

Model Curriculum “The Ranching way of Life: San Luis Valley in Colorado” Curriculum suggestions for grades K-4 and 5-8.

**Curriculum for K-4 derived from
Colorado Model Content Standards for Education**

Geography K-4

Standard I: *Students know how to use and construct maps, globes and other geographic tools to locate and derive information about people, places and environments.*

After viewing the film, have students identify geographic features of the SLV they noticed from the film. Example: aquifer, mesa, foothills, mountains, grasslands, streams, wetlands. Get a map of the SLV or copies of maps for students.

Discuss how features are depicted on the map and how maps are used as tools. Example: Maps show how to get places. If a rancher wants to take his cattle to a sale barn outside of his local area, he would use a map to find the route. A rancher taking his cattle to graze on summer pastures in the mountains would use area maps provided by government agencies. Maps can tell you where there is water, what the terrain is like in a specific place (e.g. steep, flat, wet, dry, etc.).

Have students use graph paper to do a small map of an area --- the school and grounds work well. Make this a short-timed project. Have students explain their maps; why they included or excluded certain items, what different symbols mean. Discuss different types of maps and their uses.

Have students break into small groups and construct salt dough or clay maps of the SLV making sure features are correctly labeled. Have students place a compass on each map indicating north, south, east and west. Have students design their own map legend showing how various features are depicted.

Features to include:

Sangre de Cristo Mtns.

San Juan Mtns.

La Garita Mtns.

Great Sand Dunes

Rio Grande River

2 to 4 east west & north south roads (Hwy 17, 285, 160 are examples.)

2 to 4 mountain passes (Poncha, La Veta, Wolf Creek are examples)

2 to 4 towns

After maps are completed and on display, discuss with class what these maps tell us. What do we know about the weather / climate from our maps? Are there many people in the SLV? Where would you want to live in the SLV and why? Show students examples of various kinds of maps of the SLV, like topographic maps, road maps, and discuss these map functions as tools. Have students create SLV map vocabulary lists including new words and terms students have learned while studying this unit.

Geography Standard 2: *Students know the physical and human characteristics of places, and use this knowledge to define and study regions and their patterns of change.*

2.1 Ranchers are called stewards of the land. Why? What scenes in the video help students identify human and physical characteristics of SLV ranches? Ranges are fenced for cattle, sheep, and other livestock. To keep the balance with the physical characteristics of the environment, ranchers move their grazing animals from one pasture to another sometimes using mountain pastures in the summer and early fall, valley pastures in the winter and spring. This allows each grazing system time to recover and grow. Good ground cover (plants) keeps the soil from blowing away in strong winds (wind erosion).

Feeding hay in barren areas adds seed, vegetable matter, and manure to the soil. Ranchers and farmers here start with a physical system of sandy soil; the presence of livestock enriches the soil. The Steven Rich Sr. poem explains this point well.

2.2 What is a region? A region is an area with similar geographic characteristics that unite it. Is the SLV a region? Discuss with class. Being a high mountain valley makes the SLV a region, as does the climate, the wildlife and livestock that thrive here. Why have people chosen to ranch in the SLV? Invite a rancher from your community to come and speak about why he or she has chosen to live here.

Ranch activities are seasonal here in the SLV. Why? Remember the birth scenes or scenes with young animals, how small and fragile they are. Discuss what might happen when severe weather occurs. What do ranchers do to help animals survive and thrive? Sometimes ranchers move cattle to a more protected area, provide bedding for the young stock from snow and mud, and watch for health issues, doctor sick livestock, etc.

Geography Standard 4: *Students understand how economic, political, cultural, and social processes interact to shape patterns of human populations, interdependence, cooperation and conflict.*

4.3 *Students know the patterns and networks of economic interdependence.*

Remember the burgers on the grill? Those burgers come from beef or bison. Cooperation among people has to occur for livestock to become food. Ask a rancher which people work together to make this happen.

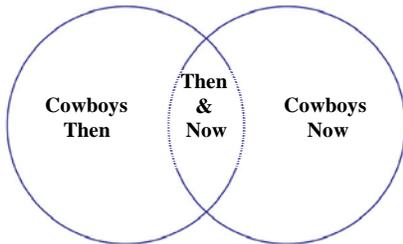
Look at the SLV on a big map of Colorado. If cattle, the raw material of burgers, are raised in the SLV where might cattle be hauled to become food? Who are the consumers of livestock raised here?

Describe the economic networks used in daily life.

