

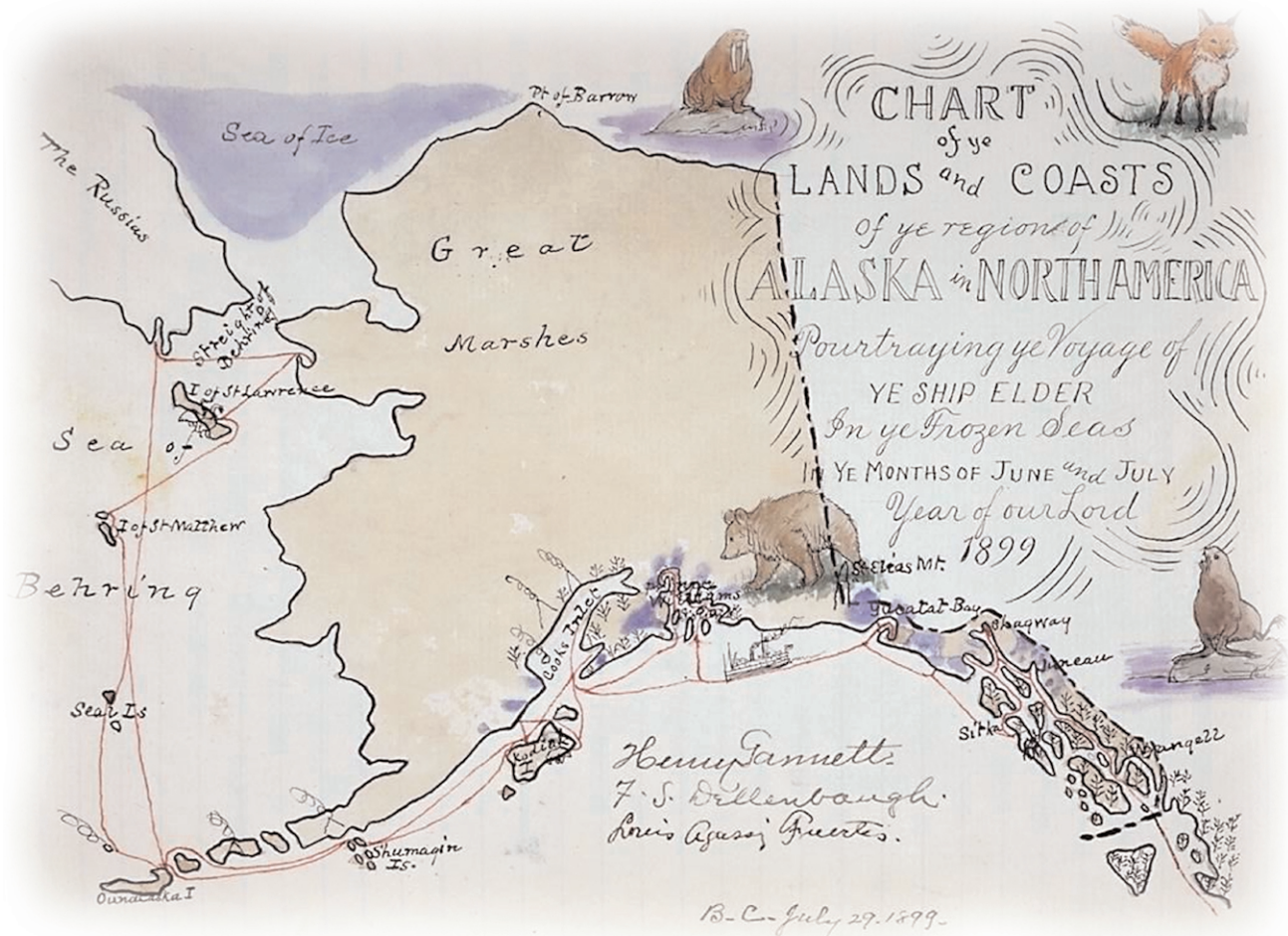


The Harriman Alaska Expedition Retraced

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*The Harriman
Alaska Expedition
Retraced:
A Century of Change*



PHOTO: Kim Heacox

INSTRUCTIONAL GUIDE AND CD-ROM

*The Harriman
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"The Harriman Alaska Expedition Retraced" film is produced by Lawrence Hott, Tom Litwin and Diane Garey. A Florentine Films/Hott Production in association with the Clark Science Center and the Alumnae Association of Smith College.

A Presentation of KTOO-TV Alaska

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A century ago,



railroad tycoon Edward Henry Harriman, one of the most powerful men in America, decided to take a little vacation – in the form of one of the most ambitious expeditions ever to be staged in America. Harriman invited twenty-five scientists, writers and artists to join him on a 9000 mile exploration of the coast of Alaska.

In the summer of 2001, a Smith College expedition, carrying a similar group of scientists, writers and artists, retraced Harriman's route, exploring some of the issues Harriman faced, and some he couldn't even imagine. The film chronicling these two expeditions presents a unique look at a century of change in Alaska.

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To learn more about the expedition and acquire teaching materials, join us online at www.pbs.org/harriman
Watch the web site for **Harriman Retraced, the book**, coming in 2004, published by Rutgers University Press.
To order additional copies of the film contact Bullfrog Films at 800-543-3764 or online at www.bullfrogfilms.com

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The Harriman Alaska Expedition Retraced would not have been possible without the critical partnership of the Alumnae Association of Smith College and support of the Smith College administration. Zegrahm Expeditions meticulously translated the 1899 Harriman Expedition itinerary into the contemporary expedition route, and provided invaluable logistical and maritime expertise. The support and ongoing cooperation of Clipper Cruise Lines, including Capt. Taylor and crew of the M/V Clipper Odyssey, was a critical ingredient of Harriman Retraced's success.

