

**“It’s News to Me!”**  
**Teaching with Colorado’s Historic Newspaper Collection**  
**Model Lesson Format**

**Lesson Title:**

Colorado Irrigation Methods and Water Rights Disputes in the Late 1800s and Early 1900s

**Subject(s) and Grade Level(s):**

Science, History; Economics: Grades 9-12

**Focus of Lesson:** A brief explanation of what students are to learn in this lesson (content and/or skills). What is the purpose of the lesson?

In the late 1800s and early 1900s, a series of irrigation ditches was constructed along the Arkansas and South Platte Rivers to provide farmers with sufficient water to meet their agricultural needs in an arid environment. Kansas claimed that the amount of water withdrawn from the Arkansas reduced the flow of water sufficient to affect their rights to that water. The Colorado-Kansas dispute was settled by the Supreme Court.

**Standards Assessed:** Which standards will you be assessing in this lesson? Identify the content area, the standard number and any key components or benchmarks that are applicable.

**Information Literacy Standard 1:** The information literate student accesses information efficiently and effectively.

**Information Literacy Standard 2:** The information literate student evaluates information critically and competently.

**Reading and Writing Standard 4:** Students apply thinking skills to their reading, writing, speaking, listening, and viewing. In order to meet this standard, students will make predictions, analyze, draw conclusions, and discriminate between fact and opinion in writing, reading, speaking, listening and viewing. They will also recognize, express, and defend points of view orally and in writing and evaluate the reliability, accuracy, and relevancy of the information.

**Assessment:** Explain the assessment. (Include the formal 'assessment assignment' and any forms, worksheets, etc. in the Materials Section)

1. Activity #1 – Written list of major points covered in “teaching” other group members.
2. Activity #2 – Written letter describing photo interpretations.
3. Activity #3 - Written chart stating the position of one of the town meeting groups and the primary source in the Historical Newspaper Collection supporting the position.

**Standards Addressed:** Which standards will you be addressing (but not assessing) in this lesson? Identify the content area, the standard number and any key components or benchmarks that are applicable.

**History Standard 2:** Students know how to use the processes and resources of historical inquiry.

**History Standard 2.1:** Students know how to formulate questions and hypotheses regarding what happened in the past and to obtain and analyze historical data to answer questions and test hypotheses.

**History Standard 2.2:** Students know how to interpret and evaluate primary and secondary sources of historical information.

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

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

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

**Science Standard 4.3:** Students know major sources of water, its uses, importance, and cyclic patterns of movement through the environment. Students are capable of identifying and explaining factors that influence the quality of water needed to sustain life; identifying and analyzing the costs, benefits, and consequences of using water resources.

**Time:** The number of class periods required for the lesson as well as the length of class period.

A Total of 5 class period plus outside homework for researching:

Day 1: Introduction to Colorado Digitization Project and Historic Newspaper Collection. Student Activity 1

Day 2: Student Activity 2 – research and homework to finish letter

Day 3: Introduction to Activity 3; Assignment of groups to be represented; begin research in the historic newspaper collection.

Day 4: Continued preparation and chart completion

Day 5: Town meeting presentations

**Materials / Teacher Preparation Section:** List the technology, handouts, chart paper, text resources, etc. needed to complete the lesson. Include what you need to do to prepare ahead of time for your students to complete the lesson.

Go to [www.cdpheritage.org](http://www.cdpheritage.org). Students should review the frequently asked questions section and the search tips for using historic newspapers. Students should be shown how to print, email or add an article to “my collection”. Students should be given the format required by the teacher to cite the sources used.

Handouts:

Student Worksheet #1 - Littleton History – Ditches and Irrigation

Student Worksheet #2 - Colorado Irrigation Ditches 1870 – 1910

Student Worksheet #3 - Town Meeting Scenario

Technology:

Access to the internet, printer, word processor

**Possible Procedures:** Enumerate the procedure teachers can follow to teach the lesson to students. Provide the URL for the digital primary sources that you will use.