Livestock auctions are busy in the fall. Why? The smaller livestock auctions like the one in the video are useful for a ranch community. Why? (Tom Moss, Marty's sale day story) Help your students act out an auction scene by providing roles as owners, auctioneers and buyers or visit the Southern Colorado Livestock Auction between Monte Vista and Alamosa on any Thursday, sale day. How do ranches move their livestock to auctions? Is that the only option?

A good website with worksheets, mazes, coloring pages, crosswords and puzzles that work well to enhance K-4 curriculum may be found at <http://cowboykids.nationalcowboymuseum.org/> or at the National Cowboy Museum website which is <http://www.nationalcowboymuseum.org/>. The Education tab on this website will provide additional units for use in your classroom.

Another activity called a Venn diagram (see below) describes “cowboys then” and “cowboys now.” The overlapping signifies what is common to then and now for cowboys. Discuss what activities would fall under “then” and “now” and which are still used today.



Geography Standard 6: Students apply knowledge of people, places and environments to understand the past and present and to plan for the future.

6.1 *Students know how to apply geography to understand the past.*

Describe how places change over time and how places and environments have influenced people and events over time.

Discuss how trends, technology and climate factors have changed ranching in the SLV. Do you eat meat? What are your favorite ways to eat it? (burgers, steaks, jerky, hotdogs, etc.) What would your grandparents’ favorites have been at your age? Ask them, a friend’s grandparents or your older neighbors.

Resources: (The SLV History Museum features exhibits on various groups of people who settled the SLV, including ranchers. Chilton, Charles, *The Book of the West*, Bobbs-Merrill Co., Indianapolis, 1962 is a great resource for younger students.) Have students discuss how their hometown or region has changed in their lifetimes.

6.2 *Students know how to apply geography to understand the present and plan for the future.*

What are the water concerns in the high desert: availability, quantity, locations, purity (upstream pollution from mines, etc.)? What practices can ranchers and land managers use to conserve water, prevent erosion, improve plant diversity, provide for livestock and wildlife, etc.?

Explore the relationship between water and life. Why is it important to think and plan ahead to protect resources: soil, water quality, air quality and plant diversity. What could students do to conserve resources at home or at school? Good for small group discussion.

If you live close enough to irrigated acreage, take students on a field trip to see how irrigation and water management systems work.

Activity: To demonstrate the difference in water requirements for sprouting grass seeds in sandy desert soil versus potting soil. Grow grass seed in sandy soil and in potting soil. Measure how much water is used to water each sample. Record the amounts of water used and note length of

time before each soil and grass sample has to be watered again. Record all data on a chart. Discuss implications of the findings with your students.

Grades 5-8 Geography Curriculum

2.1 Students know the physical and human characteristics of places.

Define and discuss: What are the human characteristics of a place? What are human characteristics of ranching regions, such as the San Luis Valley?

An example of agriculture changing a place or environment could include irrigation systems and managing water as a resource. Have students study old records of the Valley before irrigation. One good example would be found in the diary of Juan Bautista de Anza, who wrote about the geography of the SLV in the course of his 1779 campaign against the Comanche. De Anza referred to the northern reaches of the Valley as the San Luis Lake. (Ronald R. Kessler, Alfred B. Thomas, Anza's 1779 Comanche Campaign, San Luis Valley Historian, Volume XXVI, Number 1, 1994)

Feeding hay in barren areas adds seed, vegetable matter and manure to the soil. How does this practice change the soil characteristics? Activity: prepare and fence two planting beds at your school; one with original soil and one with compost or manure added. Both beds should have the same general care: seed, water and weeding. Have student gardeners keep diaries of the similarities and differences in the beds. Have them include weather, amount of water, temperature, etc. At the end of the project discuss how we can intentionally enrich our soil quality.

Define and discuss: What are the physical characteristics of the San Luis Valley?

Resources: Have students search the library and Internet for maps of the SLV. A great site is the Color Landform Atlas of the USA, www.ferri.jhuapl.edu/states/states.html, another is the Colorado www.colorado.gov/dpa/doit/archives.geography.html Department of Education's site and the last site recommended is Colorado Geography, Mapping Our Past, www.geography.unco.edu/mapco/default.htm

Using the Color Landform Atlas make lists of characteristics gained from research. When mountain allotments are used, grazing reduces fuel load (dead grasses from past seasons), recycles plant nutrients into the soil as manure, and provides high-quality feed for livestock. This practice gives valley vegetation the opportunity to recover and re-grow to maintain range health.