The project team is deeply indebted to Phoebe A. Wood, who provided logistical and financial support, as well as a base of operation in Anchorage, Alaska. Her commitment to the repatriation of Tlingit objects was inspirational. The Alaska Geographic Alliance, with the support of the Alaska Science & Technology Foundation, played a significant role in shaping the project's educational mission. We extend special thanks to Janine Harris, Walter Hays, Laura Kale, William F. Hibberd, Thomas C. Richards, Terry Andreas, Werner Zender, Brenda Bolduc, Jennifer Gates, and David Rockefeller, Jr. for their personal commitment to the project.

Gaining insight into the life of contemporary coastal Alaska is a monumental task that could not have been accomplished without the goodwill of the many wonderful communities we visited. The Harriman Retraced project team is deeply appreciative of the support provided by the people of Anchorage, Metlakatla, Ketchikan, Saxman, Wrangell, Juneau, Skagway, Sitka, Yakutat, Orca, Cordova, Valdez, Homer, Chignik, Unalaska, St. George, St. Paul, Gambell, Teller, Little Diomedes, and Lorino.

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Kodiak Convention & Visitors Bureau, Baranov Museum of Kodiak, Alutiiq Museum of Kodiak, Unalaska/Port of Dutch Harbor Convention & Visitors Bureau, Museum of the Aleutians, Traditional Council of St. George, Tanaq Corporation of St. George, Aleut Community of St. Paul Tribal Government, Pribilofs Stewardship Program, Traditional Council of St. Lawrence, Traditional Council of Teller, Inalik Native Corporation of Little Diomedes, and the Office of Chukotka Governor Roman Abramovich.

The Harriman Expedition Retraced would not have been possible without the assistance and cooperation of the National Oceanic and Atmospheric Administration, National Marine Fisheries Service, U.S. Fish & Wildlife Service, U.S. Forest Service, and National Park Service.

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INSTRUCTIONAL GUIDE INTRODUCTION

The Harriman Alaska Expedition Retraced: A Century of Change

In 1899 Edward Harriman assembled a distinguished team of scientists and artists and took them on a two-month survey of the Alaska Coast. The scientists produced eleven volumes of data that took twelve years to compile.

During the Harriman Expedition Retraced, scientists, naturalists and artists observed anew the sites visited by Harriman’s scouting parties a century ago. At the heart of the new expedition is the 100-year Harriman benchmark that can be used to assess our relationship with the natural world and society’s current and future needs.

The purpose of this Instructional Guide is to help educators navigate and use the Web site/CD in the classroom. It includes lessons for middle and secondary classes and is designed to be used in schools across the nation. Grade levels recommended are approximate, and lessons should be adapted to fit the needs of the students. The Instructional Guide builds on the central theme, “A Century of Change,” but within that broad theme contains a sequence of interdisciplinary lessons. This approach reflects the spirit of the two expeditions, themselves, which were undertaken as holistic studies of Alaska’s coast. Disciplines include art, history, literature, geography, ethnography, economics, geology, technology, and biology. The lessons are based on national standards, listed on pages 55-56. You may visit the site on-line, (<http://www.pbs.org/harriman>), or work from the CD. A matrix showing the grade levels, subject matter emphasis, and estimated time of each lesson follows:

Lesson	Grade levels						Subjects				Time By CLASS
	7	8	9	10	11	12	SOC STU	LANG ARTS	SCI	ART	
1. Launching an Expedition	•	•	•	•	•	•	•	•	•		6
2. Results of the 1899 Expedition	•	•	•	•	•	•	•		•		2
3. Bag a Glacier	•	•	•	•	•	•	•		•		4-5
4. No Neutral Images	•	•	•	•	•	•	•	•		•	4 +
5. A Sense of Wonder and the Fleeting Image	•	•	•	•	•	•	•			•	3 +
6. The Two Alaskas			•	•	•	•	•	•	•		4-6
7. Making a Collection	•	•	•	•				•	•		3
8. National and International Contexts of the Harriman Expeditions			•	•	•	•	•	•			4-5; 3
9. Historiography		•	•	•	•	•	•	•			3
10. Evaluating the Expeditions	•	•	•	•	•	•	•	•			1-2

The Guide is suitable for placement in a three-ring binder. The contents are organized to be used by teachers of different subjects, as fits their needs. A science teacher may extract the science sections; an art teacher may select the most relevant parts; and so on. Teaching teams and interdisciplinary schools may implement the entire Guide as appropriate. Lessons may be used in any sequence that meets teacher needs, although we encourage beginning with Lesson One in order to practice navigating the Web site/CD, and to experience an overview of the stories of the two expeditions. We also encourage the teacher to show the film early in the study cycle.

A typical "route" (lesson) in the Guide includes:

- topic of the "journey";
- lesson subject(s): social studies, language arts, and so on;
- appropriate grade level(s);
- approximate class time needed to complete the lesson;
- materials needed;
- activities with instructional methods and suggested teacher presentation;
- vocabulary; and
- assessment techniques and instruments.

Navigation: Ease of navigation has been a primary goal of the Instructional Guide. Within the Web site/CD, the most comprehensive navigation resource is the "Table of Contents." Its URL is <http://www.pbs.org/harriman/aboutsite/contents.html>, and it is always accessible at the HOME page, (<http://www.pbs.org/harriman>). The Table of Contents can also be reached on each page after the HOME page by using the SITE INDEX, located in a small pull down window near the upper right. The SITE INDEX will, like the Table of Contents, provide access to the major locations on the Web site, but it will not give as much detailed search control. A full Web site/CD Table of Contents is included in this Guide (see pages 51-54), cross-referenced with each lesson to highlight important content areas. While emphasizing the utility of the Table of Contents, you may wish to caution your students not to expect the usual key word "Search" function on the CD, although the Web site does support it.

