DOCUMENT RESUME

ED 478 404 SO 035 101

AUTHOR	Old Elk, Arlene; Stoklas, Jackie
TITLE	After the Rain: Rain.
INSTITUTION	Heard Museum, Phoenix, AZ.
PUB DATE	2001-00-00
NOTE	77p.; For related units, see SO 035 097-102.
AVAILABLE FROM	Heard Museum, 2301 North Central Avenue, Phoenix, AZ 85004-1323. Tel: 602-252-8344; e-mail: education@heard.org. For full text: http:// www.heard.org/rain/rain/rain.pdf.
PUB TYPE	Guides - Classroom - Teacher (052)
EDRS PRICE	EDRS Price MF01/PC04 Plus Postage.
DESCRIPTORS	Art Activities; Community Resources; *Cultural Context; Educational Facilities; *Integrated Curriculum; Interdisciplinary Approach; Language Arts; Mathematics; *Museums; Primary Education; Primary Sources; Sciences; Skill Development; Student Educational Objectives; *Thematic Approach
IDENTIFIERS	Native Americans; *Rain; United States (Southwest)

ABSTRACT

The Heard Museum (Phoenix, Arizona) has developed and updated an integrated curriculum for use in grades K-3. The goals for this curriculum are to: (1) share museum resources with schools; (2) promote cross-cultural understanding through a focus on rain, a universal requirement for life; (3) help students understand that Native Americans are contemporary people maintaining identity and values in the modern world; (4) develop an awareness of the varied expressions of rain in the art, literature, and customs of the native people of the greater southwest; and (5) use culturally specific materials as a vehicle for developing essential skills, especially as they relate to the Arizona Student Assessment Program. The curriculum may be used in any order. This unit contains: (1) art prints of artifacts in the Heard Museum collection related to rain; (2) specific cultural information and materials relating to a particular Native American tribe or nation featured through the art prints this cultural information is the basis for some of the lessons in mathematics, science, and language skills; (3) mathematics lessons with a special emphasis on measuring and comparing; (4) science lessons, usually hands-on or observational units; (5) language skills, including reading, listening comprehension, writing, vocabulary, and poetry skills; and (6) art projects. (BT)

RAIN

After the Rain:

Heard Museum
2301 North Central Avenue
Phoenix, Arizona 85004-1323

http://www.heard.org/rain/rain_pdf_main.html

Updated 2001

Introduction

The Heard Museum has developed this integrated curriculum for use in schools in grades K through 3. The overriding goals for this program are to:

- 1. Share museum resources with schools;
- 2. Promote cross-cultural understanding through a focus on rain, a universal requirement for life on earth;
- 3. Help students to understand that Native Americans are contemporary people maintaining identity and values in the modern world;
- 4. Develop an awareness of the varied expressions of rain in the art, literature and customs of the native peoples of the Greater Southwest;
- 5. Use culturally specific materials as a vehicle for developing essential skills, especially as they relate to the Arizona Student Assessment Program.

This curriculum is divided into six units that can be used in any order.

Each unit contains:

- 1. **Art Prints** of artifacts in the Heard Museum collection related to rain. While these prints are used for art history and aesthetics lessons, these artifacts are also used to begin lessons in math, science and language skills.
- 2. **Specific cultural information and materials** relating to a particular Native American tribe or nation featured through the art prints. This information includes a map, text from the RAIN exhibit applicable to the people, and other information of special interest to children. This cultural information is the basis for some of the lessons in math, science and language skills.
- 3. **Math lessons** with a special emphasis on measuring and comparing.
- 4. **Science lessons,** usually hands-on or observational units.
- 5. **Language skills,** including reading, listening comprehension, writing, vocabulary and poetry skills.
- 6. **Art projects**

This K-3 curriculum was developed teachers by Arlene Old Elk (Dine') and Jackie Stoklas during a year-long residency at the Heard Museum, made possible by the Lila Wallace-Readers Digest Museum Accessibility Fund. Additional information was developed by the Heard Museum Education Department staff.

Rain

The Southwest United States and Northwest Mexico exist in a rain shadow cast by mountain ranges to the west. Rainfall is light and undependable. There are two rainy seasons: summer and winter. Often, summer rains are brief and highly localized, as clouds suddenly boil up from the south in the afternoon and early evening. Winter storms come from the Pacific Ocean and may arrive in waves, soaking the ground. In higher elevations, the rain becomes snow. In between these two seasons are dry periods, when great care must be taken to ensure life and growth until the next rain.

The indigenous people of the Southwest welcome rain into their lives and land, praying for the blessing of rain through a variety of ceremonies and creative expressions. Many expressions of rain and water focus on rain's connection to making life and growth possible. Expressions may be enduring, such as embroidered figures on a ceremonial garment. Some are intended to be temporary, such as body paint on a ceremonial participant or the pigments of a sand painting. Other expressions take the form of music, song, oratory, poetry, and prayer.

For all of the cultures in this exhibit, rain has deep meanings that reflect a culture's unique experience with the universe. This deep spiritual relationship is far from the stereotype of the "Indian Rain Dance", or feeble jokes suggesting a superficial and simplistic magic.

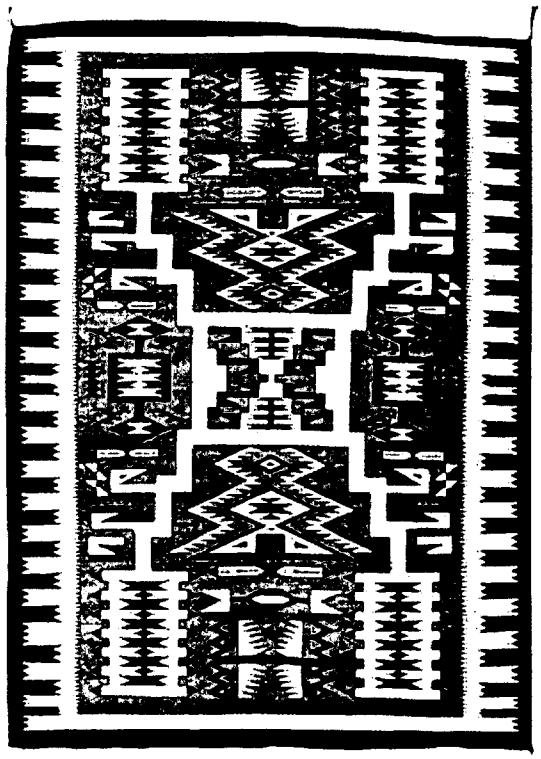
As you look at specific designs or symbols, please remember that they are part of a whole and have meaning as part of that whole. Expressions of rain span centuries. Some of the forms change, but the intent of people to bring the blessings that come from rain into their lives and the world remains unchanged.

ARTS

Designing a Blanket

Activity: Students will select and combine individual symbols to design a blanket.

Focus Activity: Look at the art print of the storm pattern rug, and use it to discuss symmetry, balance, repetition and individual design elements.



Outcomes:

1) The students will learn to recognize patterns and their repeated use.

2) The students will understand the balanced and symmetrical use of design elements.

3) The students will use some basic designs to create their own rugs by cutting and pasting.

Vocabulary:

- balance, symmetry, repetition, design element, symbol

Materials:

- copy of rug background for each student, copies of design elements #1 and #2, scissors, glue, markers

Procedure:

1) Hand out a copy of the rug background and of the design sheet to each student.

2) Instruct the students to decide what background color they will use for the rug. Then they must decide the colors for the design elements and color them in. Explain to the students that they are doing this first, just as a Navajo weaver makes these decisions before she begins weaving.

3) Instruct the students to cut out all of the individual designs first and play with them on the page before they begin gluing them down. They may want to try different combinations before they design their final rug.

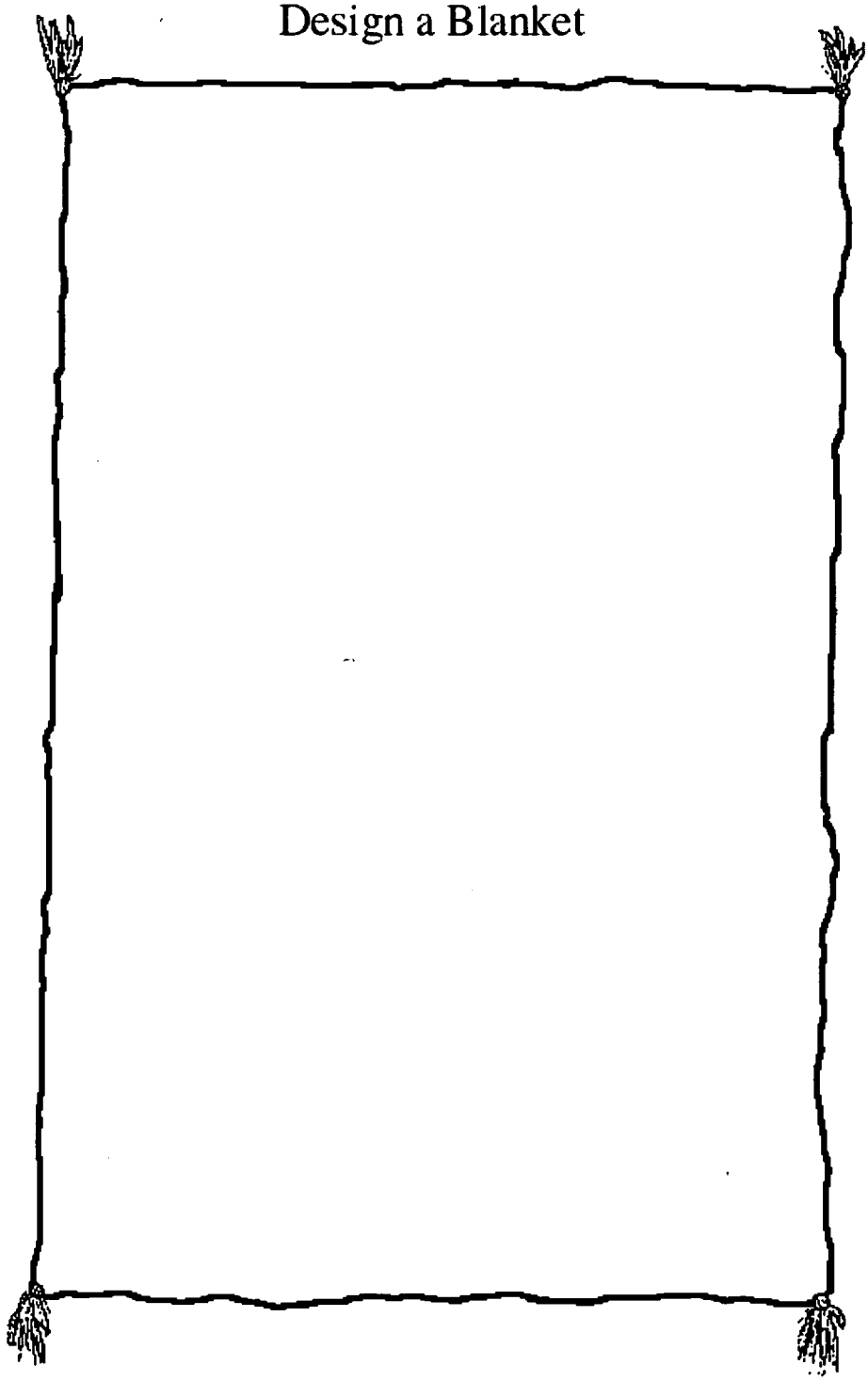
4) Once they have decided which designs they are using and how they are placing them, remind them once again to stand back and notice if the rug is balanced. Ask them to pay attention to their use of color as well as the designs.

