the sky; the clarity of the air; the colors of the earth; the sweep of mountains, rock, plain; and the eternity of the river. Environment directly called forth the spirit and the creations of the people. (6).

The Native Americans with their many gods and stories of creation lived their lives not as individuals, but as people belonging to a group in strict societies. The individuality of a person was sacrificed. It was buried deep in their conscience and revealed only in their many dreams. But soon another man came to live by the Rio Del Norte and he was a different breed. He too had many rituals and prayers; however, he believed in only one god.

Spaniards

Eventually the Spaniards came to New Mexico, not necessarily to conquer, but to spread their Christian beliefs. These were proud men. Some noble, some not so noble. They had the spirit of Rome within

them. Since Spain was at one time a province of the Caesarian Empire, many of the Spanish youth had left their villages and had gone to the cities of Rome. They went as adventurers to learn and experience what they could, and they became the essence of Rome. They learned the life and death challenge of the arenas, and they were fascinated by it. Their daily lives revolved around their Christian beliefs. They believed that God had granted the king his authority; therefore, to them God and king were as one. They believed in representative government, and they valued learning. They came on ships with great banners and great sails that had drawings depicting ancient Rome. The taste of adventure must have been their greatest preoccupation, for they were willing to suffer great hardships to reach their destination. Food was scarce and they were always hungry. Lice, cockroaches and rats were quite plentiful. The storms were threatening, but still they came.

Yet, their love of the king was great and any mention of King Charles was listened to with great interest. The king was gracious; he wanted justice for the Indians, and most of all he wanted their souls to be saved through the teachings of Christianity. And although the king had not been to the New World, he was well informed about everything that took place there. The emperor had a strange custom. He would whip himself with a blood-laden flail for atonement of his sins. At his death he bequeathed his flail to his son Prince Phillip, who in turn continued the practice of whipping himself. Spain began to crumble under the guidance of King Phillip II. Battles were lost and England was even instrumental in invading their country. They were also successful in burning and destroying one of Spain's richest cities-Cadiz. Through it all, the king handled his misfortune with courage and faith. When hard times hit Spain, men of nobility lost their fortunes and people grew hungry. When King Phillip died he left a legacy of ruin and destruction for his successors (102).

And so, the people came to the New World in search of adventure and a new beginning. Their personalities were already formed from their beliefs, their values and their love of life. They settled near and around the Rio Del Norte. They built their churches with great care and exact specifications. The monks were well- educated men who were quick to learn the natives' language. Thus they began to instruct the natives in Christianity.

Homes were built of mud since wood was scarce. The homes reflected the size of the family. They began by building a square patio, and as the family grew the home grew with more patios and rooms. The walls were about three feet thick; and there was always a chapel in which to pray. Possessions from Spain were much admired by visitors

and considered to be "very European." Their furniture was formal and uncomfortable. The chairs were tall and straight and the seats were narrow. The floor of the homes was left bare, but when available black earth was used which was then polished to shine once it hardened (118-9).

Women dressed according to the fashion of Spain with fitted bodices and long skirts with short, sleeveless- jackets, and long sleeved shirts. The men wore long jackets and long sleeved shirts. Their pants were long and they wore a long sash around their waists. In this they hid a small weapon. The elite or "gente de razon" had many outfits to choose from. The men wore linen shirts and under clothes. Suits were made of velvet and leather. The pants had buttons all the way down the sides. Indian servants dressed in their typical native attire. Blankets were added when they learned to make them from the Spaniards (123-4).

The whole environment looked very much like Spanish soil. The land was dry and bare except for the land near the river. This land also became overgrazed around the eighteenth century due to the over use of the choice land. The Spaniards grew crops such as corn and squash, and they raised their own cattle and sheep. The men worked in the fields and the women kept busy at home making soap from animal fat, dyeing wool, sewing and preparing meals.