Time: Time is estimated in each lesson by class periods of 45 to 50 minutes. The time estimates are, however, flexible, and each educator should consider the abilities and skill levels of their students in planning the time to accomplish each activity. The estimated time does not include any delays in access to either the Web site or the CD.

Materials and Printing: The materials list always assumes a printer, a computer with Internet access, and the Harriman Expedition's CD-ROM. You will find the section "About This Site" (<http://www.pbs.org/harriman/aboutsite/aboutsite.html>) helpful for guidelines on viewing and printing. When printing images for art lessons in particular, go to "Page Setup" in "File" and enlarge the image to 110 or 120%. Changing the page orientation from "portrait" to "landscape," as appropriate, will also improve the image. Some printers will print the yellow background color from the Web site pages. Set your printer for "draft" version whenever you are printing for text use only to help dilute the yellow and avoid depleting your print cartridge.

More Resources: All sections of the Instructional Guide were designed to be accomplished from within the Harriman Web site/CD, but in all instances the teacher should encourage students who are engaged in the subject to further explore related resources, many of which are listed on the Web site/CD. For more information about the expeditions, please see the References pages: (<http://www.pbs.org/harriman/aboutsite/references.html>); Harriman Links: (<http://www.pbs.org/harriman/aboutsite/links.html>); and Suggestions for Further Reading: (<http://www.pbs.org/harriman/education/extracredit/reading.html>).

Thank You: Advisors from the Harriman Expedition Retraced staff and the Alaska Geographic Alliance assisted the Guide development. Additional advisors from the Anchorage School District (Alaska), and from the Smith College Education and Child Study faculty provided expertise in pedagogy and teaching/learning opportunities. We are grateful for their patience and enthusiastic support.

Donna Matthews and Patricia H. Partnow, Ph.D.

The Harriman Alaska Expedition Retraced: A Century of Change

"Our comfort and safety required a large vessel and crew, and preparations for the voyage were consequently on a scale disproportionate to the size of the party."

Edward H. Harriman, Preface, *Harriman Alaska Series*, Vol. I, quoted in "The 1899 Expedition"

How did the crews and organizers of the two Harriman expeditions launch and carry out their respective voyages? What tools – physical and conceptual – did they use?

Level/Subjects:

Grades 7 - 12
Social Studies, Language Arts, Science

Summary:

Students watch the videotape *Harriman Alaska Expedition Retraced*. They explore and navigate the Harriman Web site/CD. They brainstorm what tools and ideas they would need to plan a major scientific expedition in 1899 and 2001, respectively. They make graphic presentations to their classmates, then compare the technology used during the two expeditions.

Time:

6 class sessions. Two to watch the videotape; one to explore the Web site/CD; one to retrace the geographic routes of the expeditions; one to complete research for group presentations; and one to prepare and present the information to fellow classmates.

Materials:

- Monitor, VCR and Videotape: *Harriman Alaska Expedition Retraced*
- Printed copy of "Table of Contents" from the Harriman Web site/CD for each student
- Large map of Alaska
- Yarn
- Art supplies for graphic presentations
- Printed copy of WEB SITE/CD EXPLORATION GUIDE for each student (see page 8)

Activities:

1. In preparation for your class's exploration of the Harriman Web site/CD site, refer to "Looking at Primary Sources" on the Web site/CD (<http://www.pbs.org/harriman/education/extracredit/primary.html>) for an example of a way to examine primary source documents.
2. Introduce the 1899 Harriman Expedition and the 2001 Harriman Expedition Retraced to students by showing photographs of the ships found at:
 - The *Clipper Odyssey* (http://www.pbs.org/harriman/explog/tech_photos.html) OR (<http://www.pbs.org/harriman/current/current.html>)
 - The *George W. Elder* Library of Congress site through "Harriman Links"; (<http://memory.loc.gov:8081/mss/amrvm/vmh/vmh057r.jpg>) OR (<http://www.pbs.org/harriman/1899/1899.html>)

Then read the following from the Web site/CD:

In 1899, the railroad tycoon Edward Harriman assembled an elite crew of scientists and artists, along with friends and relatives, and took them on a two-month survey of the Alaskan coast. They traveled aboard the steamship *George W. Elder*. In 2001, more than two dozen scientists, writers and artists, along with a number of guests from throughout the country, retraced the expedition, observing anew the sites visited by Harriman's scouting parties a century ago. They traveled aboard the *Clipper Odyssey*, a 340-foot ocean-going vessel.
3. Prepare the class for viewing the *Harriman Alaska Expedition Retraced* videotape. This will be shown in two parts—a total of 110 minutes long, with a break after 55 minutes. Assign a topic to each student; the student's task is to note when his or her topic is discussed in the videotape, and be prepared to brief the rest of the class later during the unit. For instance, if the assigned topic is "forestry," the student would take notes when clear-cutting, use of lumber, the opinions of the 1899 expedition members about the quality of Alaska timber, and so on, are raised in the videotape. Following are suggested topics that will yield interesting information and relate to subsequent lessons in

Activities, continued on page 5

The Harriman Alaska Expedition Retraced: A Century of Change

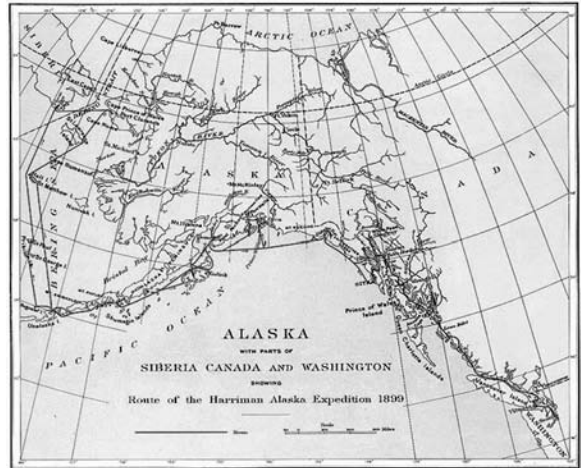
Activities, continued from page 4

this Guide. Since there are only twelve topics suggested, most will be assigned to at least two students.