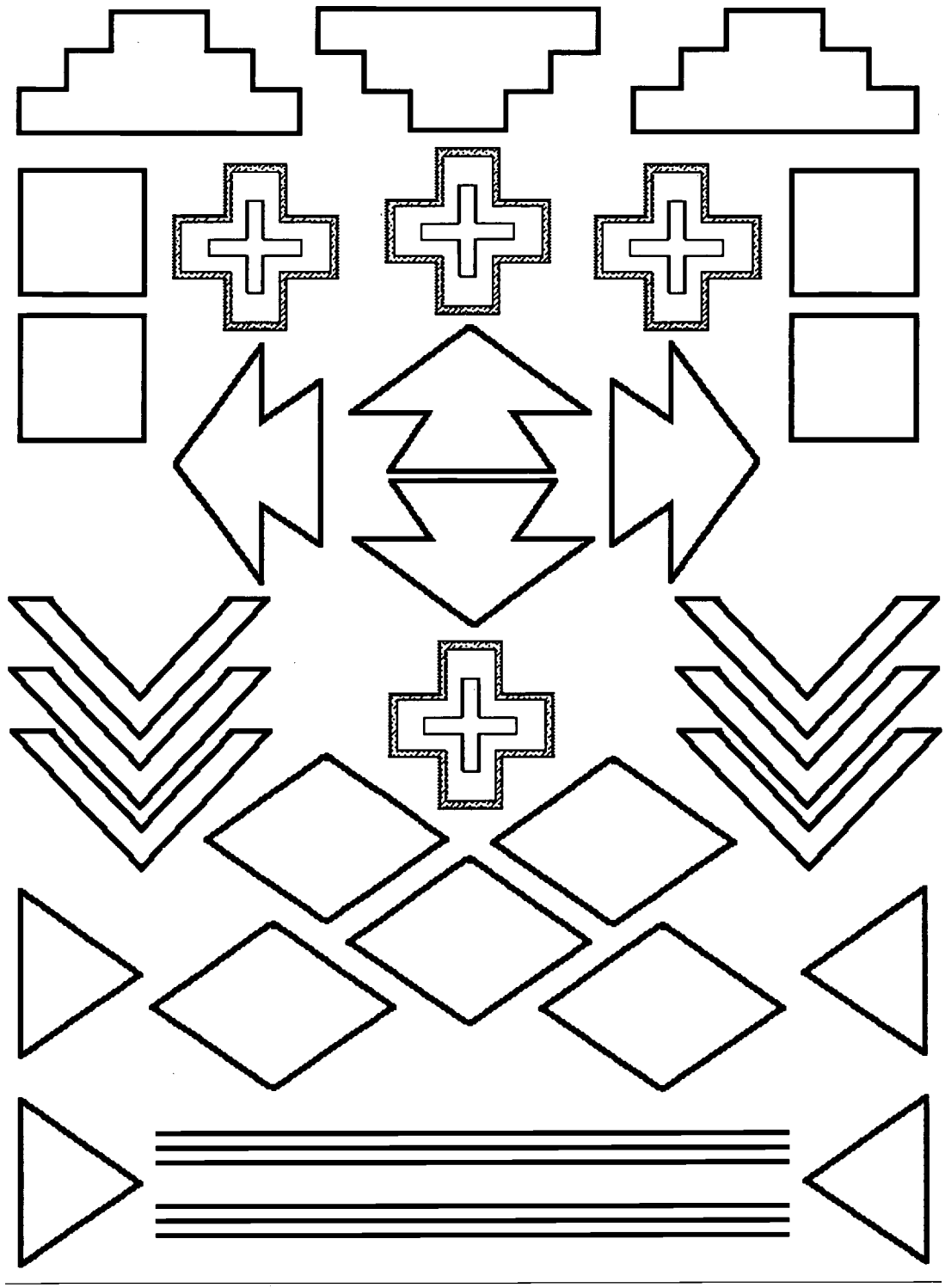
Assessment:

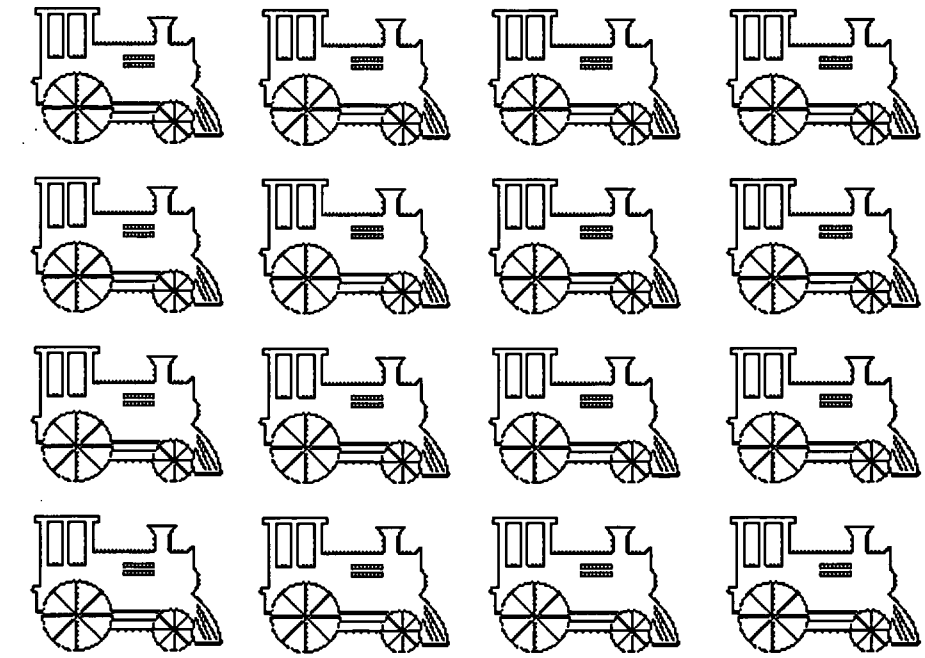
1) Were the students able to make creative yet balanced compositions?

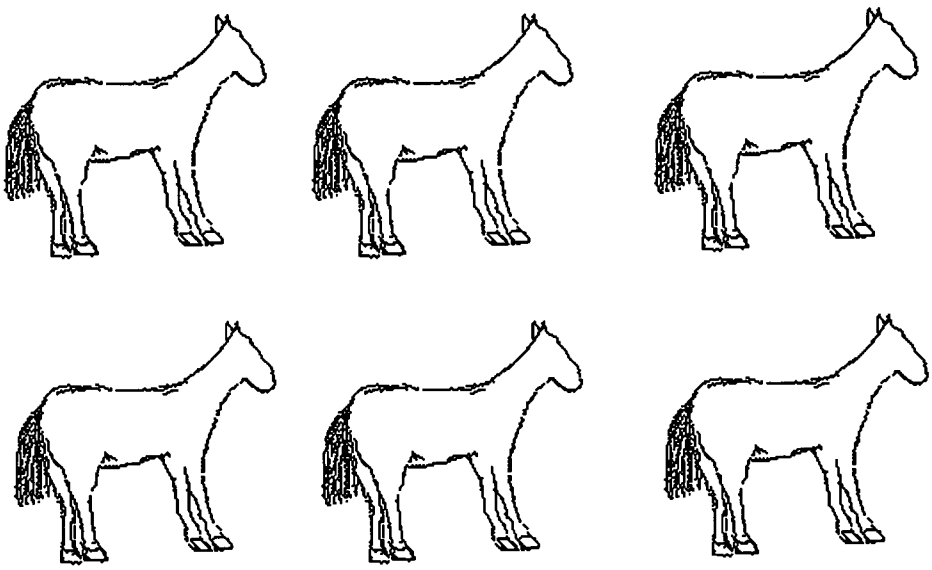
2) Did the students pay attention to the overall use of space?

Design a Blanket





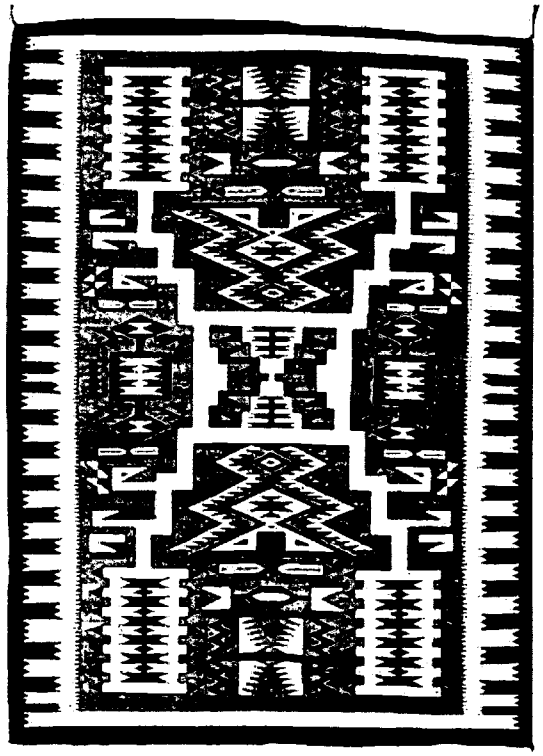




Illustrating a Book

Activity: Students will make illustrations for the legend "Wind Always Follows Rain".

Focus Activity: Introduce the concepts of medium and style. Look at the prints Storm Pattern Rug. Discuss the different media used by the artists, both two and three dimensional. Then bring attention to the different styles (e.g., realistic, abstract, stylized, representational).



Outcomes:

- Students will illustrate "Wind Always Follows Rain".
- Students will experiment with working in different media.

Vocabulary:

- medium, style

Materials:

- paper, markers, paints (acrylic or watercolor), pastels, photocopies of "Wind Always Follows Rain" pages for students. Note: see reading version of this story for teachers in the Language section.

Procedure:

1) After reading "Wind Always Follows Rain", have the students select one of the pages for illustration (if done as a group activity). If this is an ongoing art activity, each child illustrates each page over a two-week period and makes a book.

2) Have the students experiment first with the different media and decide which would work best for the subject they have chosen. Use this as an opportunity to discuss concepts such as line, shape, form, color and texture.

3) After having done some practice paintings/drawings, ask the students to choose a medium to make their final piece. Once they are all done, ask the students to hang their illustrations in sequential order (if a group activity) or to share their book with the class (if an individual activity).

Assessment:

1) Were the students able to understand the major concepts?

2) Did the students experiment with the media and play with their different qualities?

Wind Always Follows Rain

adapted from a Tohono O'odham story

Every Tohono O'odham child knows that Rain is blind and always follows Wind. When they think about the time Wind wouldn't come, they know how bad that was. Let me tell you about it:

Wind was out playing by himself when he saw the pretty girl carrying water. Rain was asleep and he wanted a friend to play with so he swept down and flipped her skirt up.

When her skirt moved, the girl was startled. She jumped and grabbed at it. When she jumped, she dropped her water pot and it broke.

She ran home crying and told her father what had happened. He was so angry, he ran out shaking his fist. He yelled: "Wind, go away and never come back!". Other people, remembering times when Wind embarrassed them or made them uncomfortable, joined in with angry shouts.

Wind's feelings were hurt and he blew away in an angry rush, pulling sand and grass with him.

For four years the people watched and hoped that Wind would come back and bring his good friend Rain. For four years they looked at the sky, watching and watching, but Wind did not come and so, of course, Rain did not come either.

With no rain for four years the river was dry and food wouldn't grow. The people decided that they needed to find Wind and ask him to come back.

They wanted to ask Coyote to search for Wind, but first they had to find Coyote. As they tried to decide where to look, someone said: "Don't look for Coyote. Just have a party and he's sure to find us." So they did.

The party wasn't much fun. There wasn't much to eat or drink and everyone was worried, but at last Coyote came.