2.2 Students know how and why people define regions.

What is a region? An area with one or more common characteristics or features, which give it a measure of homogeneity and make it different from surrounding areas. (Colorado State Content Standards for Geography, pg. 29)

What are some distinguishing features of ranching regions?

Have one or two students act as scribes. At the board, have them write lists in two columns, one of human and one of physical characteristics that identify regions. After viewing the video, have

students delineate lists.

It is the combination of both the human and physical characteristics that make a region suitable for ranching. Settlers looking for ranch lands come into an area and see physical characteristics that are natural for livestock. These might include: well-watered bottom lands, but not swamp; grasslands and land that would support hay or other crops; and flat or easily-accessible, relatively open land. Discuss management practices suited to the region.

How do regions change? Explain to the students that part of the reason for making this video was that regions change, and that family ranching in the SLV may be decreasing. “Development” is the word used to describe dividing properties into smaller parcels, with more people living on each new parcel. Talk about how regions have changed. In Colorado and mountains surrounding the SLV mining no longer plays the large role it once did in the economics of communities. Why? Could that change again, and if so, how?

Large corporate ranches, drought, disease, and economic factors (fuel costs) are affecting food supplies and availability. Discuss the impacts of buying your food locally. Are there places besides grocery stores to obtain local agricultural products? Activity: ask students to go to the grocery store with their parents, find out what foods are produced locally. Look for the Colorado Proud label. Report on what you find.

Relationships and interrelationships among regions.

Remember the grocery scene at City Market and the burgers on the grill at the Villa Grove Trade? These scenes try to show the relationships between the ranch where the beef is raised and ways it becomes available to consumers. Have students research the old cattle trails – like the Goodnight Loving Trail – which were developed to move cattle to market. How are cattle moved from ranch to consumer today?

Field Trip: A trip to a local processor of livestock and wild game or a family ranch will provide a closer look at these relationships. Call and ask local processors or ranches if they would host an educational visit.

Can you find local ranchers who market their own meat? Invite them into your classroom to find out why they decided to do that, and how they succeeded in that project. You’ll find that this process may differ from ranch to ranch.

4.3 *Students know the patterns and networks of economic interdependence.*

Ask students to research family ranches and processing facilities in the SLV. There are excellent internet websites available to help in your research, in addition to the local library and museum, which have specific information about the SLV region.

Climate and other geographic factors, along with good ranching practices mean good beef from local growers. Feeding cattle in drought may require a reduction of the herd or paying more for feed. Some ranchers choose to temporarily ship their livestock to other regions for grazing or feeding in order to preserve the integrity of their herd. Many people in the SLV depend on ranching for their livelihood.

Countries trade goods and services because different areas of the world are better suited for growing certain agricultural products than others. For example, Japan depends on the USA for beef. The USA imports bananas from more tropical regions throughout the world. Explore how quarantines of agriculture products affect exports and imports with other countries.

Look at how various technological advances have shaped the cattle industry. How have motorized vehicles changed ranching? Discuss how the railroad, refrigeration, trucking and the interstate highway system has affected the ranching industry. Using a wall-sized map of the USA, discuss how beef gets to your table. Students could use colored yarn to show a “beef trail” on the map.

Hints! Cattle are raised where there is plenty of feed. Large-scale meat packing happens in transportation centers so meat can be processed and shipped anywhere in the nation. Discuss other technological leaps that have changed the way people live and do their work. Because livestock can be transported efficiently to meat packers, cattle may be raised far away from where they are processed into food.

Activity: Using visual aides, have students give oral reports about cowboys. Explain to the class that cowboys trailed cattle with horses before railroads or roads existed in much of the west.

Resources: www.workingcowboy.com, www.westernfolklife.org, O’Rear, Sybil J., *Jesse Chisholm: The Story of a Trailblazer and Peacemaker in Early Texas and Oklahoma*, Eakins Press, Austin, TX (1997)

6.1 *Students know how to apply geography to understand the past.*

Think climate, technology and population.

Maps highlighting climate and population shifts in the west can be found

<www://geography.unco.edu/Mapco/default.htm. >

CO Geography: Mapping Our Past

6.2 *Students know how to apply geography to understand the present and plan for the future.*

Quote from the video: “A rancher may not look like a scientist to you”.... Have students research agricultural studies and majors in colleges and junior colleges. Go to CSU’s website. Have students list the variety of agricultural studies available (range management, marketing, livestock health, etc.). How would they help a rancher be successful?

Studying the river systems and drainages of the San Luis Valley can help students understand watersheds. Studying population growth and change will help students understand different needs for water use. What is unique about the SLV aquifer?