- Changes in the environment, including abundance of natural resources.
 - Scientific and technological progress over the years between the two expeditions.
 - Outside interests (economic, social, political) as they affect Alaska.
 - Conservation issues.
 - Forestry.
 - Fisheries.
 - Tourism.
 - Clash of cultures.
 - Indigenous peoples.
 - Art (photography, drawing and painting, and literature).
 - Scientific discoveries made during the voyage.
 - The two Alaskas (“oil barrel for a nation” or potential for industry, on the one hand, and “national park for the world” or conservation issues, on the other).
4. Continue showing Part II of the videotape on the second day of class. Remind students of their assigned topics. Collect and check their notes on those topics at the end of the second class.
 5. Explain to the students that during the third day’s class they will become familiar with the crews and the places visited during the expeditions of 1899 and 2001. Students will become equally familiar with the Web site/CD where this information is contained. In order to do so, they will explore the Web site/CD. Distribute a copy of the Web site/CD’s Table of Contents to each student. Then distribute the EXPLORATION GUIDE sheet to students and allow them unstructured time to explore, navigate, and answer the questions.
 6. When students have completed the exploration, assemble the class and discuss what they found. Share information. Distinguish between primary and secondary sources. Ask students to explain which information on the Web site/CD they found to be the most valuable.
 7. Display a large map of Alaska and review the routes of the two Harriman expeditions. Mark the routes with yarn. Refer to the lessons on Assessing and Making Maps (<http://www.pbs.org/harriman/education/lessonplans/maps.html>) and Charting the Path of the *Elder*, (<http://www.pbs.org/harriman/education/lessonplans/location.html>) on the Web site/CD for detailed instructions on additional ways to carry out this portion of the lesson.
 8. Next, the students will plan and launch the two expeditions along the coast of Alaska. The 1899 mission is to learn about the coast of Alaska; increase knowledge of the plants, animals,

Activities, continued on page 6

LESSON ONE



The route of the Harriman Alaska Expedition of 1899. By Henry Gannett and the U. S. Geological Survey.
Source: Library of Congress



“The Good Ship *Geo. W. Elder*” in Glacier Bay.
Photograph by Edward Henry Harriman, 1899



The *Clipper Odyssey* in Harriman Fjord.
Photograph by National Ocean Service, NOAA, 2001

LESSON ONE

The Harriman Alaska Expedition Retraced: A Century of Change

Activities, continued from page 5

geology, and geography; and allow the participants to learn from each other and have a good time.

Brainstorm what you will need. Consider the following categories in generating your list:

- Maps;
- Scientific instruments;
- Transportation;
- Communication;
- Money;
- Talented and knowledgeable expedition members.

9. Explain that the students will also need to plan a second trip along the coast of Alaska, but this one took place in 2001 rather than 1899. Briefly talk about some of the differences they might expect in planning

the second voyage.

10. Divide the class into six groups, each with the task of researching the Harriman Web site/CD for information about one of the categories listed above (maps, scientific instruments, transportation, communication, money, and expedition

members). Each group must research information for both the 1899 and the 2001 expeditions. The groups will then present the information to the rest of the class, using at least one graphic tool (map, photograph, drawing, chart, or graph).

11. Allow time to research the Web site/CD and prepare their presentations. Then have students share their reports.

12. In class discussion, compare the two expeditions, particularly as they relate to different technologies available to the two crews. Ask those students who noted technological progress when watching the videotape to help provide answers. Discuss:

- How did changes in technology alter the purposes of the two expeditions?
- How did changes in technology alter the way the two crews carried out the expeditions?
- How did changes in technology alter the quality and type of information gathered?
- How did changes in technology alter the uses of the information?
- What remained unchanged, despite the hundred years of progress between the two?
- Look at the list of invited scientists and experts on the two expeditions. What is the same? What is different? Why are they different?

13. Speculate on how a Harriman retraced expedition launched in 2100 will differ from the first two.

14. Each of the twelve topics listed in #3 above is discussed in

Activities, continued on page 7



Juneau, 1899.
Photograph by C. Hart Merriam



Juneau, 2001.
Photograph by National Ocean Service, NOAA

Key to places that both expeditions visited (alpha list; not chronological):

Cordova
Homer
Juneau
Kodiak
Metlakatla
Sitka
Skagway
St. Lawrence Island/Gambell
St. Paul
Teller
Unalaska/Dutch Harbor
Yakutat

The Harriman Alaska Expedition Retraced: A Century of Change

Activities, continued from page 6

greater detail in at least one On-board Lecture. Depending on your class's make-up and interest, you might assign each student one On-board Lecture to read about his or her particular topic, and write a reaction paragraph. Appropriate lectures for the topics include the following list, which may be expanded as students make their own reading discoveries:

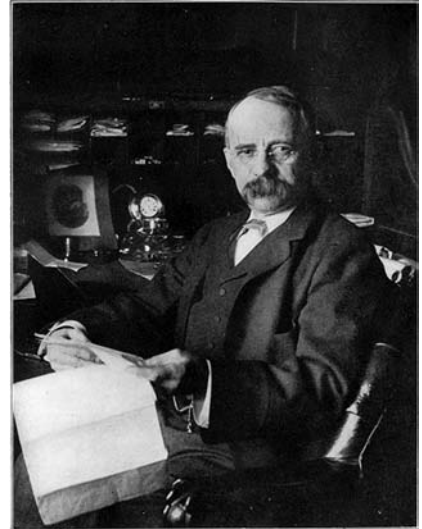
- Changes in the environment, including abundance of natural resources: "Marine Mammals in the Gulf of Alaska: Conservation Issues and More," Kathy Frost.
- Scientific and technological progress over the years between the two expeditions: [Note: no On-board Lectures deal specifically with this topic, although there is information on it in other parts of the Web site/CD, particularly "Souvenir Album: The Technology of Harriman Retraced"].
- Outside interests (economic, social, political) as they affect Alaska: "Dreaming the Klondike," Bill Cronon.
- Conservation issues: "New Ideas on the High Seas: Conservation in 2001," Brad Barr.
- Forestry: "Ecology and Politics in the Tongass National Forest," Paul Alaback.
- Fisheries: "Fisheries and the Bering Sea Ecosystem," David Policansky.
- Tourism: "A Century of Change in Alaska: Tourism and the Environment," Pam Wright.
- Clash of cultures: "Sovereignty and Cultural Survival," Allison Eberhard.
- Indigenous peoples: "Apparition in the Mirror: Soviet and Post-Soviet Life in Northern Native Communities across the Bering Sea," David Koester.
- Art (photography, drawing and painting, and literature): "Painting the Alaskan Coast: The Harriman Expedition Paintings in Context," Kes Woodward.
- Scientific discoveries made during the voyage: "The 1899 Harriman Alaska Expedition," Kay Sloan.
- The two Alaskas ("oil barrel for a nation" or potential for industry, on the one hand, and "national park for the world" or conservation issues, on the other): "A Panel Discussion on Oil and Alaska's Search for Economic Diversity and Environmental Protection."

Assessment:

Assess students according to the following:

- Videotape notes
- Completion of the Exploration Guide
- Quality and quantity of research conducted on the Web or CD
- Working relationship within the small groups
- Quality of oral and written presentations
- Participation in class discussions

LESSON ONE



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MR. HARRIMAN IN HIS OFFICE

Edward Henry Harriman in his New York office.



Tom Litwin and other explorers near pile of driftwood on beach at Kukak.

Photograph by Megan Litwin

Vocabulary:

Demographic
Elite
Expedition
Technology
Tycoon

WEB SITE/CD EXPLORATION GUIDE

Directions: Look through both the 1899 and 2001 portions of the Web site/CD to find these:

1. Choose one member of the 1899 expedition. Write a paragraph about that person, describing:
 - His personal background.
 - His professional background.
 - The kind of information he was expected to contribute to the expedition.
2. Choose one member of the 2001 expedition. Write a paragraph about him or her that describes the same three things:
 - His or her personal background.
 - His or her professional background.
 - The kind of information he or she was expected to contribute to the expedition.
3. Choose one town or village that was visited during both expeditions. Answer the following questions about it, whenever possible. In some cases, you might not be able to find all of this information on the Web site/CD. Use a map or atlas to supply information such as longitude and latitude.
 - Where is the town located (longitude and latitude, region of the state)?
 - When was the village or town founded?
 - What was the demographic makeup of the town in 1899 (population size and ethnic make-up)?
 - What was the demographic makeup of the town in 2001?
 - What did the Harriman crew learn about or do in the community in 1899?
 - What did the Harriman crew do in the community in 2001?
 - What issues were important to the people of the town in 1899?
 - What issues were important to the people in the town in 2001?
4. Look at one map from the 1899 expedition and describe it. Tell:
 - Who made the map.
 - How it was made.
 - What it shows.
 - How accurate it is.
5. Look at one map from the 2001 expedition. Explain how it differs from your chosen 1899 map.
6. Find one drawing from the 1899 expedition and another from the 2001 expedition. Describe them and tell who drew them. Compare them.
7. Find one photograph from the 1899 expedition and another from the 2001 expedition. Describe them, tell their locations, and tell who took them. Compare the photographs.

The Harriman Alaska Expedition Retraced: A Century of Change

“During the two month’s cruise a distance of nine thousand miles was traversed. Frequent landings were made, and, no matter how brief, were utilized by the artists, photographers, geologists, botanists, zoologists, and students of glaciers.”

C. Hart Merriam, “Introduction,” *Harriman Alaska Series, Vol. 1*, quoted in “Science Aboard the Elder”

What did the members of the 1899 Harriman Alaska Expedition find?