Coyote agreed to look for Wind. He looked for four days. He looked in all four directions, but he couldn't find Wind or Rain.

When Coyote returned without seeing Wind, the people got together again. "What can we do?" they asked each other.

They decided to send Bear. Bear looked for four days. He looked through the mountains. He went into caves, but he couldn't find Wind or Rain.

Next they decided to send Buzzard. He flew for four days. He looked and looked, but he couldn't find the two friends.

Then they sent Hummingbird. Hummingbird knew that Coyote, Bear and Buzzard had looked hard. He would have to find another way to find Wind and Rain. Hummingbird pulled some soft feathers out of his tail and tied them to a stick.

He used this as a Wind indicator. He flew everywhere, stopping from time to time on a bush and holding his Wind indicator out, but it didn't tell him anything. Finally, he landed on a greasewood bush. He held up the Wind indicator and the feathers moved, just a little.

Hummingbird smiled. He knew where Wind was. He flew on and found a pleasant breeze. He continued on and found a small creek and green grass by a dark cave. He flew into the cave and found Wind and Rain sleeping by a fire.

He woke them up and told them how the people and animals were suffering without them. He asked them to come so that the dry spell would not destroy all the people and animals.

Wind said: "I remember how much it hurt when they told me to go away. What do you think Rain?".

Rain said: "No one wants me. They complain when I come. You are my friend and you lead me everywhere I go. You decide and I'll stick with you."

Wind told Hummingbird: "Tell the people if they really want us to come, they will hold a ceremony for four days. When it is over, we will come and celebrate with them."

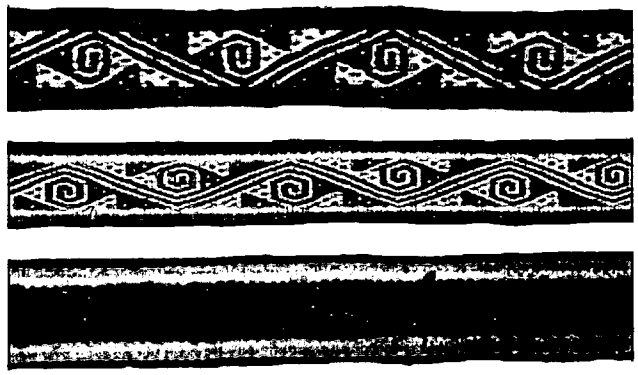
When Hummingbird returned to the people and told them what Wind had said, they were excited. They went out and picked the saguaro fruit from high on top of the sturdy cactus. They made juice to drink so they would be strong for the four days of singing.

They sang and danced for four days. On the fifth day, Wind came followed by Rain.

Everyone was glad to see them. No one complained about the embarrassment or inconvenience they might cause. The people knew how important Wind and Rain were! Everyone welcomed them and had a wonderful celebration.

A Bird's-Eye View

Activity: Students will draw scenes and objects as seen from above.



Focus Activity: Using the print of the Rarámuri Sashes, explain to the students that the spirals represent mountains as seen from above. Discuss with them the nature of topographic maps and explain how this is one way of seeing a landscape. Have them think about other things that a bird might see from the sky.

Outcomes:

1) Students will understand that how one depicts an object changes depending on the angle from which one looks at it.

2) Students will become familiar with the uses of topographic imagery.

- **Vocabulary**:
  - topography, bird's-eye view, relief, texture

Materials:

- paper, pencils, topographic map or globe, print of Rarámuri Sashes

Procedure:

1) Begin by looking at the globe or map. Ask the students if they can see what the different images are. Point out how shading and texture can show depth or changes in the surface.

2) Ask the students to choose 3 or 4 objects in the classroom and place them on the floor (if they are small enough to be moved). Have the students draw the objects while looking down on them. Explain that the drawings should look different than if they were done from an eye-level perspective.

3) Once the students are comfortable with looking from this new perspective, ask them to imagine an entire scene from this viewpoint. They can draw either an outdoor scene and pretend they are birds or clouds. Or, they can depict an indoor scene as if they were spiders looking down from the ceiling.

Assessment:

1) Were the students able to identify topographic features?

2) Were the students able to draw their objects from above?

3) Could the students then incorporate this idea into a more complex scene?

Extension:

- Ask the students to look through old magazines and cut out any photographs or illustrations that are from a bird's-eye view. They can then paste them together.

CULTURAL

Rain in Life

The Rarámuri live in the southwest corner of Chihuahua, Mexico, among the higher elevations of the Sierra Madre Mountains. Over half of the annual rainfall of 24 to 30 inches occurs between mid-June to late August. Another rainy season occurs between October and February. The Rarámuri plant crops of corn, beans, potatoes and squash in April and May, prior to the start of the summer rainy season. To protect against drought, Rarámuri men dip the tips of their plows into ponds or streams before spring plowing.

Rain in Ceremony

Rarámuri rain and healing ceremonies begin in June to assure that *Onoríame* (The Creator) will maintain his strength and send rain. Rain and healing are linked in the ceremonies because there can be no healing without rain and no rain without healing.

There are three aspects to the ceremonies: the offering and drinking of *batariki* (corn beer) as a sacrament; dances done as a form of prayer; and ritual healing as performed by shaman and chanters on behalf of those who are ill and for the farm animals and fields. The dances encourage rain, therefore rain is an extension of the ceremony in dances.

Expressions of Rain

The main expressions of rain in Rarámuri culture occur in chants associated with the *yúmari* and *dutúburi* ceremonies. These chants have healing aspects.

The Rarámuri do not place symbols or designs representing rain on objects. They do represent water as it flows in rivers between the mountains. According to Rarámuri ethnobotanist Enrique Salmón, rain is indirectly present through its links to the place from which all living things are born and on which they grow.

The Rarámuri History of Creation

A long time ago, the Creator made the worlds of plants and animals. It was some time later that he decided to add humans to this world. In man's original form, he fell to the earth as rain and hit the ground running. At first, humans lived for only one day and had only a short time to get things done. That is why, the Rarámuri say, the first man ran.

The first people got so much exercise with all this running, that they began to live longer. This meant that they had more time to do things. Unfortunately, as they settled, the people became corrupt and forgot their obligations to one another and to the Creator. The Creator was angered by their behavior so he caused a great flood to happen. The waters rose and all the people began to die. Two children, a boy and a girl, were the only survivors. They had escaped to the top of a high mountain.

The Creator wanted to help the children to start over again. The creator gave them corn and bean seeds and told them to plant them. The children threw down the seeds and watched the corn growing. They saw that as the corn reached a certain size, people began to emerge from the plants. These people repopulated the earth and were the ancestors of the Rarámuri.

The Rarámuri believe that corn is sacred. Corn reminds them of where they came from and also of their obligations to the Creator. They also remember their origins when they run and participate in races, which have always been an important part of their life.

Rarámuri History and Environment

Rarámuri is the name the Tarahumara use for themselves; it means "foot runners" in their language.

The Rarámuri live in the Sierra Madre Occidental, in Chihuahua, Mexico. This land is geographically diverse and quite harsh, ranging from highlands and plateaus to canyons and gorges. It is estimated that 40,000 to 50,000 Rarámuri live in this region today. Scholars are not sure exactly when the Rarámuri came into this region, but evidence suggests it was at least 2000 years ago.

When the Spanish Jesuit missionaries arrived in northwest Mexico in the early 16th century, they encountered the Rarámuri, who lived a semi-agricultural and nomadic lifestyle. The Rarámuri lived in isolated areas, often in caves or scattered homesteads. Their main food sources were corn, beans and squash, with fish, small game and gathered wild plants supplementing their diets, particularly between harvests.

By the 17th century, the missionary presence was strong and they had built many churches and attempted to bring the Rarámuri into settled villages. Besides the missionaries, there were others who were settling in the region such as farmers and miners who were interested in the recently discovered gold and silver. These various pressures caused the Rarámuri to begin a slow and gradual migration toward the west and south of the Sierra Madre.

Despite the continuing presence of outside influences, Rarámuri lifestyle has not changed much since the initial contact with the Spanish. The Rarámuri adopted cattle and other livestock as well as steel tools, but have maintained their traditional subsistence patterns of farming, hunting and gathering. There were some Rarámuri who did not move west during the 17th century and became integrated with the Spanish settlers. These people became a part of the many mestizo communities; mestizo is the Spanish word for people of mixed Indian and Spanish ancestry. The mestizo live in more concentrated settlements with local schools and stores. They use cars and trucks and have furnished homes, unlike the Rarámuri people.

Rarámuri Life: The Family and the Farm

The Rarámuri family is usually made up of the parents and their children. Grandparents only live with them once they have reached the point where they cannot care for themselves. This is because the Rarámuri value independence. For the first two years of their lives, Rarámuri children remain in constant contact with their parents. When a Rarámuri boy is three days old, he is visited by a shaman who performs a ceremony for the boy's protection; this ceremony is performed two more times, several weeks apart. After this the boy is named. The shaman performs the same ceremonies for girls, but the first one takes place when the girl is four days old, and it is repeated four times.

After the age of two, Rarámuri children are allowed to roam freely. Rarámuri children are taught to be independent at a young age. By age 5 or 6 they may be left alone all day, or sometimes overnight while their parents are away tending the crops of another field, or attending a *tesgüinada* (a work party). Children's independence is fostered by giving them duties from an early age, such as tending the goats. Rarámuri children are never punished physically.

Because of the climate in the Sierra Madre, most Rarámuri families live in the highlands in the summer where it is cool, and in the canyons in the winter, where it is warm. Every Rarámuri family has two or three plots of land in the highlands. They farm corn, beans and squash, which are the staples of their diet. The reason they have two or three plots is because the soil is poor and the land is too rugged to have tracts of land large enough to grow all their crops.

Each Rarámuri family has a house located near each plot, which are often many miles apart. Only one of the homes is the main residence. This primary Rarámuri homestead consists of a house, the field, the granary for storing corn, and a clearing for working and gathering. The family also usually has a chicken coop and a corral for the goats. Some families also own cattle and sheep. Many families keep dogs to help with the tending of the animals and to help catch small game. The livestock are very important because they provide fertilizer for the crops. The cows help to plow the fields. The

animals are not a major food source, as the Rarámuri only eat meat on special occasions. Instead, the Rarámuri supplement their diet with gathered plants, nuts and seeds, and small game and fish.

These houses tend to be isolated, but five or six of these homesteads make up the basic Rarámuri community unit, called a *rancher*#237;a*. However, due to seasonal migrations, the members of the *ranchería* is not a permanent grouping. The members of a *ranchería* will gather for both social and economic reasons, to trade or to help one another to tend the crops. Rarámuri families are almost entirely self-sufficient and produce most of their own necessities. Their limited contact with outside communities means that they do not often participate in the cash economy.

The sheep provide the wool with which the Rarámuri make most of their clothes. The Rarámuri are well known for their woven textiles. They also use cotton for their clothes, which is obtained through trade. Men wear a breechcloth, held up with a sash, with a simple shirt. Women wear a long and loose cotton skirt, also secured with a sash, and either a shirt or a poncho. Women will also wear a woven headband. Rarámuri children wear the same clothing as adults. The Rarámuri don't often wear shoes, but when they do they are sandals made of cowhide and tied with leather thongs.

Rarámuri houses have roofs made of interlocking logs, and the walls are made of planks. They have little or no furniture. Their belongings consist of mats and hides for bedding, gourds and ceramic jars for food storage and a *metate* for grinding corn.

In the winter time, after the corn has been harvested, the Rarámuri family may move down to the canyon floor. This is particularly common for families who own goats or cattle. In the canyon, the family lives in caves, and the people spend their time weaving baskets and blankets and tending to their animals. The Rarámuri also grow chilies and tobacco in small garden plots.