However, the work was suspended for an occasional feast day, and the whole hacienda celebrated with a fiesta. On June twenty-fourth they celebrated the feast of Saint John. Saint John was the apostle who baptized Jesus in the River Jordan. The river water was blessed and considered to be holy. Everyone bathed in the river, but not together since the Spaniards were modest people. First the women and girls bathed. Then the boys and men bathed (135).

The greatest feasts were for marriages. It began with the groom's father visiting the bride's parents. Once the marriage proposal was accepted the families prepared for the feast. The bride's parents decorated the house and prepared for visitors while the groom's family prepared the trousseau and selected the food and gifts. It was their responsibility to present the bride with these things. They also provided the cooks who would prepare the feast. Many relatives and friends came and stayed for days. The next day the groom took his new bride home to his father's house. There they added new rooms to the hacienda (133-6). Thus, they began their new life together.

Other times, work was suspended to deal with the Apache raids. All left the fields and ran for cover within the huge cottonwood gates. Men shot their muskets from the roofs, and sometimes lives were lost.

If someone were unfortunate enough to have not made it to the hacienda, they were caught and killed in full view of everyone. The Spaniards considered this to be an unavoidable part of life (133).

The Spaniards who inhabited New Mexico, like their forebears, believed in good and evil. They felt that evil was in the flesh and in the spirit. And since their king The Emperor Charles V had used the flail on himself, so they in turn continued the practice of self-flagellation. This behavior had been in practice since the thirteenth century. Men gathered together in chapels called Moradas to pray and inflict pain upon themselves. The meetings and rituals were conducted in secrecy. And so on Good Friday the brothers reenacted the crucifixion of Jesus Christ. Rituals were followed and blood was sacrificed (140).

The Spaniard's art was limited to religious works. Crosses and santos were carved out of wood. They made drawings on little tablets of wood called retablos. The images reflected their own image. The Santos were idolized and prayed to and became an integral part of the household. As time went by the life of the hacienda took on its own form and things of the past were put aside; life became more simplistic. The Spaniards found contentment in their daily lives. There were no schools, so children had to learn from their parents. Instruction was part of their daily lives. Like the Indians, the Spaniards learned to appreciate the beauty of the land with its brilliant sunsets that surrounded their haciendas, and they learned to appreciate the boundless beauty of the Rio Grande. But since life is ever changing, there soon came a new order and a new inhabitant to El Rio Del Norte.

Anglos

One of the most destructive forces for cottonwood trees is a small brown creature called a beaver. It's home is in the water, and it's home is built out of mud and twigs. This is where their food is stored and this is how they protect themselves from predators. Beavers love to chew the bark from the cottonwood trees, and in order to reach the smaller branches way up high, they will gnaw away at a tree until it falls. You can usually spot the beaver's home by the dams they create in the rivers. When the water is not deep enough, they will create a dam in order to build their home. Beavers weigh about thirty or forty pounds when full-grown. This little creature alone was instrumental in changing the nation during the first decade of the nineteenth century (157-8).

Many hunters came in search of beaver skins that they sold for a few dollars a pound. The Mexicans who governed the territory at the time

tried to put restrictions on these hunters. They requested hunters to buy licenses, but beaver pelts were highly in demand and the hunters were relentless in their pursuit of them. Anglo- Americans even tried to purchase licenses from Mexicans, although they could have been arrested. Nothing seemed to deter the Anglo- Americans. They continued their search and infiltration of the area. The Indians tried to defend their land, but they were met with an aggressive and unrelenting adversary who fought like them, took scalps like them, and even lived in the wilderness like them (159).

The mountain man was bearded and wore a red loincloth near his body. On the outside of his body, he wore a long buckskin jacket with fringe. On his feet he wore moccasins made of deer or buffalo hide, and he wore a leather belt through which he thrust a pistol and a knife. He always had with him his beaver traps that were made of leather and wood. Usually he traveled alone, but sometimes he traveled with a partner. He wore a hat of rough wool. And when he left for the mountains, he had two horses that carried his supplies and a third horse that he used for riding. When he had all his supplies together, he was ready to head for the mountains of Taos. He would stay there for an entire season (161).