Activities:

1. Explain that the students will play the roles of scientists and historians by determining what information the 1899 voyagers gathered. Eventually they will compare the 2001 voyage and its findings with the earlier expedition, and speculate on what a future expedition in the year 2100 might discover.
2. In class discussion, review the types of expertise and the range of scientific instruments on board the *George W. Elder*. Then generate a list of possible types of information the scholars, writers, and artists can be expected to have gathered on the voyages. Examples include:
 - Ethnographic (i.e., information about the people of Alaska).
 - Zoological information, including information on the health of various animal species.
 - Botanical information.
 - Geological information, including data on glaciers.
 - Geographic information, including coastline surveys, weather, tides, and other natural systems.
 - The state of industry (e.g., furs, fishing, forestry, mining, whaling, tourism) in Alaska at the time.
 - Information about human settlement and demography.
3. Provide each student or group of students with a TREASURE HUNT guide. Students may work singly, in pairs, or in small groups, depending on your preference. Their goal is to find answers to the questions on the treasure hunt in the shortest time. Have ready small prizes appropriate to the unit, such as light-weight snack bars, inexpensive compasses, a colorful but inexpensive map of Alaska, a bird’s feather, a pressed plant specimen (ideally, of a plant that grows in Alaska), a volcanic rock, a small Alaska state flag, etc. You might find it necessary to provide clues to students to help them find the answers. If so, refer to the TREASURE HUNT ANSWERS for Web page URLs.
4. Record the order in which students finish the treasure hunt. When all are done, review the answers students have provided, writing them on large pieces of paper fastened to the walls or

Activities, continued on page 10

Level/Subject:

Grades 7 - 12
Social Studies, Science

Summary:

Students explore the Harriman Web site/CD to learn the results of the 1899 Harriman Expedition’s scientific exploration. They engage in a timed treasure hunt to answer pre-determined questions.

Time:

2 class sessions: One to undertake the treasure hunt; and one to complete the hunt, compare answers, and discuss the information learned.

Materials:

- Large paper and markers
- Prizes (see #3, this page, for examples)
- TREASURE HUNT (see page 11)
- (Optional; this book is out of print) Goetzmann, William H. and Kay Sloan, *Looking Far North: The Harriman Expedition to Alaska, 1899*. New York: The Viking Press. 1982.



Columbia Glacier from Heather Island.
Photograph by Edward Curtis, 1899

LESSON TWO

The Harriman Alaska Expedition Retraced: A Century of Change

Activities, continued from page 9



Fur seals on St. Paul Island.
Photograph by C. Hart Merriam, 1899



"The Two Johnnies," Burroughs on the right, Muir to the left. 1899.



Eskimo children pose on the beach in Port Clarence.
Photograph by Edward Curtis, 1899

board. The first to finish the treasure hunt with 100% accuracy receives a prize, as does the second, and so forth, until your stash of prizes is depleted.

- Recap the new information gained through this expedition, including data that was not reflected in the treasure hunt. Discuss the contention by the participating scientists that the expedition was "reconnaissance rather than a comprehensive or definitive survey of the region" (Goetzmann and Sloan, *Looking Far North*, p. 194).
- Discuss the value of the information gathered. What did the scientists not learn that students would have expected them to? Would students consider the expedition successful as either a scientific expedition or expedition of exploration?
- In later lessons, students will return to the question of what the voyagers on the 2001 expedition learned. At this time, ask students for general impressions about that expedition. Have them speculate on what voyagers of a similar journey, to be undertaken in 2100, will find.

Vocabulary:

Botanical
Eskimo
Ethnographic
Expertise
Inupiaq
Inupiat
Zoological

Assessment:

- Completed Treasure Hunt
- Working relationships within groups (if applicable)

TREASURE HUNT

Directions to the student: You will find this information in the Harriman Expedition Web site/CD. For each question, write the answer, as well as the page you find it on. THIS IS IMPORTANT! WITHOUT ITS IDENTIFYING LOCATION ON THE WEB SITE OR CD, YOUR ANSWER IS NOT ACCEPTABLE.

1. List three glaciers that the 1899 Harriman crew named:

- a. Glacier 1: _____
- b. Glacier 2: _____
- c. Glacier 3: _____
- d. Write the Web site/CD location(s) where you found the information:
_____ AND: _____

2. Which community in Alaska had the largest population when visited by the Harriman Expedition?

- a. List the community, its region, and its 1899 population:
_____, _____, AND

- b. Write the Web site/CD location where you found the information:

3. Name two animal species whose numbers had declined when the Harriman Expedition crew visited Alaska.

- a. Species 1: _____
- b. Species 2: _____
- c. Write the Web site/CD location(s) where you found the information:
_____ AND: _____

4. a. Where is Cape Fox? _____
What did the inhabitants of Cape Fox call themselves?

- b. Broad cultural name: _____
- c. Name that refers specifically to Cape Fox: _____

d. Why did the Harriman Expedition participants think it was abandoned?

e. Where were the Cape Fox people in the summer of 1899?

- f. Write the Web site/CD location(s) where you found the information:
_____ AND: _____
AND: _____

Bonus Question 1: Which industry employed a number of immigrants from China?

- a. Industry name: _____
- b. Write the Web site/CD location where you found the information:

Bonus Question 2: The 1899 Harriman Alaska Expedition and Harriman Alaska Expedition Retraced encountered several Native groups who were once known as "Eskimos." What name or names do these people prefer to call themselves?

- a. _____
- b. Write the Web site/CD location where you found the information:

TREASURE HUNT ANSWERS

1. List three glaciers that the 1899 Harriman crew named:
 - a. Glacier 1: **Harriman, Bryn Mawr, Harvard, Wellesley, Vassar, Barnard, Smith, Columbia, Yale.**
 - b. Glacier 2 (see "a" above)
 - c. Glacier 3 (see "a" above)
 - d. Write the Web site/CD location where you found the information: **See the Log for August 1, 2001: http://www.pbs.org/harriman/explog/080101_photos.html AND the On-board Lecture by Kris Crossen: <http://www.pbs.org/harriman/explog/lectures/crossen2.html>**
2. Which community in Alaska had the largest population when visited by the Harriman Expedition?
 - a. List the community, its region, and its 1899 population: **Juneau, in Southeast Alaska, with an 1899 population of 2000.**
 - b. Write the Web site/CD location where you found the information: **Juneau Community Profile: <http://www.pbs.org/harriman/current/profiles/juneau.html>**
3. Name two animal species whose numbers had declined when the Harriman Expedition crew visited Alaska.
 - a. Species 1: **Fur seals.**
 - b. Species 2: **Sea Otters.**
 - c. Write the Web site/CD locations where you found the information: **1899 Brief Chronology for July 9: <http://www.pbs.org/harriman/1899/chronology.html> AND: <http://www.pbs.org/harriman/1899/seaotters.html>**
4.
 - a. Where is Cape Fox; **Near Ketchikan.**
What did the inhabitants of Cape Fox call themselves?
 - b. Broad cultural name: **Tlingit.**
 - c. Name that refers specifically to Cape Fox: **Saanya Kwaan**
 - d. Why did the Harriman Expedition participants think it was abandoned? **They had heard a rumor while in Kodiak; when they arrived, they found untrampled paths with grass growing on them, and no one in the village.**
 - e. Where were the Cape Fox people in the summer of 1899? **In Saxman.**
 - f. Write the Web site/CD location where you found the information: **Ketchikan Community Profile: <http://www.pbs.org/harriman/current/profiles/ketchikan.html> AND; Daily Log for July 23, 2001: http://www.pbs.org/harriman/explog/072301_log.html AND; 1899 Brief Chronology for July 1 – 4: <http://www.pbs.org/harriman/1899/chronology.html>**

Bonus Question 1: Which industry employed a number of immigrants from China?

- a. Industry name: **Fish processing, canning.**
- b. Write the Web site/CD location where you found the information: **Cordova Community Profile: <http://www.pbs.org/harriman/current/profiles/cordova.html>**

Bonus Question 2: The 1899 Harriman Alaska Expedition and Harriman Alaska Expedition Retraced encountered several Native groups who were once known as "Eskimos." What name or names do these people prefer to call themselves?

- a. **Inupiat people of the Arctic north and the Yupik (Yuit) of the Bering Sea and Pacific Ocean region.**
- b. Write the Web site/CD location where you found the information: **<http://www.pbs.org/harriman/1899/native.html>**

The Harriman Alaska Expedition Retraced: A Century of Change

"It is much easier in Alaska to bag a glacier than a bear..."
John Burroughs, *Harriman Alaska Series, Vol. I*, quoted in "2001 Expedition Itinerary"

What are the records of glacier study in the 1899 Harriman Alaska Expedition and the 2001 Harriman Alaska Expedition Retraced? What do the records show about changes over the century?

Activities:

One of the grandest accomplishments of the 1899 Harriman Expedition was the record of information about glaciers by Grove Karl Gilbert. He "described the Ice Age horizons and ... outlined the physical mechanics of glaciers and glacial action. Though he left some questions unanswered, his work was far ahead of its time" (Goetzmann and Sloan, *Looking Far North*, page 205).

There are more than 25 glaciers identified on the Web site/CD. The students' task is to bag (collect) five or more of them. They should:

1. Read the "Expedition Log": On-board Lectures: "Alaska's Glaciers" by Kris Crossen.
2. Answer briefly the worksheet questions below, and write in vocabulary definitions.
3. Prepare a chart with information about five or more of the glaciers (list shown below), and where appropriate, compare each glacier in 1899 and 2001. If the information is not available, they write NA (Not Available), or research in other sources on the Internet or in print. An example of the chart can be handed out to students by copying the first two rows of "GLACIER CHART: TEACHERS GUIDE," so students see the categories and example answers for the Baltimore Glacier.
4. Collect related visual information such as images from the Web site/CD, maps, or videos.
5. Develop a report containing the findings. Students should include in the reports estimates of the glacier's appearance one hundred years from now.
6. Present their reports. Reports can be "poster" sessions, oral reports, or innovative displays incorporating technology or physical models.

Level/Subjects:

Grades 7 - 12
Science, Social Studies

Summary:

Students find and locate five or more glaciers named on the Web site/CD, and build a chart to compare them during a Century of Change. Students report on their discoveries in informal science fair-style displays or "poster" sessions, oral presentations, or with other innovative displays. Students work individually or in small groups.

Time:

4 – 5 class sessions. One to research the glacier list on Web site/CD; one to provide answers to questions and define vocabulary; one or two to prepare report; one to deliver report.

Materials:

- Dictionary
- Pen/pencil
- Paper
- BAG A GLACIER work sheet for each student, page 16
- Report supplies as needed
- Print out of the On-board Lecture: "Alaska's Glaciers" by Kris Crossen (optional)
- Optional recommended print sources include:
Orth, Donald J. *Dictionary of Alaska Place Names*. Geological Survey Professional Paper 567. Washington DC: US Government Printing Office. 1967.
Alaska Atlas & Gazetteer: Topo Maps of the Entire State. Freeport Maine: Delorme Mapping. 1992.

LESSON THREE

The Harriman Alaska Expedition Retraced: A Century of Change



Terminus of Barry Glacier in 1899 near Point Doran, showing the ice caves where englacial streams exited the ice.
 Photograph by C. Hart Merriam



The front of Barry Glacier.
 Painting by R. Swain Gifford, 1899

GLACIER LIST for teacher reference (starred glaciers * have the most information in the Web site/CD). Information in these locations may be in text, photo captions or videos.