Rarámuri Social Occasions

Running is very important to the Rarámuri for many reasons. Primarily, it is a social event that brings people from distant communities together; but, it is also a means for them to remember their origins. The Rarámuri gather to participate in an informal race in which the players have to kick a wooden ball across a marked course. If the players are women, they have to kick a hoop and stick across the course. The players make up two teams that compete by running a set amount of laps on the course. The course may be as short as two miles or as long as 12, and the game may last an afternoon or several days. The Rarámuri may place bets on the teams.

The Rarámuri are well known internationally as long-distance runners. They have competed in international endurance races against professional athletes and have won many times. What is most amazing about this fact is that they used sandals with soles made out of truck tires, whereas their competitors used specially designed, expensive running shoes.

The *tesgüinada*, or work party, is another important social occasion for the Rarámuri. This event is sponsored by a family that needs help with their fields. The sponsoring family will ask *rancheria* members and other neighbors to gather at the sponsor's homestead. The *tesgüinada* may last several days, and all the people drink large quantities of *tesgüino*, which is a beer made of fermented corn. *Tesgüino* spoils very quickly and must be drunk within 48 hours.

At these parties, the Rarámuri forge important relationships with one another through joking and trading. These occasions are the only time that the Rarámuri act aggressive and become outspoken; at all other times, they are very quiet and reserved. Rarámuri boys and girls are usually 15 or 16 years of age when they attend their first *tesgüinada.* This is also the age when they are considered adults.

Contemporary Issues in Rarámuri Life

The Rarámuri are being threatened by severe droughts and deforestation. The drought has meant that the crops are failing, and that the Rarámuri water sources are getting contaminated and depleted. As a result, the Rarámuri people are dying from starvation and their children are severely malnourished. It is the youngest and the oldest people who are the hardest hit. This is a major problem for a community that already has a high infant mortality rate.

The situation for the Rarámuri is worsened by the fact that deforestation has been proceeding so rapidly in recent years . Deforestation means that the Rarámuri livestock do not have enough space or food to graze, and also that the people can no longer rely on wild plants and small game to supplement their diets.

Due to their plight, the Rarámuri have received a lot of media attention in recent years. This attention has been a positive thing for them because it has brought them assistance. Many people and charitable organizations have sent food and supplies to the Rarámuri. This relief has been an important means of assuring their survival.

Yaqui History

For centuries, the Yaqui have lived along the Yaqui River in the Mexican state of Sonora. They settled there in small communities. The Yaqui were farmers who grew squash, beans, corn and cotton. The soil in this region is fertile and they were able to plant and harvest crops twice a year. The river overflowed once a year, which was important for irrigating their crops but also meant that they had to move their settlements. In addition to farming, the Yaqui supplemented their diets with gathered foods such as mesquite beans and cactus fruits. The mesquite beans were ground into a flour that was used in making many foods. The Yaqui hunted large deer and wood rats for food. In villages close to the coast, they also fished and gathered clams and oysters.

The Yaqui had their first contact with Europeans when the Spanish arrived in northwest Mexico in 1533. With the arrival of the Spanish, new crops such as wheat and watermelon were introduced, as were cattle. All of these became important resources, which further supplemented their diets. In addition, the Yaqui began to trade extensively with the Spanish, which meant that they adopted a cash economy.

By the 1700s, the Yaqui communities had grown in size and were organized into eight villages. Each village had 2,000 to 4,000 residents, who relied on both farming and trade for their livelihood. By the mid-1800s, these towns had become highly organized political and social units. Each one had its own governor who was elected annually.

The Yaqui Today

The eight villages still exist today but there are only three significant Yaqui communities. Three are almost entirely abandoned due to a short water supply. Two more have become Mexican-run communities. However, the Yaqui still tell stories of their original eight villages and make reference to them. Today, there are Yaqui people found throughout Mexico.

Yaqui economy in Mexico is still based on agriculture. Important crops include: corn, sorghum, chickpeas, alfalfa, peas, lentils, chili, cotton, tomatoes, limes, oranges and vegetables. Because of water shortages, some Yaqui people have had to hire themselves out as agricultural laborers or rent their land to people who can afford to irrigate it.

Historically, the traditional Yaqui house in Mexico was either one or two rooms. Their houses were made of either adobe or cane and mud. Each household usually consisted of several nuclear families.These families could be related by blood or by ritual kinship. Ritual kin were people who took on the role of sponsor or godparent for an occasion such as a birth, baptism, confirmation or marriage. Besides having ceremonial obligations, ritual kin formed a network of support and assistance for one another. They helped one another to take care of both the farm and the family. These ritual relationships are still very important to the Yaqui today, in both Mexico and Arizona.

There are also Yaqui communities in the United States. Starting in 1887, some Yaquis began to leave Mexico to come to southern Arizona. They left Mexico to escape political unrest and continuing warfare. They settled in several communities outside of Tucson and in Guadalupe near Phoenix. Many of them went to work on citrus and cotton farms.

In 1964, the Yaqui were given a reservation outside of Tucson. But it was not until 1978 that the Pascua Yaqui Tribe of Arizona became federally recognized. There are now approximately 6,000 Yaqui in Arizona, and they retain their strong ethnic identity. Unfortunately, poverty, underemployment, and unemployment are major problems for these Yaqui communities.

Yaqui Dances

Dances are an important part of Yaqui arts and tradition, and have helped them to maintain a strong sense of identity. These ancient dances and songs have been known and taught for generations, being passed down through trained individuals. Two of the main types of dances are the *pascola* and deer dances.

Dances occur on a range of occasions, both religious and secular. Sometimes the public and non-Yaquis are allowed to watch the dances. However, the people must observe and respect the Yaquis' wishes that no photos be taken and that no drawings or recordings be made. These public performances are usually shortened to a half-hour.

Pascola means "old man of the dance." The *pascol*a dancer learns the dances by studying as an apprentice under another *pascola.* The *pascola* is inspired to dance because he has seen a vision in a dream. The *pascola* dancer performs at all major occasions including feasts, weddings and sacred occasions. Sometimes he is the host of the event. In addition to dancing, he will pantomime, clown and tell stories to the crowds.

The *pascola* dancer is accompanied by a harpist, a violinist and a drummer-flutist. The dancer wears a large blanket tied around his waist, a belt of metal bells and cocoon rattles around his ankles. The *pascola* will also carry a wooden rattle. The most important part of his dress is the mask. The *pascola* mask is carved of wood and usually painted black or brown. The mask is made to resemble either a human or a goat face. The masks will also have a beard and eyebrows made of either hair or fibers.

The deer dance is another important dance, and it is widely known in the non-Yaqui community. Deer dancers perform at many Yaqui events, but not as often as the *pascola.* However, a *pascola* is always present when a deer dancer dances. The deer dancer wears a breechcloth around his waist, a belt of deer hoof tinklers, and cocoon rattles around his legs and ankles. The sounds of the tinklers and the rattles are meant to remind one of the rustling leaves and of the wind. The headdress is a stuffed stag's head that is tied with a thong (strip of leather) around the dancer's chin. The dancer also has a white scarf that covers his forehead and partially covers his eyes.

If the deer dancer is performing with a *pascola* dancer, he will be accompanied by only the flutist-drummer. If dancing alone, the deer dancer has three musicians who accompany him with the sounds of wooden rasps and of a drum made of a gourd floating in a dish of water. Some Yaqui say the sound of the water drum is like the pounding of the deer's heart, and that the sound of the rasps is the deer's breathing. The deer dancer also carries his own gourd rattles. The musicians also sing in Yaqui. Their songs are about the beauty of nature and they celebrate the lives of animals, including the deer. The songs are not meant to be frightening and make no mention of killing the deer.

The dancer imitates the movements of a deer. The dancer will appear to be a deer running through the woods, searching for other animals and looking out for hunters. Some Yaqui believe that this dance is important because it honors the soul of the deer. This is a way of expressing thanks, to both the deer and the Creator, for providing the Yaqui with food.

The most important occasion for the Yaqui are the Lenten and Easter ceremonies. The deer dances and the *pascola* dances are just two aspects of performance at these celebrations. The four major Yaqui communities in Arizona open some parts of these events to the public. There is extensive preparation and much excitement at this time of the year for the Yaqui community, and men and women, boys and girls, all have important duties to fulfill on behalf of the entire community during this season.

LANGUAGE

Writing a Letter

Activity: Students will write a letter to a Rarámuri boy who narrates the story.

Focus Activity: Read "Dream Runner" by Jacklyn M. Stoklas. Discuss with the students that although the boy is telling his dreams, it is also a personal narrative. Discuss the importance of family and community.

Outcomes:

1) Students will gain experience writing a letter.
2) Students will understand the concept of a personal narrative.

Materials:

"Dream Runner" by Jacklyn M. Stoklas, pencil, paper

Vocabulary: personal narrative

Procedure:

1. Read "Dream Runner" to the students.

2. Discuss with the students that this is a form of personal narrative, and focus on the fact that the boy tells about his family, what they are doing and how they are important to him.

3. Tell the students that they are going to write a letter to the Rarámuri boy telling him about themselves. Ask them to begin by making a list of the things they want to include in the letter. Suggest to them that they include in their lists where they come from, who they live with(if not with their parents) and anyone else in their family who they feel close to and spend time with like pets and friends. Encourage them to include an important lesson that they have learned from a family member or close friend. (Remind them of the important lesson the boy's grandfather taught him.)

4. Ask the students to write rough drafts, using the list to write a letter to the boy.

5. Have the students read their rough drafts to a partner. Have the partners make suggestions about what else they would want to know if they were receiving the letter. Ask the partners to comment on the clarity of the letter.

6) Ask the students to rewrite their letters, using their partner's suggestions, on good paper.

Assessment:

- Do the students understand the structure of a letter?
- Were the students creative in converting their lists into letters?
- Did the students make helpful suggestions to one another?

Extension:

- Have the students write another letter to someone they do not personally know but would like to meet. After a brief personal introduction, have them explain why they want to meet this person, and ask what else they would like to know about him/her.

Dream Runner

By Jacklyn M. Stoklas

In a dream, I open my eyes in the mountains of the land of my souls.

I run through the arroyos and over the streams, finding my way without difficulty, as a Rarámuri boy should.

I run as my people have since we were sent to the earth like raindrops so long ago.

I run to see my grandfather who holds my little brother. He is the one who taught me that each part of my body has a soul.

I run to where the crops grow to help my father pick the sweet corn.

I run to the fields where my grandmother is looking for plants to feed us and keep us well. I know some of the plants and help her look.

I run to my mother, who is making a chicken stew and corn tortillas for the dinner my family will share.

When I am too tired to run anymore, I lie down by my sisters in my home.

I close my eyes, thinking of tomorrow when we will gather to help our neighbors plow their field and plant a new crop.

We will have a tesqüinada, and my cousin will be baptized with corn drink.

We, the children of the corn, will laugh together, enjoying each other's company.

Or run, rolling a wooden hoop along a fallen log.

In my dreams, my souls will always run as Rarámuri have run for centuries. I will live to care for the earth, to run and enjoy life wherever I wake.

Keeping a Dream Journal

Activity: Students will keep a dream journal for a few days.

Focus Activity: Read "Dream Runner" by Jacklyn M. Stoklas. Discuss with the students the nature of dreams. Discuss how dreams are interpreted in different ways by different cultures.

Materials:

- "Dream Runner" by Jacklyn M. Stoklas, paper, pencil, photocopy of chart for each student

Outcomes:

1. Students will understand that some people write stories about what they do during the day, and others write about what they dream.