The trapper's clothing was original and expressed his individualism. It was simple and adapted to his environment. A wide-brimmed hat was used for the prairie or for the river. Fur caps were used for mountains and woods. They wore loose white shirts with long sleeves that had lace or buttons at the wrist. The pants were fitted to the knee, and boots were worn. The boots had thick soles and square toes. They were hunters and very prideful of their expertise as sharpshooters. They were also boastful and prone to exaggeration. Competitions were held to see who could create the most exaggerated story (221).

If everything went well for the trapper, and if his pelts weren't stolen or ruined by animals, he could expect to make about two thousand dollars. Many times, the trappers would fashion a canoe out of cottonwood trees. Then they would stay in the canoe at night to protect themselves from prowling animals like grizzly bears that were then quite plentiful. Once the trappers had caught their limit they would sometimes raft down the river from New Mexico to El Paso, unless the Mexican authorities confiscated their pelts by invoking some old law (162).

Other times, the trappers would come down from the mountains and look for a place to stay and then take a bath. The women would prepare his bath while he waited in a wooden tub. As the water was poured over his body, he would make a familiar cry, "Wagh," as if the

simple pleasure of bathing had long been forgotten. And the awakening of this simple pleasure was pure satisfaction. When the trapper took his first drink after a long dry spell, he would utter that familiar sound, "Wagh" when that homemade whiskey called "lightening" burned through his body like fire. The trapper was wild. He seemed guided by instinct and impulse. While the Mexicans were formal and governed by governmental authority, the trappers made their own rules and expressed their individuality. This was a new breed of a man. He was uninhibited and aggressively independent. This man that came to the Rio Del Norte (165).

Trade continued to grow, and the paths became well traveled. The trappers were the first to show the way over the Overland Trail. Santa Fe grew and became an established trade center. Merchandise came by sea, and then it continued on wooden carts from Mexico to Santa Fe. The merchandise was costly prior to Mexico's independence, but the restrictions were relaxed somewhat after Mexico's independence in 1821. Trade from the east was encouraged. A delegation was sent to the east to try to entice traders to come to Santa Fe. Wagon trains from the east took about seventy days to reach Santa Fe. It took less time, forty days, with an empty wagon (176).

In 1846 a new era was about to take hold. It had its foothold with the northern trappers and the eastern traders. In 1846 General Taylor's army came to the Rio Grande for the war with Mexico. The army consisted of soldiers from all nationalities and all walks of life who came and established a new society. Although very different, they had similar traits and beliefs. They were individuals who valued freedom and wanted self-government and a democratic doctrine. They worked hard to achieve these goals. Though they encountered many obstacles and a vast wilderness, they pushed on westward (176).

Soon the demand for beaver pelts began to diminish, and the cattle trade brought a new breed called the cowboy. The cowboy wore hats with large brims to protect himself from the sun while he worked out in the frontier. The hat's crown was dented and this gave the hat a pyramid shape. He was a horseman who was much like the trappers of the frontier. The cowboy was the last to live a life of wild freedom. However, his life was dangerous, lonely and monotonous. He wore boots and his shirt was a cotton flannel with stripes, checks or plaids. His pants were made of denim and sometimes he wore a vest. When he worked, he wore leggings made of cowhides. He also wore spurs of silver or iron, and always carried a pistol on his side. Of the trappers and the traders, he was the one that left a legacy that is remembered through motion pictures, films and television programs. His life is romanticized, and idolized, yet never clearly touches the true reality of

his life (220-1).

These are the people who make up the three dominant cultures of the Rio Grande, They are the Native Americans, the Latinos, and the Anglos. Their attributes and contributions are still very much a part of New Mexico. Their beliefs and traditions and customs are enmeshed within our society. We have made changes to improve our existence. And we have managed to preserve our individuality without sacrificing our diversity.