1. Students read an overview of agriculture and irrigation in the Littleton area in the late 1800s, setting the stage to define the need for agricultural expansion in light of a growing population (<http://www.littletongov.org/history/othertopics>). Because of Colorado’s arid climate, the ability to secure water sources and delivery the water to the farms was a primary key to sound economic development. Students will engage in a pair and share activity. In the pair and share activity 2 members of the group read through one section and make a list of the major points presented in the article. They will teach the other members of the group about what they have read.
2. Activity 2 engages the students to research time appropriate photos through the Heritage West collection at [www.cdpheritage.org](http://www.cdpheritage.org) on irrigation ditches and water ditches. Students write a letter to a friend in a different part of the United States, explaining how people in Colorado got water for irrigation, the concept of a water ditch and insights into how the water ditches were constructed. This activity provides students with background information for investigating of the Kansas-Colorado Water Dispute. Students are asked to critically examine the photos and interpret ideas about the methods of construction of ditches, the size and location and the need for irrigation based on the surrounding landscape.
3. Activity 3 provides students with the opportunity to research the Colorado Historic Newspaper Collection as they prepare for a town meeting in which students role play the position of the Colorado farmer, irrigation ditch owners, engineers, and lawyers for both sides in the Kansas-Colorado Water Dispute. This Supreme Court case was about water rights and the excessive withdrawal of water in Colorado through ditches, leaving Kansas cities along the Arkansas River with diminished water flow. Students will read and review articles in the pathfinder lists as well as research additional articles to support their positions.

Background Information on Irrigation Ditches  
Student Activity #1

Overview: The availability of water is the key resource for developing and sustaining the agriculture and economics of a region. Using the example of Littleton, Colorado, access the website at <http://www.littletongov.org/history/othertopics> and read through the section on agriculture and irrigation. Divide your class into groups of 4 students and do a pair and share. One group of 2 students reads through the agriculture section and makes a list of the major points in the article. They present their information to the other members of the group. Repeat this for the irrigation section.

URL: \_\_\_\_\_

Date Accessed: \_\_\_\_\_

Last Update: \_\_\_\_\_

Organization Sponsoring: \_\_\_\_\_

Topic: \_\_\_\_\_ (Irrigation or Agriculture)

Major Historical Points:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

Colorado Irrigation Ditches 1870 – 1910  
Student Activity #2

It is difficult to imagine how different the irrigation and water distribution system today is in contrast to the early twentieth century. In the absence of modern construction equipment, ditch building was a major endeavor. The availability of water is a key resource in supporting and sustaining cities and agriculture due to our limited rainfall. As the population expanded, so did the need for water resources, diverting water from the main river systems to the arid regions of Colorado.

The Colorado Digitization Program through Heritage West allows access to photographs of the times. Access the site at <http://www.cdpheritage.org/> and click into the Heritage West search box. Search for photos of water ditches or irrigation ditches during the date range of 1870 -1920. Examine the photo carefully and write a letter to a friend on the eastern coast in the late 1800s and explain the concept of an irrigation ditch, their size, and their appearance. Include a description of how the ditches were constructed. Explain how water was distributed. Include a description of the appearance of the surrounding landscape. Review at least 10 photos.

Some suggested call numbers are:

- **Call Number:** MCC-3796
- **Call Number:** CHS.X4782
- **Call Number:** CHS.J3504
- **Call Number:** MCC-1281
- **Call Number:** MCC-1481
- **Call Number:** MCC-1479
- **Call Number:** MCC-3745
- **Call Number:** CHS-L1602
- **Call Number:** CHS-L2555
- **Call Number:** CHS-L1613
- **Call Number:** CHS.X5442
- **Call Number:** GB-8090
- **Call Number:** MCC-1118
- **Call Number:** MCC-2403
- **Call Number:** MCC-1255
- **Call Number:** CHS.X5400
- **Call Number:** CHS.X5704
- **Call Number:** MCC-870
- **Call Number:** MCC-2017

Town Meeting Scenario  
Student Activity #3

As the population grew and the use of irrigation ditches expanded to meet the needs of agriculture and domestic water requirements, the amount of water diverted for Colorado needs was of concern to the people of Kansas who claimed that excessive withdrawal diminished the flow in the Arkansas River. These reductions had economic consequences and resulted in Kansas filing a lawsuit against Colorado in the Supreme Court of the United States.