2. Students will learn to use their senses to make what they read and write seem more real.

Procedure:

1. Explain that "Dream Runner" is a personal narrative, told by a boy telling what he sees in his dreams. Discuss that it is written in English and Spanish.

2. Discuss how dreams can relate directly to your daily life, or how they can be entirely different.

3. Read the story to students and tell them to pay close attention to how the boy's dream incorporates all of the senses. Be sure to review the five senses!

4. Read the story a second time, while the students note on their charts at least three things the boy smells, hears, sees and touches.

5. Have the students write down a few sentences everyday about their dreams the night before. Tell them to pay extra attention to the things they smelled, heard, saw touched and tasted.

6. Depending on the grade level, the students can keep the journal as just a list of images and things, or they can write about their dreams more extensively in a narrative.

Assessment:

- Were the students able to pick out the different sensory perceptions in the story?
- How creative were they in filling out the chart?
- They know that the boy sees a stream, but do they think about the noise it makes, or how it may smell?

Extension:

- Have the students draw their dreams.
- If you speak Spanish, read the story in Spanish to the students so they can hear how the story sounds in a different language.

Vocabulary: "Dream Runner"

- **Arroyo**

I run through the arroyos and over the streams...

- **Corral**

I run with my sister and the goats, chasing them back to the corral by my home.

- ***Tesquinada***

We will have a *tesquinada*...*

- **Baptized**

...and my cousin will be baptized with corn drink.

*Definition: A ***tesquinada*** is an important social occasion that is most often given as a work party. At a ***tesquinada***, local community members join to assist a family that needs help to complete a large agricultural work task. The corn beer ***tesguino*** (also known as ***batariki***) is drunk in large quantities at these gatherings.

Dream Runner

Smell

See

Touch

Hear

Writing a Poem

Activity: Students will write poetry using the poem "April Rain Song" by Langston Hughes, or "August" by Cecilia Nuñez.

Focus Activity: Read the poems "April Rain Song" and "August". Discuss the differences in the structure of the two poems. Discuss the personal nature of poetry.

Outcomes:

1. Students will learn that poems are different than narratives.

2. Students will write their own poem.

Materials:

- "April Rain Song" by Langston Hughes, "August" by Cecelia Nuñez, paper, pencil

Procedure:

1. Read and discuss the two poems.

2. Discuss the rules of poetry:

    - Poems may not look like narrative.
    - Poems do not need to use complete sentences.
    - Poems may rearrange sentence structure.
    - Poems make pictures with words.
    - Poems share feelings.

3. Read the two poems again.

4. Have the students write their own poems using "April Rain Song" as a model:

    - Let the rain...
    - Let the rain...
    - Let the rain...
    - The rain sounds/makes/falls...(action)
    - The rain sounds/makes/falls...(action)
    - The rain sounds/makes/falls...(action)

5. Once the students feel comfortable with this format and understand the nature of poetry, encourage them to write a poem about rain with a freer structure, such as that used in "August".

Assessment:

- Do the students see the differences in the structures of the two poems?
- Could the students think creatively, using "April Rain Song" as a model?

Extension:

- Encourage the students to play with the placement of the words on the page.

Comparing Two Legends

Activity: Students will read and compare two legends about rain.

Focus Activity: Read "Toad Brings Down the Rain" and "Wind Always Follows Rain". Discuss with the students the idea of a legend and encourage them to think about legends in American culture or any other culture represented by the students. Discuss why rain is important to the Yoeme and the Tohono O'odham. Talk about what can happen when it doesn't rain for a long time.

Outcomes:

1. Students will learn how to give a plot summary of a story.

2. Students will learn to draw parallels between stories.

Vocabulary:

- plot, summary, legend

Materials:

- "Toad Brings Down the Rain", "Wind Always Follows Rain", photocopy of the Legends Charts for each student, pencils

Procedure:

1. Read each legend to the students.

2. Have the students discuss why the stories are similar and how they are different.

3. Read the stories a second time and have the students fill in the chart indicating the initial problem, the efforts that failed, the plan that worked and the end result, for each story.

4. Working from the charts, have the students discuss in further detail the differences and similarities between the two stories, encouraging them to think on different levels. Have the students talk about how they think the people in the stories felt when there was no rain, and then how they felt when it finally came. For second and third graders, have them write out what they thought the characters felt.

Assessment:

1. Were the students able to follow the progression of the plots? Were they able to find the plot similarities between the two stories?

2. Could students identify and elaborate on the differences between the two?

3. In either discussion or in writing, could the students identify with the emotions of the characters in the legends?

Extension:

- Students could write a letter to Toad or to Hummingbird, thanking them for bringing the rain.
- Let the students explore the idea of identifying with the rain, and have them write a short narrative from the perspective of the rain.

Vocabulary: "Wind Always Follows Rain"

- **Indicator** - He used this as a Wind indicator.
- **Pleasant** - He flew on and found a pleasant breeze.
- **Sturdy** - ...high on the top of the sturdy cactus.
- **Inconvenience** - No one complained about the embarrassment or inconvenience...

Toad Brings Down the Rain

A Yoeme Legend

The dry spell had lasted a very long time. Now the Rio Yaqui was dry. There was no water to drink or water the corn. There was not even a mud puddle for Toad's home.

The people were desperate for water so they asked Swallow to go to blind Yuku and ask him for rain.

Swallow flew high into the heavens until he reached Yuku's house. "Yuku," he said, "Our land is dry. We are thirsty. Please bring us rain."

Because Yuku is blind he could not find the eight Yoeme pueblos unless he followed Swallow.

Yuku said, "Don't worry. Go home and I will follow you."

But Yuku followed with wind and lightning. Swallow was not strong enough to fly in the storm and he could not lead Yuku to the Yoeme's home.

When Swallow did not return, the people asked Sparrow to go to Yuku and ask him to bring rain.

Sparrow flew high into the heavens until she reached Yuku's house. "Yuku," she said. "Our land is dry. We are thirsty. Please bring us rain."

Yuku said, "Don't worry. Go home and I will follow you."

Sparrow flew quickly toward home. Just as quickly Yuku followed her, but he followed with wind and lightning. Sparrow was not strong enough to fly in the storm and could not lead Yuku to the Yoeme's home.

When Sparrow did not return the people asked Toad to go to Yuku and ask him to bring rain.

Toad borrowed wings from Bat. He flew high into the heavens until he reached Yuku's house.

"Yuku," he said. "Our land is dry. We are thirsty. Please bring rain."

Yuku said, "Don't worry. Go home and I will follow you."

Toad pretended to fly home, but instead he hid in the mud by Yuku's door. Quickly clouds formed. Yuku began to rush to earth with wind and lightning. When he could not hear Toad he stopped and the sky was calm.

Toad called, "Kowak, kowak, kowak."

Yuku began to rush to earth with wind and lightning again but he was not as fierce this time.

When Toad stopped singing Yuku stopped rushing to earth.

Toad jumped down on top of Rain and began singing, "Kowak, kowak, kowak."

Yuku began moving toward earth again, but even more gently. Toad stayed on Yuku's back and sang all the way down to earth. "Kowak, kowak, kowak."

When Yuku reached the earth he scattered rain about and toads everywhere began to sing. "Kowak, kowak, kowak!"

Comparing Legends #1

Initial Problem:

Toad Brings Down the Rain:

Wind Always Follows Rain:

Comparing Legends #2

Efforts that Fail:

Toad Brings Down the Rain:

Wind Always Follows Rain:

Comparing Legends #3

Plan that Succeeds:

Toad Brings Down the Rain:

Wind Always Follows Rain:

Comparing Legends #4

Ending:

Toad Brings Down the Rain:

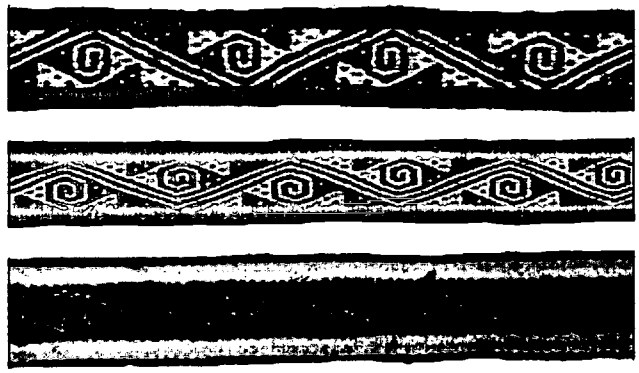
Wind Always Follows Rain:

MATH

Just Another Way of Seeing It...

(For Older Students)

Activity: Students work with decimals as numbers and as words.



Focus Activity: Look at the Sashes by the Rarámuri (Tarahumara) artists. Discuss how the weavers have shown a bird's eye view of their canyon: the river is shown by the zigzag and the mountains by the swirls. How else could we "see" down into the canyon? We could have a photograph, or we might fly over the area in a plane. A third way would be for someone to tell us what the canyon looks like. All of these methods are ways of "seeing" the same thing.

Outcomes:

1. Students will practice recognizing multiple decimal places in numerical and verbal form.

Materials: Copy of the worksheet for each student, pencils.

Procedure:

1. Review how to verbalize decimal places.

2. Review the difference between "hundreds" and "hundredths" when reading numbers.

3. Hand out the worksheet and ask each student to work independently.

4. review the answers together.

Assessment:

1. Could the students match up the numbers and the words correctly?

Rain

Name_____ Date_____

Match the decimals and the words.

2.7	forty-three and seventy-seven hundredths
8.9	two hundred forty-five and seventy-eight hundredths
988.79	one hundred twenty-three and forty-five hundredths
43.77	two and seven tenths
245.78	eight and nine tenths
123.45	six hundred ninety-three and twenty-one hundredths
7.77	nine hundred eighty-eight and seventy-nine hundredths
693.21	forty-three and seventy-seven hundredths
0.56	seven hundred seventy-seven and seventy-seven hundredths
77.77	seventy-seven and seventy-seven hundredths
777.77	fifty-six hundredths

Finding Triangles

Activity: Recognizing and counting triangles.

Focus Activity: Look at "Rainstorm" by Darren Yazzie. How does he depict rain? How does he paint the mountains?

Outcomes:

1. Students will recognize triangles.

2. Students will understand the concept of overlapping.

3. Students will gain experience counting.

Vocabulary: triangle, overlapping

Materials: Copy of one of the cloud shapes (Terraced cloud, Pueblo cloud, Zuni cloud, Hopi cloud) for each student, copy of the worksheet for each student, dried beans, cloud shapes in color for display

Materials: "Rainstorm" print

Procedure:

1. Have students examine the print closely, bringing attention to the mountains.

2. Have students count the number of triangles they see.

3. If they did not notice the smaller ones created by the overlapping lines, ask them to look closer and try to find the hidden ones.

Assessment:

1. Did students easily recognize triangular shapes?

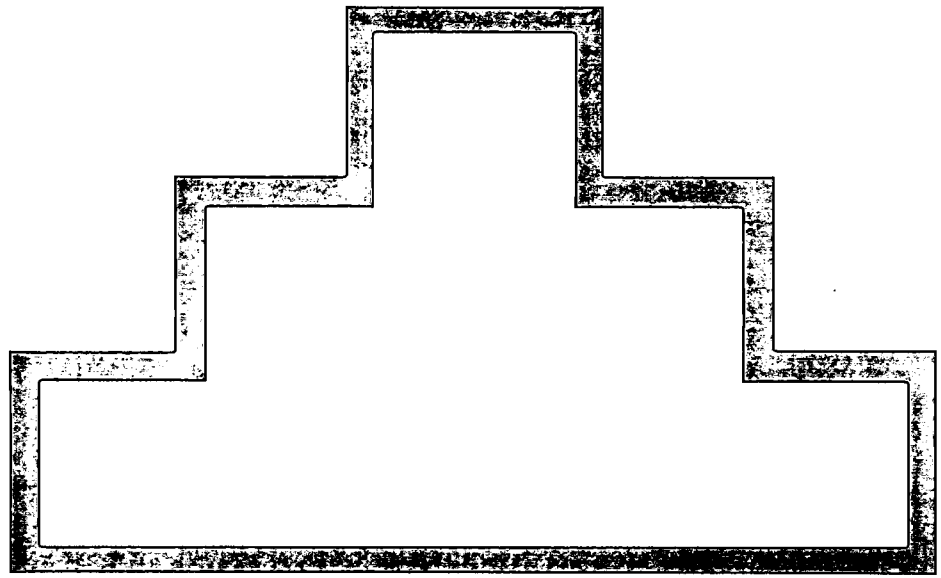
2. Did they understand that intersecting lines can create more triangles?