Our state is unique in its cultural heritage and nowhere is it more apparent than during the Christmas Season. Its uniqueness is reflected by the adobe homes decorated with luminarias to prepare the path for the Christ Child. It is also demonstrated at the State Fair where we see all the three cultures come together. Each culture unique in its own way, yet blended together to form our state. Enter the Indian Village and you will see dancers with rich beautiful costumes. On the dancers' necks you will see beautiful silver and turquoise squash blossoms. The dancing is a sight to see with the males wearing white, feathered headdresses and the females wearing full colorful skirts. You will hear the slow methodical beat of their drums telling stories of ancient ones. The Spanish Village will entice you with sounds of music, and laughter. Ladies wearing brightly colored outfits will be preparing to demonstrate a typical dance of Mexico or a Ballet Folklorico from Spain. Everywhere you will see and smell the delicious food of New Mexico, from the green chili burritos to the Indian fry bread. Go to the arena and you will see people dressed in their cowboy style clothes. Visit the rodeo and you will hear the sounds of music, or see cowboys riding wild horses, or attempting to ride a Brahma bull. Many races will be present, and although we have had our share of conflict we have learned to live together and appreciate each other's contributions.

When people ask me what I like most about New Mexico, I always say that it is difficult to answer that question because there is so much that I like. I enjoy the beautiful sunsets and the celebration of cultures. I love the Jemez Mountains, and the Pecos River, and only recently I had the opportunity of rafting down the Rio Grande, and was inspired by the many beautiful landscapes and the peacefulness of the Rio Grande.

Some things will always be constant while yet others will continue to change. We continue to see great changes in the landscape, in our rivers, in the environment, and in our people. We seek to improve our lives, but we are not always cognizant of our future. We have seen a change in the "improvement" of the Rio Grande, but we have also

witnessed its demise. We have eliminated flooding by restricting the Rio Grande, but in the process we have destroyed the growth of cottonwoods in our Bosque, and recently we have endangered a species of fish called the silvery minnow. For a few years now we have been fortunate to have a wet climate; however, the state of Texas has not been so fortunate. They are suffering a drought and the Rio Grande that once flowed to the Gulf of Mexico no longer reaches its destination. Concern for the ecological damage to our land is essential, and preservation of our aquifers should be foremost on our minds.

Implementation

Lesson Plan 1- Introduction to the Rio Grande Unit.

Objective: Students will reflect on the origins, symbolism and utility of water.

New Mexico Standards and Benchmarks (2b)

- Students will understand and use Language Arts as a learning tool.
- Students will use language to understand various sources of information, local traditions, and culture as resources for learning.

Time: Forty-five minutes

Material: Map of the Rio Grande, students' notebooks, bucket of water.

Procedure: Prepare students by questioning them on their knowledge of the Rio Grande. Make a web on the chalkboard with the student's responses. Discuss the responses. Water means a great deal of different things to many different people but to all people water is life giving. In some instances it could mean death. We use water to be baptized and to cleanse our bodies and purify our souls. We need water for our crops to grow, and we need water to sustain our lives. We also use water for bathing and for recreation. According to John Nichols in *Dancing on the Stones*,

Water is the true power and glory that defines our universe of life. Heavens may twinkle with vast fires of exploding hydrogen, and the rocks on Jupiter may hold within their dark hearts the secrets to gravity and time-but water gave rise to the only living web we'll ever know, and water created my active imagination.

We are creatures composed of water and we cannot exist without it.

Pour water in a bucket, then have students touch and feel the water. Ask them how the water feels to their touch. Ask students to write a short essay on what water means to them. Have students enter all their assignments in their notebook. Show students the map of the Rio Grande, and instruct them as to where the rio originates and the path it follows to reach it's destination The Gulf of Mexico.

Lesson 2- Field Trip to the Bosque (Bosque Guide Book pg. 21)

Objective: Introduction to the Rio Grande and eco-systems Del Bosque

New Mexico Standards and Benchmarks (3a)

- Students will use form and function to organize and understand the physical world.
- Students will explain function by referring to form and explain form by referring to function.