Science K-4

Standard 3 Life Science: Students know and understand the characteristics and structure of living things, the processes of life, and how things interact with each other and their environment. (*Focus: biology, anatomy, physiology, botany, zoology, and ecology*)

3.1 *Students know and understand the characteristics of living things, the diversity of life, and how living things interact with each other and with their environment.*

Show students photographs of domestic livestock and wild animals. In a group, discuss what these animals have in common and how they differ. What are ruminants?

Explain the purpose of the ruminant digestive process.

Enrichment: The Wool and Sheep Activity Book produced by the Colorado Foundation for Agriculture is an excellent resource for discussion. Have students read out loud from the activity book.

3.2 Students know and understand interrelationships of matter and energy in living systems.

What does it mean: “If agriculture fails, civilization fails.”? How would you define a ranch? Ask students for any personal stories they may have about ranching. Useful websites are www.workingcowboy.com and www.nationalcowboymuseum.org.

What is a domestic animal? Discuss the relationship between ranchers and their livestock. Discuss how important it is to understand the nature of different animals. How would you treat a dog, a chicken and a fish differently? What they eat, where they live and how to keep them healthy are all areas to discuss

Activity: have students create a mural of domestic animals and what foods we get from them. In a group, create a few different food chains on the board; for example: grazing animals eat grass; people eat grazing animals and drink their milk.

Ranchers help animals with basic needs such as food, water, and shelter. Ranchers have a relationship with living things: their livestock, the plants their livestock eat, and predators such as coyotes or mountain lion who might want to eat young animals. They also have a relationship with non-living things such as the land and the water. Explore the “cycle of life” process – how all living organisms are interconnected.

What is hay and why do ranchers need to feed hay to livestock? Feeding livestock on barren ground adds seed and manure to the soil. To keep the balance with the physical characteristics of the environment, ranchers move their grazing animals from one pasture to another sometimes using higher mountain pastures in the summer and early fall, valley pastures in the winter and spring. This allows each grazing system time to recover and grow. Plants keep the soil from blowing away in strong winds. Remember the excerpt from the Steven H. Rich Poem in the video to illustrate how nature designed grazing animals to help the land.

Activity: plan a cookout. Chuck Wagon Cookin’ by Stella Hughes might give you a few suggestions. Invite parents, sing cowboy songs, and watch the stars. For a history of the chuck wagon see Cattle in Colorado History a booklet produced by The Colorado Cattlewomen and Colorado Beef Council.

3.4 Students understand how organisms change over time in terms of biological evolution and genetics.

The birth scene and explanation of bonding from the video are good tools to demonstrate the nature of herd animals. How have methods of herd health changed over time (antibiotics,

vaccinations, nutritional education, etc.)? Using Peggy Godfrey's poem, *Country Graft*, how do ranchers pair up orphan calves with cows whose calves have died. This is a natural solution for a situation that happens once in a while on the ranch. Ask students if they have ever had a baby animal bond with them.

Science Standard 5 *Students understand interrelationships among science, technology, and human activity and how they can affect the world.*

Focus on the idea of a rancher as a scientist who needs to use his or her observations and resources to know the best way to successfully raise livestock, hay, and keep the land healthy.

Discuss the importance of water to all life. Look at a globe, have students talk about how much of the surface of the earth is water. Why do ranchers in the Valley irrigate? Ask a rancher who irrigates to come to your classroom to talk about head-gates, artesian wells, pumps, ditches and center pivot sprinklers.

Activity: If you have a water table at your school or a sand pile on your playground, you can make some irrigation models where students are instructed to get water from one corner of the table to another, wasting as little water as possible. Break students into teams of three to five, give them 10 minutes to devise a plan and then 10 min. to implement it. Time their irrigation and measure the amounts of water used. When you have a winner, discuss how they won. The teacher can set up the first irrigation challenge with mountains, canyons, rocks, different elevations and other challenges. Small pieces that students may choose to use to direct water may be designated; these could include small boards, sticks, legos for head gates, paperclips for latches...use your imagination and let students help. Students may change features for subsequent irrigation courses.

Resources: Use all or parts of the EPA's Office of Water publication, "Thirstin's Wacky Water Adventure" www.epa.gov/safewater. This includes word puzzles, mazes, crosswords and fun-to-color illustrations all based on water use and conservation.