Extension:

- 1. Have the students draw squares. Then ask them: "How can you make three squares by drawing only two?"

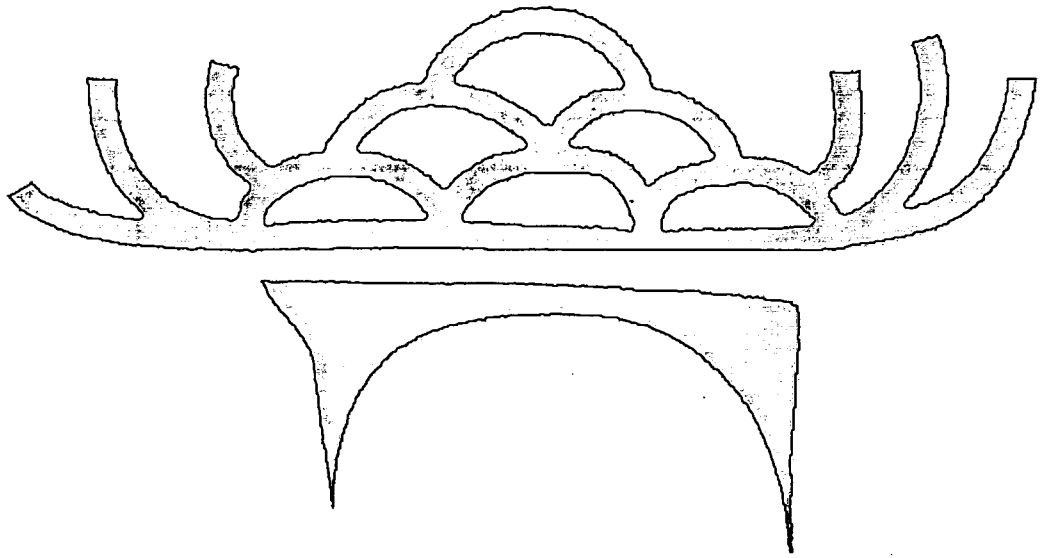
Terraced Cloud

This shape is used by Pueblo peope as a symbol of rain.



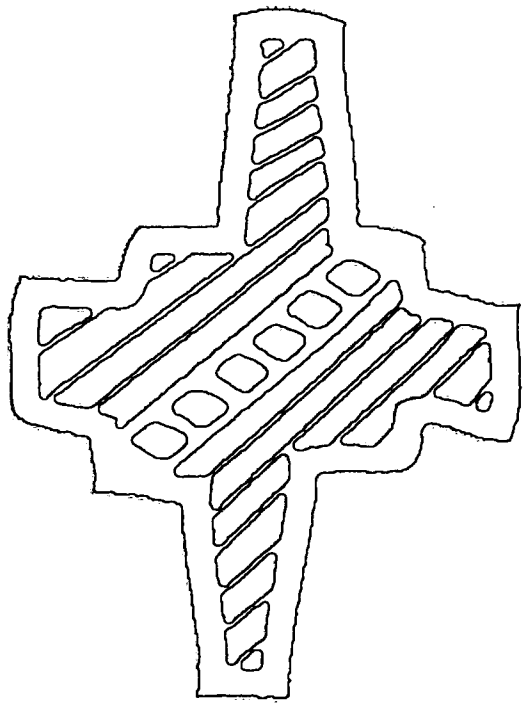
Pueblo Cloud

This cloud looks much like cumulus clouds.
The arch below represents rain in the distance.



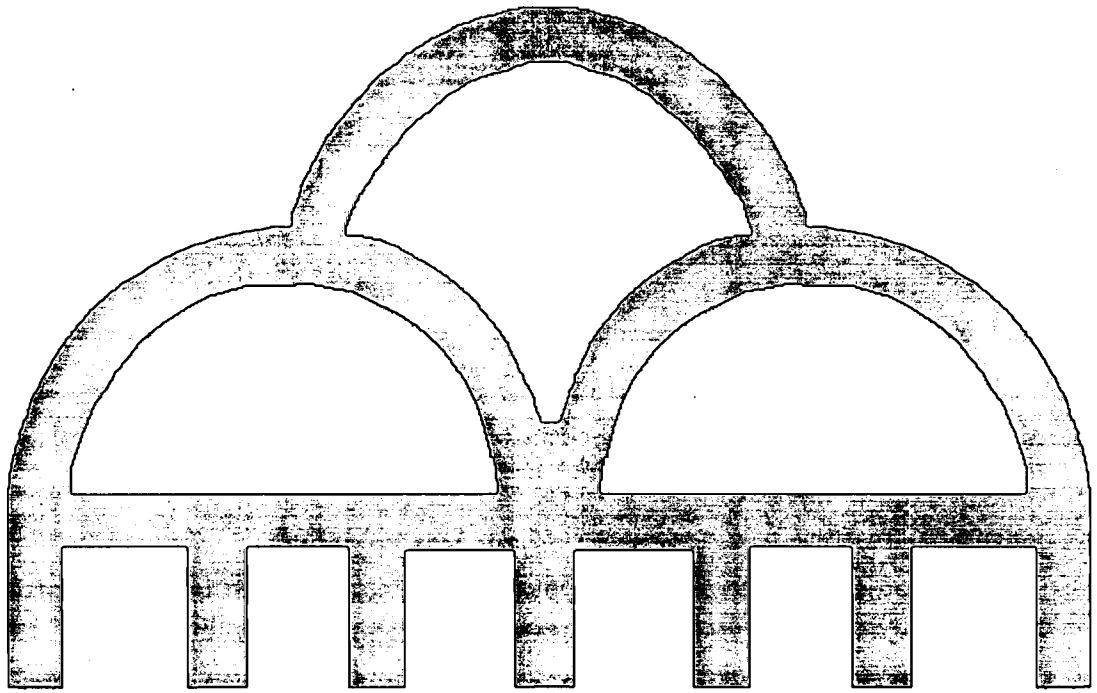
Zuni Cloud

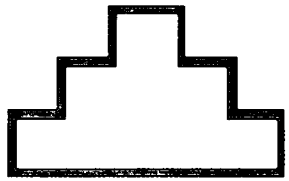
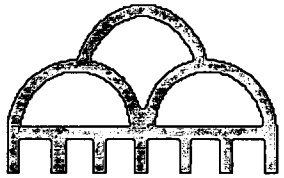
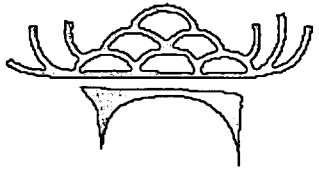
This cloud symbol has the parallel lines that represent rain.
The band through the middle is the Milky Way.



Hopi Cloud

The billowing clouds are on top and
the lines below represent rain falling.



Symbol	Estimate	Did you need...	The difference is...
		More? _____ Less? _____	
		More? _____ Less? _____	
		More? _____ Less? _____	
		More? _____ Less? _____	

Counting Cups of Water

Activity: How many glasses of water does it take to fill a jar?

Focus Activity: Look at the Canteen by Zuni artist Jean Bratthauer. What do you think is stored in this container? Why? Why do you think it is shaped like a duck? Discuss why the opening is so small.

Outcomes:

1. Students will learn to estimate and begin to understand the concept of volume.

Vocabulary: volume, estimate

Materials: measuring cup, 2 large jars of different sizes, photocopy of chart for each student, water

Procedure:

1. Have the students estimate how many measuring cups full of water are needed to fill the jar.

2. Fill the measuring cup with water and pour it into the larger jar. Count how many times you do this to fill the jar up.

3. Have students compare their estimates with the actual amount.

4. Repeat the activity with the second jar.

Assessment:

1. Were students able to make closer estimates with the second jar?

Extension:

1. Repeat the activity using a different sized cup.

How Many Cups?

	Estimate	Actual Number
Jar #1		
Jar #2		

Stamping Raindrops

Activity: Using a raindrops stamp to predict, determine difference and subtract.

Focus Activity: Look at the raindrops falling in Untitled by Arthur C. Begay. Which raindrops are more realistic? How are the raindrops the same? How are they different? Discuss how the drops are falling.

Untitled

"Rainstorm"

Outcomes:

1. Students will gain experience predicting.

2. Students will calculate difference by subtraction.

Vocabulary: difference, length, width

Materials: stamps, (2 designs, 3 each), 3 ink pads, "Rainstorm" by Darren Yazzie and print by Arthur C. Begay, paper, photocopy of chart for each student.

Procedure:

1. First, have the students predict how many stamps it will take to fill up the length and width of the paper and write it on the chart.

2. Then, have students stamp across the width of the paper, count and record the number of stamps.

3. Using a fresh piece of paper, have students stamp the length of the paper. Again, count and record the number of stamps.

4. Ask students to compare their estimates with the actual number.

5. Ask students to subtract the number of times they stamped the width from the number of times they stamped the length. What is the difference?

Assessment:

1. Were the students able to make good predictions?

2. Did they know it would take more stamps to fill out the length of the paper?

Extension:

1. Repeat the activity with another stamp, and on differently sized paper.

Stamping Raindrops

	Length	Width
Estimate		
Actual Number		

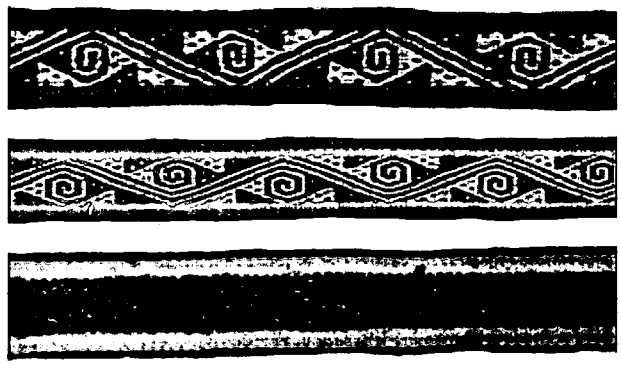
_____ - _____ = _____

(Height - Width = Difference)

It took ____ (this many) more stamps to fill the height than the width with the raindrop pattern.

Counting Spirals

Activity: How many spirals are there?



Focus Activity: Look at the Rarámuri Sashes and discuss how the Rarámuri wear them. These spiral designs symbolize mountains seen from a birds-eye view. Discuss how topographic maps show geography similarly, from the same point of view.

Outcomes:

1. Students will learn to recognize design repetition, and gain experience counting.

Materials: Rarámuri sashes print

Procedure:

1. Have the students count the number of spirals in each sash.

2. Students should write down the number of spirals in each sash.

3. Discuss why each sash has a different number of spirals, even though the sashes are the same length in the print.

4. Have the students add up the total number of spirals in the sashes.

Assessment:

1. Do the students see the contrast between the two colors making up the spiral?

Extension:

1. Have the students count how many sashes use red, use blue and use white.

PRINTS

Untitled

Artist: Arthur C. Begay

Culture: Diné (Navajo)

Size: Height 14.6"; Width 19.5"

Media: Oil paint, canvas

Description:

Clouds - nimbostratus

Boys - wearing contemporary clothes

Plants

Butte - The mineral material of which the butte is made is harder than the minerals of the nearby hill. For this reason, the butte has resisted weathering. The hill is rounded because the minerals forming it were more prone to the effects of rain and wind.