Materials: Hat, water bottle, sunscreen, cameras, various magazines, and index cards. Also a small plastic bag to collect samples of vegetation for future model of river.

Time: One hour – three hours

Procedure: Prepare the students by familiarizing them with the terms: *Bosque, aquatic, riparian, hydrology*. If you are planning to spend the day at the Bosque, be aware of some of the rules. Visitors are asked not to bring any food to the Bosque. However, there is an area set aside near the parking lot where students may have their lunch or a snack. At the Bosque, you should remember to stay on the trails and remind students to take care of the environment. Also set perimeters, so that no one gets lost. Tell the students that they will be going on a Scavenger Hunt. Distribute magazines and ask students to pick out pictures of things that they feel are found in the Bosque. Ask them to paste their pictures on the index cards. Tell students that they are to hunt for the pictures that they have selected in the Bosque. The students may be divided into groups of two or they may hunt individually. The first person or group to successfully find all the items on the card wins the game. Have a discussion about why some of the items may not have been found in the Bosque.

Take a walk through the Bosque and try to identify the plants. Many plants are already labeled. Have students write down the names of some of the plants, and as an extension activity have the students do some research on the computer for the medicinal benefits of the plants they selected. Also, have students draw a picture of one of their

favorite trees or plants. Notice that the Bosque has only large cotton wood trees, and that the Russian olive trees and the salt cedar appear to be taking over. Enter these drawings and information in student journals. As you walk through the Bosque, pick up leaves or pieces of plant life that can be used to create the students' own model of the Rio Grande.

Notes: If you find a leaf that is chewed, it probably belongs to a pillbug or an arthropod. The arthropods were brought from Europe. If you see cottonballs flying around they are probably seeds from the Cottonwood Tree. Cotton-like fibers surround the seeds and aid seeds in travel. Only females produce seeds. Look under trees and you will probably find a rolled leaf. It was once the home of the caterpillar.

The caterpillar has probably become a small moth and flown away.

Lesson 3- View the film *One River, Many Voices*

Objective: To familiarize students with the plight of the Rio Grande.

New Mexico Standards and Benchmarks (5c)

- Students will speak clearly and write effectively for a variety of audiences and purposes.
- Students will express facts, ideas, and opinions in a variety of settings in oral and written form.

Materials: VCR and video

Time: Ten-minute video and fifteen- minute writing assignment.

Procedure: The film may be purchased or it may be seen at the Bio-Park.

Assessment: Have students write a short summary of the film, or have students create a story convincing people of the importance of preserving the Rio Grande.

Lesson 4- Demonstration by CIUDAD Soil and Water Conservation District.

Objective: To make students aware of river hydraulics and the natural and unnatural changes in the Rio Grande.

New Mexico Standards and Benchmarks (2c)

- Students will use evidence, models, and explanations to explore the physical world.

- Students will design and develop models.

Materials: Butcher paper, salt, flour, water, sand, cinnamon, vegetation, sticks, or toothpicks to create a riparian environment.

Time: The demonstration takes about thirty minutes, but it takes about one hour to set up the exhibit, and another hour to take it apart. It will also take about sixty minutes to create the student's own model. Preferably this activity should be done on the following day.

Procedure: Call CIUDAD Soil and Water Conservation District and make an appointment to have them demonstrate their model of The Mobile River Study Center. I suggest you make the appointment as soon as possible. Students will learn that the water- shed extends from the mountains to the river and that the mountains are considered to be the top of the watershed and the river is the bottom of the water shed. They will learn that what effects one thing can have an effect on everything else because everything is interconnected. Students will learn that acequias, mountains, bridges, dams and even construction sights can have an effect on the river. Once the students have seen the demonstration and have had time to manipulate the objects in the exhibit, they can design and reproduce their own model. The students may create their own model by using salt dough and various plants to simulate the Rio Grande and the riparian environment. Students may collect their own plant material at the Bosque, or they may look for plants around their home.

Some of the students can design their model after the Rio Viejo while others can design their model after the Rio Nuevo.