Science Standards 5-8 Curriculum

3.1 *Students know and understand the characteristics of living things, the diversity of life, and how living things interact with each other and their environment.*

Have students make a list of various animals, wild and domestic, found in the SLV. Group the animal list according to common characteristics.

Discuss why plant and animal adaptations are important? Using ranching seasons as a backdrop, outline a food chain.

Activity: List what animals produce what types of edible and non-edible products. Example: chickens = feathers, eggs, meat, manure and baby chicks.

History K-4 Curriculum

Standard I: *Students understand the chronological organization of history and know how to organize events and people into major eras to identify and explain historical relationships.*

1.1 Students know the general chronological order of events and people in history.

On a long wall, make an SLV timeline to show when different cultures/groups lived in the Valley.

Tell students about Neolithic hunters who came through the Valley 10,000 years ago to hunt mammoth and bison. Explore how they made their kills.

Talk about various Native American groups who came to the SLV to hunt, fish, gather pinon nuts, chokecherries, and currants. Explain what artifacts are and what artifacts these groups left, giving us an idea of how they lived.

Discuss the history of ranching in Colorado and the SLV. Great free activity book: *Cattle in Colorado History*, which you can access through the Colorado Beef Council, 789 Sherman St., Suite 105, Denver, CO 80203.

Activity: show students pictures of various artifacts, spearheads, arrowheads, scrapers, grinding stones, spurs, branding irons, lariats, barbed wire, etc. Have students try to figure out what each tool is and what it might be used for. Students could also visit a local museum to find most of these artifacts.

1.2 Students use chronology to organize historical events and people.

Tell students about the Spanish colonization of the Valley. Describe irrigation practices and contributions to today's ranching heritage.

Resource: Go to www.newmexico.org and link to Cowboy and Ranching Tradition, NM Farm & Ranch Heritage Museum.

What animals did Spanish settlers bring to the Valley? What animals did Anglo-Americans bring to the Valley? What role did the railroad play in the development of towns in the Valley and in the ranching way of life?

Resource: Colorado Reader: Ag in Classroom Colorado Foundation for Agriculture www.growingyourfuture.com. The Heritage of Cattle Ranching. This newspaper-like publication is full of fun and interesting facts about ranching and its history.

Activity: have students divide into small groups and create dioramas of some aspect of their town or town's history. Display projects in chronological order. Looking at dioramas and discuss the changes that have taken place over the years.

As a group discuss the history of man in the SLV. Explain a hunter-gather. What resources make it possible for hunter-gatherers to survive? Make clear that when people domesticated livestock and raised crops, it allowed them to live in one place most of the time.

1.3 Students use chronology to examine and explain historical relationships.

As depicted in the video, the cycle of a rancher's life follows a pattern based on the seasons.

Ranchers return livestock to valley pastures (leased or the home ranch) in the fall. In the winter, when livestock are unable to graze, ranchers provide feed in the form of hay, grains and supplements. Caring for pregnant livestock, and then the nursing mothers and their young, becomes a priority in the later winter and spring.

Activity: using the video references to stimulate discussion, have students delineate tasks by the season when they are performed (calving in the spring, haying in the late summer, etc.). Pick four students and have them act as scribes, listing the seasonal tasks on the board.

Resources: www.newmexico.org Link to the Cowboy & Ranching Tradition, NM Farm & Ranch Heritage Museum. www.workingcowboy.com, & www.nationalcowboymuseum.org are good research sites. Mary Marie Brandon's, *Buffalo Gals: Women of the Old West*, Lerner Publications, and Minneapolis, 1995. Wes Medley's, *The Old Fashion Dutch oven Cookbook: Recipes from the 1840's*, Original Western Publications, and Cairo, NE are good hardcover resources for this project.

Standard 4: *Students understand how science, technology, and economic activity have developed, changed and affected society throughout history.*

4.1 *Students understand the impact of scientific and technological developments on individuals and societies.*

Remember Vogal Sandlin's gate latch, invented during the time he worked on the Baca Ranch in the 1940s? Name other useful tools that have come from a rancher's needs such as irrigation systems, branding and birthing tools. How did settlers in the Valley keep things cool in the summer? Ask at your museum.

Activity: have students list and draw various wild animals found in the SLV: antelope, mountain lion, bobcat, bear, lynx, hawk, eagle, coyote, etc. Discuss the value of wildlife in a region like the SLV.