Use the Colorado Historic Newspaper collection to research positions of various interest groups in this controversy. Present your findings in a town meeting. Explain how decisions in this case could affect you. In addition to the role playing assignments listed below, a student should be assigned as Mayor of the city to facilitate the meeting, call on speakers, maintain the orderly conduct of the participants and conduct a question session following or during the presentations. A timekeeper should also be assigned to limit presentation times and questioning sessions. The following positions should be researched and represented in your discussions.

1. Colorado Ditch owners
2. Colorado Farmers
3. Kansas Farmers
4. Water engineers (Federal, Colorado or Kansas)
5. Lawyers representing the case

A second, follow-up town meeting will be held for the purpose of explaining the decision of the Supreme Court. Several lawyers should be appointed to provide the community with this information.

Researching involves keyword searches. Your ability to find information depends on your ability to ask the questions in multiple ways. Brainstorm keywords and combinations of nouns that will help narrow your search. For example: irrigation, irrigation ditches, agriculture, water. Think about the words (nouns) that will appear in the article. Read through the search tips. Be sure to place a check mark in the search all publications box.

**Preparation for Town Meeting:**

Before the presentations, generate a class chart defining what is meant by the goal of active speaking, active listening and active participation. Specifically, define behaviors that demonstrate and do not demonstrate the goal. Post these in your classroom to remind students of desired behaviors.

**Assessment:**

This section of the assignment evaluates the student's ability to locate primary source documents, identify facts and opinions, and document the sources of information. Students will find articles, review the article and make a list of facts and opinions that they can use in their role playing discussions. The source for each fact or opinion needs to be cited.

Group Represented:		
Facts	Opinion	Source



<b>Town Hall Meeting Rubric</b>				
	Unsatisfactory	Partially Proficient	Proficient	Advanced
Active Speaking	The speaker's voice was not loud enough to clearly hear the content. Enunciation of words was unclear. Eye contact was missing. Notes were read.	Only those students near the speaker could clearly hear or understand what he/she was saying. Reading of notes was distracting.	Infrequent instances of unclear speech or insufficient loudness. Some notes were read directly. Eye contact with the audience was sporadic.	Speaking was clearly understandable, adequately loud and the speaker retained eye contact with the audience. Notes were not read and only referred to infrequently
Content	Presentation had no factual basis and was inaccurate	Research of content weak.	Research of facts presented was adequate but lacked depth.	Content of presentation was based on well researched, primary source material.
Ability to answer questions	The student was not able to answer any questions	The student's response was vague and brief. The student appeared unsure.	The student's response was complete and accurate but did not elaborate in detail.	The student seems knowledgeable regarding the question and gave a detailed response
Active Listening	The student was rude to the speaker(s) by having sidebar conversations, was inattentive and/or disruptive.	The student appeared uninterested but was not directly rude or disruptive to other presenters.	The student was attentive to most groups but did not actively participate in the town meetings in any session beside their own presentation.	The student was attentive to all speakers, actively participated in questioning periods and was respectful to other while they were presenting.
Active Participation	Non-participatory behavior was observed such as head being down, engaging in reading non related material or drawing activities.	Participated as a listener during the presentations. Did not ask questions or provide other groups with comments	Assumed the role of a listener in other presentations. Participated infrequently in question and answer sessions.	Participated fully in all the presentations. Showed appropriate acknowledgement to others. Gave positive comments. Participated in question and answer sessions.