Assessment: Photographs should be taken of the exhibit and of the students' models. Models should be graded on the completion of the project.

Note: Salt Dough Recipe

Two cups salt to one cup of flour. Slowly add one cup of water to this mixture and mix until you get the consistency of clay. Add cinnamon to this to give it a brownish color. Wrap mixture very tightly in wax paper or clear plastic wrap until ready to use.

Lesson 5-Field Trip to the State Fair.

Objective: To view the celebration of the three dominant cultures of New Mexico.

New Mexico Standards and Benchmarks (8f)

- Students will appreciate and respect their own language, culture, and literature, and will learn about the languages, cultures, and literature of others.
- Students will develop, analyze, and use social and interpersonal skills to understand and communicate effectively within their own cultures and with the cultures of others.

Materials: Bus passes for city bus, entrance fee to the State Fair varies. Ten- twenty dollars is needed for the entrance, games and for the purchase of food.

Time: It will take an entire day to view the main events at the State Fair.

Procedure: Tickets may be purchased at the door. Prices may vary depending on the day. You should arrive by nine o'clock, and plan on spending the day. Places you will want to see: The Indian Village, The Spanish Village, The Horse Arena, and the bandstand. Visit the Fine Arts Building and the building that houses the Arts in the School. Don't forget to try the fry bread, and the burritos. And if you still have an appetite, try the corn on the cob, dripping with butter. Have students bring small notebooks to the fair. And while at the fair, interview people at the Spanish and Indian Village and also interview cowboys at the arena. Students can formulate their own questions depending on whom they choose to interview. Sample questions are:

- Where were you born?
- How old are you?
- Where are you from?
- Where did your ancestors come from?
- Are you a member of a certain tribe?
- Do songs tell a story? What is the story?
- What is the name of one of the dances?
- How long have you been dancing?
- What kind of rodeo sports event do you participate in?

Note: Interviews should go in students' portfolios. Photographs should be included.

New Mexico Standards and Benchmarks (9a)

- Students will use language and literature to gain insight into their own and others' lives, and to build understanding of the moral and aesthetic dimensions of human experience.
- Students will use language and literature to build understanding of self and others.

Objective: Students will view the history of New Mexico through displays, exhibitions, and works of art.

Materials: Bus tokens, admission is free

Time: You will need a full day if you are taking the bus.

Procedure: The museum has four centuries of Rio Grande History presented through displays, exhibitions, and works of art. The Gem Theater features a movie on the history of Albuquerque. You can witness how Albuquerque has changed through the years from its beginning to the present time. The exhibits vary depending on the featured artist. If you are lucky you can see artists demonstrating how they carve Santos out of wood. There is also a trunk available that holds some interesting items for students to touch and feel.

Assessment: After doing some research, students will write a short essay on their favorite artist, and draw an illustration of their favorite painting.

Lesson 7-The Story of La Llorona

Objective: To familiarize students with one of the favorite myths of the Rio Grande.

New Mexico Standards and Benchmarks (8a)

Students will appreciate and respect their own language, culture, and literature, and will learn about the languages, cultures, and literature of others.

Students will explain and appreciate elements of literature from diverse cultures.

Materials: Story- book titled *La Llorona*.

Time: One to two hours depending on student's ability.

Procedure: Read students the story of La Llorona. Once students have listened to the story, ask them if they have heard of any similar

stories. Once you have discussed the students' stories remind students that these stories were told to keep children away from rivers and to scare them into being obedient children. Once you have read and discussed the story, have students write their own river myth.