History 5 – 8 Curriculum

1.1 *Students know the general chronological order of events and people in history.*

Resources: I would encourage teachers to use Virginia Simmons excellent volume, *San Luis Valley: Land of the Five-Armed Cross*. You can pick out and print appropriate sections for the class to share. The Colorado Cattle Women & Colorado Beef Council has a booklet for students: *Cattle in Colorado History*. This publication can be accessed through www.cobeef.com. For exploring the Spanish incursion into the SLV, a great site is the www.newmexico.org link to the Cowboy & Ranching Tradition and the NM Farm and Ranch Heritage Museum.

Activity: have students divide into groups based on historic periods from Neolithic times to the present. Focusing on the SLV, using words and pictures, create a timeline showing human activity in the SLV. Use this timeline as the basis for discussion.

Hunting, mining, farming, ranching have all been important in the history of the SLV. What infrastructures were created to serve these industries? Review the Native American presence in the SLV from history books. How would one identify camp sites? Invite someone who looks for

Native American artifacts to come to your class. Discuss Spanish incursion into the Valley and the introduction of sheep and cattle. How do early and later irrigation systems differ? One obvious and constant in the Valley has been the presence of large grazing herds both wild and domestic.

1.2 *Students use Chronology to organize historical events and people.*

Activity: have students pick a historic character in SLV history and write a short biography, including illustrations and a timeline of that individual's life. Have students present a short oral biography of their chosen historic SLV character to the class. When all the biographies have been written and presented, have students arrange timelines. Compare who lived when, what the particular challenges of their lives were, and how the strategies they chose for survival may have affected the SLV.

1.3 *Students use chronology to examine and explain historical relationships.*

In June, plans are made to move cattle to summer pastures or allotments. These summer ranges are often on government lands. Government agencies which manage these lands include US Forest Service (USFS), Bureau of Land Management (BLM) and Colorado State Lands. What are grazing permits? When are they issued? How long do grazing permits last? Can they be renewed? Invite a representative from one of these government agencies to come and answer questions. Some topics for discussion might be: how do you negotiate agreements with ranchers, what elements are included (e.g. fences, water development, livestock stocking rates, range conditions, etc.)

Resource: Go to www.co.gov to find a printable map showing public lands in CO.

4.1 *Students understand how science, technology, and economic activity have developed, changed, and affected societies throughout history.*

Project: Divide students into groups to do a multi-faceted report with a biographical slant. There will be a total of four groups.

Group I will focus on inventors and scientists who have made an important contribution to ranching.

Group II will explain how industrialization affected ranching. (Hint: transportation advances, the railroad & interstate highways made it possible for the rancher's products to get to market quickly.)

Group III will look at the changing face of the family ranching community. New technologies are allowing people to move into the Valley and work from home. How have these two developments affected the family ranch? (Hint: Look at population statistics for the SLV. Look at water and energy use and the price of property. Agricultural curriculum in colleges and universities will give some idea of what the modern rancher needs to know technologically.)

Group IV will look at ranching families and modern technologies. What kinds of technologies do they use daily?

Economics

Standard 1: *Students understand that because of scarcity, decisions must be made about the use of scarce resources.*

1.1 *Students know that economic choices are made because resources are scarce and that the act of making economic choices imposes opportunity costs.*

Livestock sold at auction are called “raw goods”. They will be put on feed then sold when they are at a marketable body condition. The cook at the diner, the food server, and the butcher in the grocery store meat department all add service to the goods raised by the ranchers.

Activity: have students discuss what would happen if there were a shortage of beef for hamburgers. Would more people want them because they were hard to come by or scarce? Would they become more expensive? Why? What would happen if the hamburger shortage ended and there were plenty of burgers for all? What if everyone got tired of burgers? Would the price change if the demand for burgers went down? Do ads influence the way you spend your money? How? Say you only have a limited amount of money to spend, would advertising affect how you spend your money? The way you choose to spend your money and how popular something is create an opportunity cost. If you spend money to go to the movies, you may not have enough money to eat in a restaurant. If a burger restaurant ad makes a burger look really good you may choose to eat out rather than go to the movies.

1.2 *Students understand that economic incentives influence the use of scarce human, capital, and natural resources.*

Ranching is year-round work. Ranchers preserve their investment through education, traditions, hard work and conservation practices that protect the land and water. Water is a valuable resource in the SLV, so ranchers conserve and manage this resource.

1.3 *Students understand that resources can be used in many ways and understand the costs of alternative uses.*

Ranchers in the SLV are often faced with drought or dry years. Decisions have to be made allocating water for pasture and hay meadows.

Activity: have students discuss water conservation. Make a list of ways your class can conserve water at school and at home.

