

*“The Last Roundup”*

**Resource Title:** *Island Cattle Ranching*

**Resource Summary:** Students will gather information on beef cattle and cattle ranching. Then as a group they will be presented with data from Santa Rosa Island such as water and foraging sources. Students will watch the tale, “The Last Roundup” and decide if cattle ranching on the island is viable or non-viable. Through investigation, groups will explore the impacts and benefits ranching might have on the environment and present their arguments to the class. Finally, students will learn about brands by looking at the Vail and Vicker brands. They will develop their own brand and create a final PowerPoint presentation to show the class.

**Subject Areas:** Science, Agriculture

**Grade Level Range:** 6th - 8th

**Standards:**

Common Core English Language Arts

SL.6-8.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6-7-8 topics, texts and issues, building on others’ ideas and expressing their own clearly.

RST.6-8.2 Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions.

Next Generation Science Standards

MS-LS1-4 Use argument based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively.

MS-LS1-5 Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.

MS-ETS1-1 Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.

**Resource Provided By:** Suzanne Squires, Science/Agriculture/Multimedia/PE, Los Olivos School, Los Olivos School District

## Resource Details:

### 1. Beef Cattle Research:

Students are broken into groups of four and given access to Beef Cattle Fact Sheets ([www.learnaboutag.org](http://www.learnaboutag.org)). Information can be recorded on paper, a spiral or group white board. Each group shares out to the class and then they record important facts that will help determine if cattle can be grown for profit on Santa Rosa Island.

### 2. Students are then presented with Santa Rosa Island Facts such as:

- 84 square miles in size and about 15 miles long and 10 miles wide
- 26.5 miles from the nearest mainland, 6 miles from Santa Cruz Island and 3 miles from San Miguel Island
- Highest peak is 1589 feet in elevation
- Mediterranean climate with dry and sometimes foggy summers and cool rainy winters and prevailing winds from the northwest
- Average rainfall is about 15 inches a year with extreme years of droughts as well as exceptionally wet years
- Has many permanent springs and a few permanent streams
- About nine canyons have year around water
- Clapp Spring has water of exceptionally good quality
- Blanketed with predominantly gentle rolling hills and grasslands
- North shore with well developed marine terraces
- Southern sector is steeper and more rugged
- Island's coastline is variable with broad sandy beaches
- Only three native terrestrial mammals (island fox, the spotted skunk, deer mouse)
- One snake (gopher snake), two species of lizards (alligator lizard, western fence lizard) and two amphibians (Pacific tree frog, slender salamander)
- Numerous birds nest on the island
- A diverse array of plant communities including grasslands, coastal sage scrub, chaparral, woodlands, pine forests, riparian and marsh communities
- Stands of the Bishop pine and Torrey pines

3. In their groups, students use their notes and island facts as evidence to develop an argument that states whether cattle ranching is viable or non-viable on Santa Rosa Island. These arguments are presented to the class using a variety of student generated visual aides.

4. Watch "The Last Roundup" Tale in "West of the West." Students take notes. Students are also presented with a diagram of the carbon cycle and some more cattle grazing facts.

### Cattle Grazing

- Over rested pasture grass – grass that is not grazed; carbon remains in the plant therefore carbon is not added to the soil
- Over used pasture grass – grass that lacks leaf area index to properly photosynthesize
- Properly grazed – grass covers nose of the animal and goes up to eyeballs (take off half and leave half)

### Other Ranch Activity

- Oat Hay grown to feed horses when brought into corral
- Used horses (60 to 70 head) to gather cattle (one stallion kept on the island for breeding; Thoroughbred/Morgan/Appendix Quarter Horse crosses)
- Barbed wire fencing used for gathering areas and pasture separation
- Pier/boat for shipping animals
- Housing for family and employees
- Stocker cattle operation (calves delivered and grown up to market weight)
- Cattle supplemented with molasses in dry season
- Ship cattle May-July

5. Groups are presented with the brands used on the Santa Rosa Island Ranch and develop their own brands to be used in their final PowerPoint project on their title slide to identify their group. (Additional resources)

6. Using student notes, island facts, beef cattle facts, grazing facts and other ranch activity facts, students will develop a final group project using PowerPoint to argue whether ranching on the island is viable or non-viable and whether it has positive or negative environmental impacts on the island.

### Supplemental Activities:

1. Visit a cattle ranch operation or have a beef cattle producer visit class.
2. Add some math to the lesson by using an actual cattle sales receipt from the Vail/Vickers cattle business.

SPECIAL THANKS TO: Pete Healey and Karen Smith Healey for their personal accounts of cattle ranching on Santa Rosa Island

Santa Rosa Island Brands



Vail and Vickers



Empire Ranch  
(Arizona Ranch)



Vail and Rodgers



Heart Slash

# VAIL & VICKERS

PHONE (805) 682-7645

123 WEST PADRE STREET, SUITE D  
SANTA BARBARA, CA 93105

DATE July 2 1995

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## **Additional Resources:**

California Foundation for Agriculture in the Classroom ([learnaboutag.org](http://learnaboutag.org))

Milk or Meat? Beef or Dairy?

Commodity Fact Sheet – Beef

Beef Activity Sheet

Cattle Connections

Ag Bites – Cattle

California's Channel Islands, Marla Daily (book)

Northern Channel Islands Anthology, Vail & Vickers, Edited by Maria Daily (book)

Island of the Cowboys Santa Rosa Island, Kerry Blankenship Allen (book)

A Step Back in Time Unpublished Channel Islands Diaries, Edited by Maria Daily (book)

California's Channel Islands A History, Frederic Caire Chiles (book)

Cowboy Island, Farewell to a Ranching Legacy, Text by Gretel Ehrlich, Edited by Nita

Vail, Introduction by Marla Daily (book)

The Island, Reminiscences of twentieth century ranching on Santa Rosa Island, Pete

Healey (book)