Vocabulary for discussion of Art Elements:

Line - organic, rough, smooth, edge

Shape - organic, natural

Color - contrast

Space - look top-to-bottom, side-to-side

Texture - slick, wet, rough, sandy, smooth

Art Principles:

Concept - Contrast

Discuss how the artist has contrasted the storm with the sunlight by the use of color and the violence of the storm clouds with the gentleness of the boys at play.

Cultural Context:

This painting represents the passing of a storm on the Diné (Navajo) reservation. The two Navajo boys probably sat quietly inside their home as instructed by a grandparent or parent during a rain storm. Diné children are taught not to disturb the rain. Rain is special to the Diné because it does not happen often. After the storm, the two boys would have been eager to play in the puddles. They would have run down to the fields where they usually play to see how much fun they could have. Even the pet dog would come to see what the excitement was all about.

Questions for Logical Interpretation:

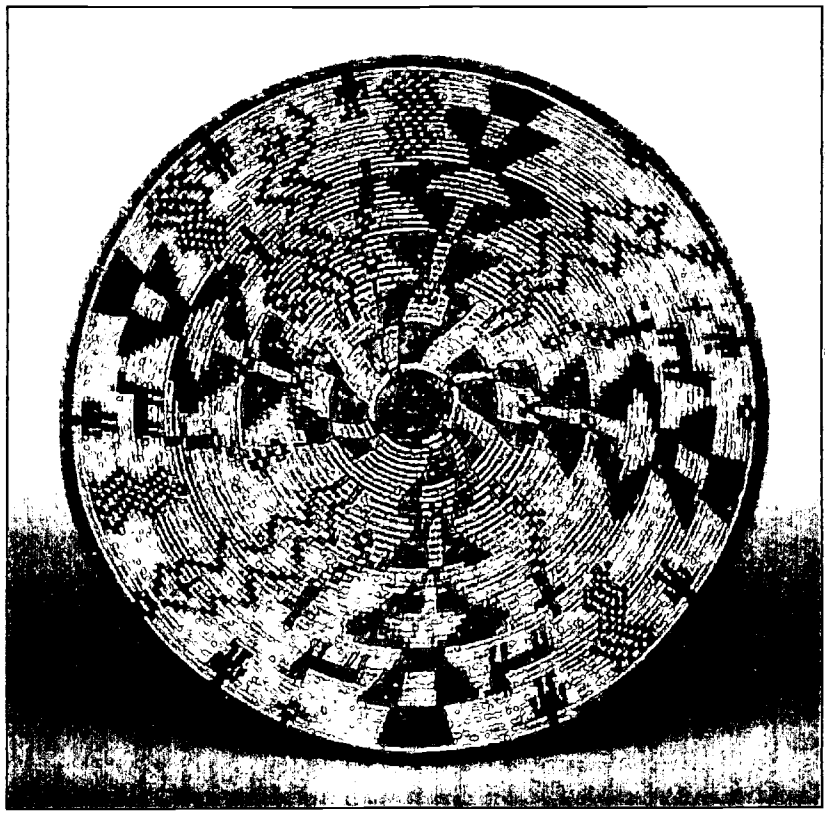
What time of day do you think it is?

How do you think the boys feel?

Would you like to be there too?

Rain

Inde' (Apache) Coil Basket



Artist: Unknown

Culture: Inde' (Apache)

Size: Diameter 18 9/16"; Depth 3 15/16"

Media: willow, martynia (cat's claw)

Date: before 1933

Catalog Number: NA-SW-AP-B-259

Description:

Center circle with triangular-shaped lines - These lines made by the rows of triangles divide the basket into four parts. The four parts represent the four cardinal directions. The four directions are important in the Inde' tradition.

Zig-zag lines in pairs and in groups of four are lightning - Lightning is considered a blessing because it is a focus of power.

Animal - This animal may be a horse, because horses are often woven into baskets with their tails down and dogs with their tails up.

Person - Inde' basket makers occasionally put people in their designs, but do not give details about the people.

Vocabulary for discussion of Art Principles:

Line - broken

Shape - triangles, pointed, symmetrical, circular

Color - dull, natural, neutral

Space - two-dimensional, opening, above, under, through

Texture - actual, rough, coarse

Description of Art Principles:

Concept - Movement
Ask:
"How does your eye move as you look at this basket?"

Cultural Context:

This type of basket was originally made to be used for gathering, mixing or serving food. It could also have been used in ceremonies. When Roosevelt Dam was built between 1905 and 1911, many, many people came from far away to help construct the dam. It was built in the Inde' homeland and so brought the Inde' in contact with many new people. A lot of these people appreciated the beautiful baskets and bought them from the women who made them.

Images for Comparison:

"Rainstorm" by Darren Yazzie

Storm pattern Tapestry by Rose Maloney

Questions for Comparison:

Carved lines are easy to make with a pencil, paint or even clay. They are much more difficult to make when weaving a curved design on a basket or some cloth. The shape and lack of flexibility of the weaving material and the framework on which weaving is done makes the curves very hard to do.

"What kind of line does the weaving create in a basket?"

"What kind of line does the weaving create in a tapestry?"

"How does the weaving line effect the figures the basket maker wove into this plaque?"

"How does the weaving line effect the figures the weaver wove into this tapestry?"

"How would you go about making a curved line if you were weaving a basket or some cloth?"

Canteen

Artist: Jean Bratthauer

Culture: Pueblo of Zuni, New Mexico

Size: Height 7 1/16"; Length 6 5/16"; Width 6 7/16"

Media: Clay

Date: 1983

Catalog Number: NA-SW-ZU-A6-1

Description:

Students should be aware of the texture created by:

*the small spots of paint on the upper body of the duck;

*the triangular and half circle spaces on the wing of the duck;

*and the smooth texture of the unpainted surface

Vocabulary for Discussion of Art Elements:

Line - irregular, curved, straight

Shape - organic, free-form, hollow, rounded, geometric

Color - monochromatic

Space - 3-dimensional

Texture - surface, irregular, hard, dull, speckled, shiny

Art Principles:

Concept - The artist uses bold detail around the eyes. The contrast of color between the eyes and the rest of the frog also draws the viewer's attention.

Ask: "What do you see repeated?"

Cultural Context:

During the dry seasons (winter and summer), the river at Zuni is only a trickle. During the rainy seasons (fall and spring), the river is full and water fowl stop on their migration to rest and eat.

Perhaps a Zuni potter first formed the idea for a duck-shaped canteen by watching these water fowl.

In the late 1800s, the Smithsonian Institution sent an expedition of anthropologists to Zuni to learn about the people. An anthropologist with that expedition, Matilda Cox Stephenson, reported that duck canteens were common. One was collected by that expedition and is still in Washington, D.C., in the Smithsonian Institution's collection.

In 1983, Zuni potter Jean Bratthauer made a similar duck canteen. Zuni potters have had opportunities to learn from their ancestors and to add their own ideas.

Rareámurk (Tarahumara) Sashes

Artist: Unknown

Culture: Rareámurk (Tarahumara)

Size: Length 63 3/8", Width 2 1/2"

Media: Woven from natural wool

Date: 1960s and 1970s

Catalogue Number: NA-SW-TA-C-8; NA-SW-TA-C-42; Not Available

Description:

Focus for literal description:

Ask students if these pictures make them think of anything in nature. Do a short segment of brain storming.

Art elements to focus on for description:

What kind of lines do you see in these sashes?

Vocabulary for discussion of Art Elements:

Line - continuous, diagonal, curved, horizontal, vertical, even, spiral

Shape - triangle, round, flat

Color - contrast

Texture - woven

Description of Art Principles:

Concept - repetition

What lines do you see repeated?

Discuss the effect of using the contrasting colors in two of the sashes, but the red and black does not have a contrast.

Cultural Context:

The Rareámurk believe they first came to the earth falling from the sky like raindrops. They began running as soon as they hit the ground because their lives were short.

Beginning in the spring of each year, the Rareámurk have ceremonies in which they dance as a prayer for rain and healing. Both rain and healing are necessary because without healing there is not life, and rain is life.

The Rareámurk do not put rain symbols on objects, but these objects hold symbols which remind them of the water in the rivers between the mountains which give life to their land.

Questions for Comparison:

"What differences do you see in these sashes?"

"What do you see in these sashes that are the same?"

"Which sash do you like best?". "Why?"

"Which sash shows the most contrast?"

"Rainstorm"

Artist: Darren Yazzie

Culture: Diné (Navajo)

Size: Height 9 7/8"; Width 9 7/8"

Media:pastels, paper

Date: 1993

Catalogue Number:3444-2

Description:

Clouds

Rain

Lightning

Mountains

Sky

Rain

Vocabulary for discussion of Art Elements:

Line - curved, diagonal, horizontal, vertical

Shape - pointed, rounded, flat

Color - warm, cool, contrast, tint

Space - overlapping (Students should look at this piece from side-to-side and top-to-bottom.)

Texture - smooth

Art Principles:

Concept: Balance/symmetry

Concept: Emphasis

Discuss the bright colors and bold detail.

Cultural Context:

In 1993, when Darren Yazzie drew this picture, Bill Clinton was President of the United States, the Chicago Bulls beat the Phoenix Suns in the NBA Finals and the exhibit Rain opened at the Heard Museum in Phoenix, Arizona. Also in 1993, many places in Arizona had twice as much rain as they usually have. Some areas were flooded.

Looking at this picture, Arlene Old Elk, a Diné woman who was raised on the Navajo Reservation said, "This picture reminds me of a storm in the mountains near my aunt's home in Lukachukai."

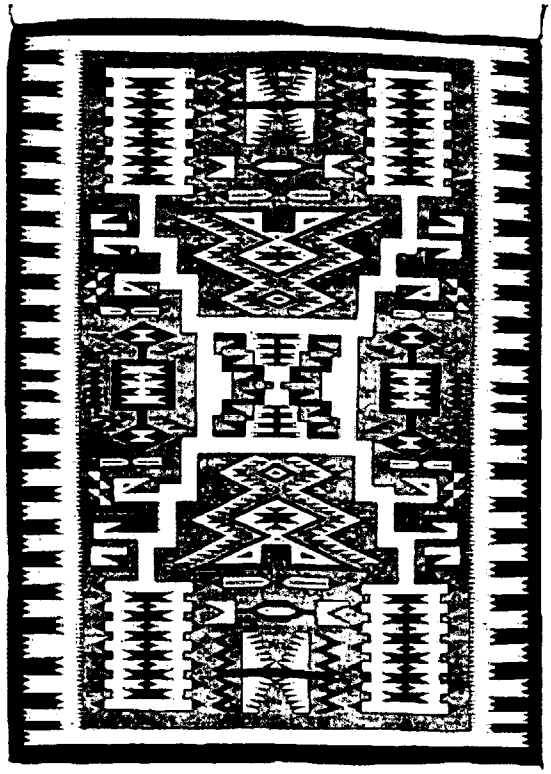
Images for Comparison:

- Inde' Coil Basket
- Storm Pattern Rug by Rose Maloney

Questions for Comparison:

- Each of these works of art have lightning represented on them. Can you find them in all three?
- Which lightning looks the most like lightning?
- Which lightning is the most exciting?