Resource: Thirstin’s Wacky Water Adventure, office of water, EPA, www.epa.gov/safewater

Standard 3: *Students understand the results of trade, exchange, and interdependence among individuals, households, businesses, governments, and societies.*

3.1 *Students understand that the exchange of goods and services creates economic interdependence and change.*

When ranchers graze their cattle on private or government leases, they give their lands in the Valley a rest to re-grow. Talk with students how this change of pastures makes sense.

Ranchers and farmers feed the majority of Americans who do not and usually cannot raise their own food. Discuss with students what foods they might raise. What advantages does this offer? Livestock make variable weight gains on different grasses. Cooler days and fewer insects reduce stress, and rocky ground conditions the hooves.

Activity: Do a container garden in the classroom and eat your harvest.

In a group discussion, follow the beef-to-burger path from birth, weaning, feeding, to market weight, processing, distribution (trucks), to grocery stores and restaurants, and then prepared as food.

Economics 5-8 Curriculum

1.1 *Students know that economic choices are made because resources are scarce and that the act of making economic choices imposes opportunity costs.*

Ranchers regularly make economic choices based on unpredictable elements like weather, markets, fuel costs, and natural disasters, such as fire or tornadoes. If hay gets rained on after it is cut, its value decreases. Without moisture (rain or irrigation) growth cannot occur. A rancher has to make the best decisions he or she can with the information at hand. Discuss economic choices ranchers make and risks ranchers take.

Activity: have students write different economic choices ranchers make seasonally on file cards. Have them also write out different possible natural scenarios on file cards (drought, frost, for example). Get as many file cards as you can. Keep Choice Cards and Scenario Cards separated, maybe even use different colors! Have students group into teams, mix the cards and have the first two members of each team draw a card. For example, if the Choice Card says “big herd” and the Scenario Card says “drought,” what are the economic choices the rancher will have to make and what are the alternatives? What factors other than money could affect decisions?

1.3 *Students understand that resources can be used in many ways and understand the costs of alternative uses.*

Ranchers choose conservation practices that best serve their land. Because the resources are the rancher's livelihood, taking care of them is good stewardship and usually makes good economic sense.

Activity: through discussion, figure out the rancher's main resources: his/her brain, experience, available help, water, soil, livestock, vegetation and facilities (including, buildings, corrals and fences). Explore with students how these are the rancher's main resources.

Students could report on cattle diseases and how the ranching industry is dealing with these diseases and what are their concerns. Disease prevention and veterinarians are a ranchers resource for this issue.

3.1 *Students understand that the exchange of goods and services creates economic interdependence and change.*

Is there a difference between a “cowboy” and a “rancher”? What is it? Every job has its specialists. Cowboys are cattle specialists. Have students research working cowboys. What types of jobs do they do? Do cowboys have to make economic choices in order to do what they love?

Resources: www.nationalcowboymuseum.org, www.workingcowboy.com, www.americanwesternmagazine Sherman, Josepha, Steer Wrestling, Heinmann Library, Chicago, 2000. Wukovits, John F., The Black cowboys, Chelsea House Publishers, Philadelphia, 1996 & Rice, James Cowboy Rodeo, Pelican Publishing Company, Gretna, 1992.

Reading & Writing Curriculum K-4

Standard 1: Students read and understand a variety of materials.

1.1 *Students are using a full range of strategies to comprehend materials such as directions, nonfiction material, rhymes and poems and stories.*

After viewing the video, make a “story circle” of students and discuss stories told during the film. What was your favorite story? Why? Are stories better when they are heard rather than read? Why? What about the poems used in the video. How do poems tell us about things differently than stories? In the poem, *Country Graft*, what is poet Peggy Godfrey explaining? Is it easier to understand what a graft is because it is in a poem?

Activity: Have a chuck-wagon-style cook-out and hootenanny. Have children find a favorite cowboy poem, story or song to share with the class. Do this outside and have cowboy music while you are working on the meal. Suggest everyone dress in western clothing.

Resources: www.westernfolklife.org, www.nationalcowboymuseum.org link to Children’s Cowboy Corral, Smith, Byron J., Roundup of Western Outdoor Cooking, Pan Press, Tahlequah, 1960.

Standard 2: Students write and speak for a variety of purposes and audiences.

2:1 *Students are choosing vocabularies that communicate their message clearly and precisely.*

Project: Using the enclosed vocabulary list, the video, and cowboy poetry, have students create a cowboy vocabulary list. Use crossword puzzles from the wonderful website, www.nationalcowboymuseum.org link up to the Cowboy Corral for printable puzzles and mazes.