The story of La Llorona is a tale about a young woman who was very vain. No man seemed to be good enough for her until she met a man who was as handsome as she was pretty. They fell in love, married and soon had two children. As the children grew, Llorona's husband began to tire of her and he began to see other women. One day as La Llorona was walking with her children, a coach appeared with her husband and his mistress. La Llorona was enraged because her husband had taken notice of her children, but not of her. And lately she had noticed that he would stay in town and would not come to see her. He would come to visit the children, but would ignore her. She grew jealous of the attention he gave to the children. When she saw him she grew very angry. She decided to take her children to the river and to throw them into the water. Once she acted on her anger and drowned her children, she grew remorseful. She could hear the cries of her children, so she threw herself into the river to try to save them, but alas she was too late, and their bodies have never been found. But it is said that you can hear her crying and wailing at night as she looks for her children up and down the river. One can only surmise that the husband must have been heart broken because she had committed the ultimate act of revenge against him. She had killed his children, and deprived him of his namesake and future heirs.

Assessment: Students should write and edit their story. Once completed, add to their portfolio.

Lesson 8-Poetry Del Rio Grande

Objective: To familiarize students with poetry of the southwest.

New Mexico Standards and Benchmarks (5e)

- Students will speak clearly and write effectively for a variety of audiences and purposes.
- Students will develop, write, and participate in drama, music, poems, and stories, and draw on prior experiences, knowledge, culture, and home language to speak and write proficiently across the curriculum.

Materials: Book on poetry, paper and pencil, tape on exploring nature with music, tape player, and dictionaries.

Time: One hour

Procedure: Read students some poetry and discuss the meaning of the poem.

Put the tape in the tape player and have students listen to the sounds of water flowing. Instruct students that they will be creating a poem about the Rio Grande. The poem may be written in free form or students may choose to use the words Rio Grande to write their poem. For example: R- raging river, I-intense, O-oxbow etc... This activity is a good way to help students get started writing, especially if students are having problems deciding what to write. Students can write their poem in the shape of a meandering river, or students can draw an illustration to go with their poem. Students can also compose their poem on the computer. Any method is correct. It is left up to the student's own creativity and imagination. Poems should be included in their portfolios.

Note: Music tape field trip. You may also purchase activity books from the gift shop. Students will have to bring their own lunch, and snacks. Hats and sunscreen are a good idea. Also students should wear good walking shoes. Don't forget your water bottle, and your camera.

Time: El Rancho De Las Golondrinas is open from 10:00 am- 2:00 p.m.

It takes about one hour travel time to reach the area. The cost is \$1.50 for students and \$3.50 for adults.

Procedure: El Rancho De Las Golondrinas is a Spanish Colonial Ranch. It was once a stop on the Camino Real Trail in the early 1700s. It was established as a museum in 1972. Some of the buildings have been restored while others have been brought from other sites. There are four mills on the site. Two of the mills are in working order and students can witness first hand the grinding of wheat. There is also a small school- house that gives students insight into what school was like in the "olden" days. There is also a Morada at the ranch. The Morada was built at the present sight but it is not an original. It was copied from a Morada in the town of Abiquiu, New Mexico. Sometimes a Penitente is present who will speak to you about his religious order. There are many festivals at Rancho De Las Golondrinas. If you go during the Fall Festival, you will be able to witness many different activities taking place. There is spinning, weaving, and dying of wool, and you can witness the blacksmith making horseshoes. There are also hands on activities like the grinding of corn (and one of the students' favorites appears to be the washing of clothes in the river as evidenced by the long line for this activity.) You will be able to see ladies making fresh bread and have the opportunity to purchase some at a reasonable price.

Notes: Remember to have students bring their cameras for this field trip. This is a great culminating activity for this unit because it is lots of fun.

Lesson 9- Field Trip to Rancho De Las Golondrinas

Objective: Students will explore and witness a typical Spanish colonial ranch.

New Mexico Standards and Benchmarks (8e)

- Students will appreciate and respect their own language, culture, and literature, and will learn about the languages, cultures, and literature of others.
- Students will develop, analyze, and use social and interpersonal skills to understand and communicate effectively within their own cultures and with the cultures of others.

Materials: You will need to make reservations, and when you make your arrangements inquire about purchasing an Activity book. The book gives you some history of the area and gives students many activities that will prepare them for the the southwest. Santa Fe, N.M: Sunstone Press 1997.

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