Storm Pattern Rug



Artist: Rose Maloney

Culture: Diné (Navajo) - Gray Mountain

Size: Height 69"; Width 49"

Media: wool; aniline-dyed black, red and brown, natural white and gray

Date: 1961

Catalogue Number: NA-SW-NA-R-346

Description:

Zig-zag lines - The white outline of the zig-zag starts from the middle and goes outward and connects to the outer corners. These represent lightning bolts carrying blessings between the mountains and the hogan.

Four rectangles in each corner - The four rectangles in each corner that are outlined in white have six brown designs inside representing the four sacred mountains.

A center box - A center box is located in the middle of the rug. It represents a hogan, storm house or the center of the world.

Borders - The borders on the top, bottom and sides are black and white. Sometimes weavers put borders on weavings. This border is a pattern that is sometimes called sun rays.

Colors - The colors used for this rug are black, white, brown, gray and red. They are the natural colors of sheep wool except for red. Sometimes the wool colors are mixed together. Dark brown and white make gray-brown. Sometimes dark brown wool is dyed black. Dying makes the color even.

Feathers - Feathers represent clouds.

Cultural Context:

In Diné (Navajo) oral tradition it is told how Spider Woman taught weaving to the Diné. Spider Woman taught Diné women how to weave. Spider Man taught Diné men how to make a loom from sunshine, lightning and rain.

At first Diné people made woven dresses and blankets on their looms. By 1805, they were trading their weaving to people in Mexico and to other Native Americans. Until about 1875, these weavings were made of natural yarn made by the weaver or her family.

In the late 1880s, storekeepers came to the Navajo Reservation. Diné women made weavings for storekeepers to sell to tourists and the storekeepers began selling these weavings as rugs, pillow covers and table or desk covers.

In the early 1900s, the storm pattern was developed as a rug pattern sold by mail order. Storekeepers and weavers began looking at what kinds of weavings sold well and adjusted their weavings to fit sales. The weavers began adding borders to their designs and using colorful dyes made especially for them by the DuPont Diamond Dye Company.

The Navajo Arts and Crafts Guild began in 1941. With the support of this organization, weavers began showing their tapestries at state fairs, exhibitions and museums.

This tapestry was entered into the 1961 Arizona State Fair where it won first prize. The weaver, Rose Maloney, used aniline dyed black, red and naturally-colored black and gray yarns.

Today, Diné weavers are still making woven dresses and producing tapestries for sale to the public. A woven dress is a traditional dress worn on special occasions such as weddings, coming-of-age ceremonies and other celebrations. Yarn is either hand spun or bought as commercial yarn and dyed with commercial dye or vegetal dye. Vegetal dyes are made from plant materials, leaves, flowers, fruits, twigs, bark and roots. Some weavers use the natural wool colors of black, white, brown and gray.

Weaving is usually taught by mothers to their daughters. Designs, styles and patterns can be passed on in a family.

Dr. Ann Hedlund, in her book **Reflections of the Weaver's World**, recorded statements by some contemporary weavers. Several of the weavers who spoke to Dr. Hedlund wished to remain anonymous. Some of those statements are recorded below:

"Weaving is my life. It's something that was given to me by my Mom."
Anonymous
"This is how my Mom taught me. She was taught by my great-great-grandmother. It's still with me, and I will teach my grandchildren."
Anonymous
"Navajos were born into weaving. It would be a shame if the weaving got lost after all our mothers knew so much about it. I'm trying to keep the tradition."
Anonymous

"Weaving is part of art. Instead of holding the paintbrush, you use the yarn and wool."

Larry Yazzie, Tuba City, Arizona

Images for Comparison:

Indé Coil Plaque

"Rainstorm" by Darren Yazzie

Questions for Comparison:

Carved lines are easy to make with a pencil, paint or even clay. They are much more difficult to make when weaving a curved design on a basket or some cloth. The shape and lack of flexibility of the weaving material as well as the framework on which the weaving is done, makes the curves very hard to do.

What kind of line does the weaving create in a basket?

What kind of line does the weaving create in a tapestry?

How does the weaving line affect the figures the basketmaker wove into this plaque?

How does the weaving line affect the figures the weaver wove into this tapestry?

How would you go about making a curved line if you were weaving a basket or some cloth?

Evaporation

Activity: Show relationship between surface area and evaporation.

Focus Activity: Look at Arthur C. Begay's Untitled painting and notice the puddles. Look closely: how does the artist indicate that it has stopped raining? When it stops, the puddles begin to evaporate slowly. Have the students discuss what factors they think affect the rate of evaporation

Outcomes:

1) Students will understand the concept of surface area.

2) Students will understand the process of evaporation.

3) Students will be able to explain that the more surface area that is exposed to the air, the faster evaporation occurs.

Vocabulary: surface area, evaporation

Materials: narrow clear container, wide clear container, erasable marker or tape, water.

Procedure:

1) Have students predict which jar of water will evaporate faster.

2) Measure two equal amounts of water and pour one into each container.

3) Draw a line at the top of the water with an erasable marker, or place a piece of tape at the waterline.

4) Place both jars in the sunlight and observe daily. Note the water levels.

Assessment:

1) Do students understand where the water is going?

2) Do the students understand why a greater surface area speeds up the process of evaporation?

3) Do the students know that other factors, such as humidity and temperature, will affect the evaporation rate as well?

Extension:

- Discuss with the students that rain and snow are both forms of precipitation, another stage in the water cycle.
- Try the evaporation experiment with the jars in a dark place, or repeat with differently shaped containers, such as a shallow pan or a tall glass.

Measuring Raindrops

Activity: Students will simulate rain and measure the individual drops.

Focus Activity: Look at Untitled painting. Notice how the artists have painted the rain, and discuss how their techniques are different or the same. What are some other ways to paint or draw raindrops?

Outcomes:

1) Students will capture and observe individual drops of water/rain.

2) Students will measure some individual drops and see that they form in different sizes.

Materials: watering can, spray bottle, aluminum pan, flour, spoon, water, photocopy of the chart for each student

Procedure:

1) Fill the bottom of the pan with a half-inch of flour and flatten the surface with the spoon.

2) Pour some water from the watering can into the pan with the flour. Make sure to tell the students to pour slowly so that only some drops fall and they don't flood the pan.

3) Have students observe the drops and measure at least two of them, and note it on their charts.

4) Repeat the procedure, but this time have the students use a spray bottle. Once again, remind them to spray only once and not too close to the pan, or they won't see individual drops.

5) Repeat a third time, but this time have the students wet their hands and let the water droplets fall off their fingertips.

Assessment:

Are students able to isolate and measure the drops accurately?

Do they know that mist is really fine rain? Can they discuss other forms in which rain can fall?

Extension:

If it actually rains, try this activity outside with real raindrops!

Measuring Raindrops

Raindrop Source	Drop #1	Drop #2
Watering Can		
Spray Bottle		
Finger Tips		

Repelling and Absorbing Rain

Activity: A demonstration of the repellent and absorbent qualities of different materials.

Focus Activity: Look at the print of the Canteen by Zuni artist Jean Bratthauer.

- Have students talk about what feature of the canteen indicate that it is a duck. Ask students if they have noticed how water rolls off raincoats and umbrellas.
- Discuss with them how a duck's feathers work in the same way.
- Use these examples as a starting point for discussing how different materials respond to water/rain.

Outcomes:

1) Students will learn that not all materials respond the same way to water/rain.

2) Students will understand that absorbing is the opposite of repelling, and that there are varying degrees of both.

Vocabulary: repel, absorb

Materials: sponge, soil, paper towels, piece of plastic wrap, piece of nylon panty hose, sandstone coaster, aluminum pan, watering can, photocopies of the prediction sheet for each student, water

Procedure:

1) Have students predict which materials will repel water and which will absorb it.

2) Put the sponge in the bottom of the pan/bowl and pour water over it. What happens to the water?

3) Repeat step two with each material: paper towel; piece of plastic (make sure the plastic wrap lies flat in the pan); panty hose; sandstone coaster; and finally the soil (leave the soil for last since it will dirty the pan).

4) Have the students check their predictions against what actually occurred.

Assessment:

- Do students understand that some materials are more absorbent than others?
- Did students predict correctly which materials repel and which absorb?

Extension:

- Have the students chart all the materials that absorbed water in the order of "least absorbent" to "most absorbent".

Repelling and Absorbing Rain

Predictions

Repel	Absorb

Results

Repel	Absorb

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

REPRODUCTION RELEASE

(Specific Document)

I. DOCUMENT IDENTIFICATION:

SO

Title:

After the Rain: Rain

Author(s):

Arlene Old Elk and Jackie Stoklas

Corporate Source:

Publication Date:

2001

II. REPRODUCTION RELEASE:

In order to disseminate as widely as possible timely and significant materials of interest to the educational community, documents announced in the monthly abstract journal of the ERIC system, *Resources in Education* (RIE), are usually made available to users in microfiche, reproduced paper copy, and electronic media, and sold through the ERIC Document Reproduction Service (EDRS). Credit is given to the source of each document, and, if reproduction release is granted, one of the following notices is affixed to the document.

If permission is granted to reproduce and disseminate the identified document, please CHECK ONE of the following three options and sign at the bottom of the page.

The sample sticker shown below will be affixed to all Level 1 documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

1

Level 1

☑

Check here for Level 1 release, permitting reproduction and dissemination in microfiche or other ERIC archival media (e.g., electronic) *and* paper copy.

The sample sticker shown below will be affixed to all Level 2A documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE, AND IN ELECTRONIC MEDIA FOR ERIC COLLECTION SUBSCRIBERS ONLY, HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2A

Level 2A

☐

Check here for Level 2A release, permitting reproduction and dissemination in microfiche and in electronic media for ERIC archival collection subscribers only

The sample sticker shown below will be affixed to all Level 2B documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2B

Level 2B

☐

Check here for Level 2B release, permitting reproduction and dissemination in microfiche only

Documents will be processed as indicated provided reproduction quality permits.
If permission to reproduce is granted, but no box is checked, documents will be processed at Level 1.

I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce and disseminate this document as indicated above. Reproduction from the ERIC microfiche or electronic media by persons other than ERIC employees and its system contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries.

Sign here, please

Signature:	Printed Name/Position/Title: Ann Marshall, Dir. Collection, Ed. & Interp.
Organization/Address: Heard Museum 2301 N. Central Phx, AZ 85004	Telephone: (602) 251-0249 FAX: (602) 257-9164
	E-Mail Address: AMarshall@heard.org Date: 6/23/03

(Over)

III. DOCUMENT AVAILABILITY INFORMATION (FROM NON-ERIC SOURCE):

If permission to reproduce is not granted to ERIC, or, if you wish ERIC to cite the availability of the document from another source, please provide the following information regarding the availability of the document. (ERIC will not announce a document unless it is publicly available, and a dependable source can be specified. Contributors should also be aware that ERIC selection criteria are significantly more stringent for documents that cannot be made available through EDRS.)

Publisher/Distributor:
Address:
Price:

IV. REFERRAL OF ERIC TO COPYRIGHT/REPRODUCTION RIGHTS HOLDER:

If the right to grant this reproduction release is held by someone other than the addressee, please provide the appropriate name and address:

Name:
Address:

V. WHERE TO SEND THIS FORM:

Send this form to the following ERIC Clearinghouse:

ERIC/CHESS
2805 E. Tenth Street, #120
Bloomington, IN 47408

However, if solicited by the ERIC Facility, or if making an unsolicited contribution to ERIC, return this form (and the document being contributed) to:

ERIC Processing and Reference Facility
4483-A Forbes Boulevard
Lanham, Maryland 20706

Telephone: 301-552-4200
Toll Free: 800-799-3742
FAX: 301-552-4700
e-mail: ericfac@inet.ed.gov
WWW: http://ericfacility.org