Reading and Writing Curriculum 5-7

1.1 *Students are using a full range of strategies to comprehend materials such as directions, nonfiction material, rhymes and poems and stories.*

Explain to students that all kinds of writing – not just novels and history books – tell us about a culture. Newspapers, magazines, technical journals, manuals, and even advertisements tell us something about a culture, a time in history, who these people were, what was important to them, what was scary to them, and beautiful to them. The written records people leave tell us a lot about them. The stories told in the video tell us about ranchers and what they see as important. List some of these things on the board with students.

Activity: divide students into four groups. Each group will explore a different type of western writing. One group will research poetry & plays, one will look for short stories and novels, one will research newspapers and magazine, and one group will look at technical literature and advertising. Using the computer and the library, it is a good idea to guide students to choose material from the past as well as contemporary material.

Have each student create an individual report on their piece or pieces of writing. Have each group create a presentation of their style of writing and what it tells them about ranching culture.

2.1 Students will write and speak for a variety of purposes and audiences.

Oral history interviews are a great way to get students involved in their community. Everyone tells his or her story differently. Talk about how in the video various rancher's stories are recorded in their own words. These stories explain, illustrate, and illuminate the life of the rancher.

Go over interviewing techniques. The journalistic W's: who, what, when, where and why. Divide into groups to interview classmates. Ask students to interview their parents or siblings. When you feel the students are competent interviewers, help them invite someone from the community to visit the class and be interviewed. Let each group prepare interview questions and conduct an interview in front of the class.

Activity: students contact a volunteer to be interviewed. Students write their questions and practice them on other students. Students in groups of two with an adult (parent, older sibling or teacher) go to conduct interviews. If the person being interviewed is willing, record the interview on a small recorder and get a photo of the person being interviewed. Students present oral and written reports focusing on what they learned from their interview. This project can be very fun and informative.

Resources:

Visual Arts K-4

Standard 1: *Students recognize and use the visual arts as a form of communication.*

After students have viewed the video, talk about how nature has inspired art. Ranchers and cowboys spend a lot of time in nature. Show students examples of western art. Locally supplied calendars often feature western art. What is happening in the picture? How are colors used to depict a mood?

Activity: give students paper and various portable art materials and take a field trip to ranch lands or mountains near you. Have each student produce perhaps three to five pieces of art. When you get back to school, have students share their art with the class, explaining why they chose the subject they did. Have students pick out their favorite piece from the field trip to make into a larger piece for a class art show.

Resources: www.westernfolklife.org, www.wildlifeart.org/Education/trunk_detail.cmf.
There are good western art books in most Colorado libraries.

Standard 4: *Students relate visual arts to various historical and cultural traditions.*

We preserve our memories and tell each other who we are as humans through art. What other purposes can art serve?.

What are brands used for in ranching? How many characters (letters or symbols) do they have? If a brand design is made up of many corners, a hot iron will burn the whole area and leave a blotch instead of a brand.

Project: Have students work on brand designs and create their own brand. Display individual brands around the school. You could even get a rubber stamp kit and make stamps of students' brands!

Resources: www.newmexico.org link to the Cowboy & Ranching Tradition, the first brand in the SLV was a Spanish brand from Conejos, CO. www.nationalcowboymuseum.org

Visual Arts 5-7 Curriculum

Standard 1: *Students recognize and use the visual arts as a form of communication.*

After viewing the video, talk about the natural beauty the of rural areas. The art of this culture reflects nature and the place of humans and animals within it. Western and cowboy art is collected in museums and private collections. Using the Internet, the library, and visiting galleries when possible, familiarize students with the western art folio.

Activity: have students select an individual artist they really like. Have them research the artist and present a biography of the artist. Have them present an oral report to the class on their artist, including examples of the artist's works. Students should explain in this report what ideas the artist communicates? This should be explained using three to five of the artist's works.

Resources: Museums, art galleries, and some libraries throughout the West have collections of western art.

Standard 4: *Students relate visual arts to various historical and cultural traditions.*

After viewing the video, discuss what features compose the beauty of the SLV. Many people and cultures have occupied or traveled to the Valley from ancient times. Petroglyphs are ancient rock art. Ancient native peoples, more modern native people, Spanish settlers and explorers and cowboys produced their own forms of art.

Activity: Take a field trip to a petroglyph site. Discuss the figures and symbols on the rocks. Have students draw several of their favorites. What were they trying to communicate? Have students make their own pictographs and explain what they communicate.