- Baltimore. "Expedition Log: Souvenir Album: August 1."
- * • Barry. "1899 Expedition: Brief Chronology": June 25-29. "Expedition Log: On-board Lectures: 'Alaska's Glaciers' by Kris Crossen."
- Bryn Mawr. "Expedition Log: Souvenir Album": August 1 (video).
- Cascade. "Expedition Log: Souvenir Album": August 1: Harriman Fjord.
- Cataract. "Expedition Log: Souvenir Album": August 1: Harriman Fjord.
- * • Columbia. "2001 Expedition: Itinerary": Curtis photo. "Expedition Log": Aug 1. Expedition Log: On-board Lectures: 'Alaska's Glaciers' by Kris Crossen." "Historic Maps."
- Coxe. "Expedition Log: On-board Lectures: 'Alaska's Glaciers' by Kris Crossen."
- * • Grand Pacific. "Expedition Log: Souvenir Album": July 28 (video). "Century of Change."
- * • Harriman. "1899 Expedition: Brief Chronology. Expedition Log": Aug 1. "Expedition Log: Souvenir Album": August 1: Harriman Fjord (video). "Expedition Log: On-board Lectures: 'Alaska's Glaciers' by Kris Crossen." "Heacox Photo Album."
- * • Harvard. "Expedition Log": Aug. 1. "Expedition Log: Souvenir Album": August 1 (video).
- * • Hubbard. "Expedition Log": July 29. "Expedition Log: Souvenir Album": July 29 (photo and video). "Historic Maps."
- Johns Hopkins. "Expedition Log": July 28. "Expedition Log Souvenir Album": July 28.
- Lamplugh. "Expedition Log": July 28.
- Malaspina. "1899 Expedition: Brief Chronology": June 20-23.
- * • Margerie. "Expedition Log": July 28. "Expedition Log: Souvenir Album": July 28: Glacier Bay and the Natural World (video). "Heacox Photo Album."
- Muir. "1899 Expedition: Original participants: John Muir." "Historic Maps."
- Northwestern. "Expedition Log": August 3.
- Reid. "Expedition Log: Souvenir Album": July 28.
- * • Sawyer and South Sawyer. "Expedition Log": July 25. "Expedition Log: Souvenir Album": July 25.
- Serpentine. "Expedition Log: On-board Lectures: 'Alaska's Glaciers' by Kris Crossen."
- Smith. "Expedition Log: Souvenir Album": August 1.
- * • Tiger. "Expedition Log": August 2 (photo). "Expedition Log: Souvenir Album": August 2.
- Turner. "Historic Maps."
- Vassar. "Expedition Log: Souvenir Album": August 1 (video).
- * • Wellesley. "1899 Expedition: Brief Chronology" (photo). "Expedition Log: Souvenir Album": August 1: College Fjord (photos and video).
- Yale. "Expedition Log: On-board Lectures: 'Alaska's Glaciers' by Kris Crossen."

Vocabulary:

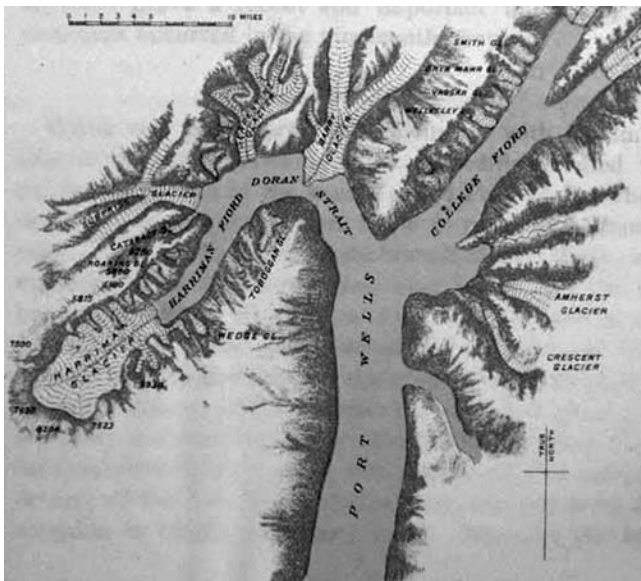
See BAG A GLACIER work sheet

The Harriman Alaska Expedition Retraced: A Century of Change

LESSON THREE

Resource Paths for Glacier Explorations:

See the "Table of Contents" Lesson Matrix, pages 51-54, with special emphasis on the On-board Lectures: "Alaska's Glaciers" by Kris Crossen; and "Expedition Log" entries: *July 25, July 28, July 29, August 1, August 2, August 3, August 9.*
 "2001 Souvenir Album": *July 25; July 28: Glacier Bay National Park: Glacier; July 28: Glacier Bay National Park: the Natural World*(includes video); *July 29,*(includes video); *August 1: College Fjord:* (includes video); *August 1: Harriman Fjord* (includes video); *August 2,* (includes video).



1899 map of Barry Arm showing Barry Glacier extending to within 1000 feet of Point Doran, where the *Elder* squeezed along the ice margin into Harriman Fjord.

GLACIER POEM
 by Charles Keeler

"To An Alaskan Glacier," was included in *Idylls of El Dorado*, a collection of poems Charles Keeler published a year after the trip. The opening lines, copied below, include the metaphor of the sea as mother to a glacier, with an eerie image of the calved iceberg slowly disappearing.

"To An Alaskan Glacier"
 Out of the cloud-world sweeps thy awful form,
 Vast frozen river, fostered by the storm
 Upon the drear peak's snow-encumbered crest,
 Thy sides deep grinding in the mountain's breast
 As down its slopes thou plowest to the sea
 To leap into thy mother's arms, and be
 There cradled into nothingness...

Assessment:

STUDENT:

	1	2	3
did not provide requested information	provided minimum information	exceeded information required	
did not answer questions	provided satisfactory answers	provided well-written, thorough answers	
did not demonstrate vocabulary understanding	satisfactory vocabulary understanding	exceeded vocabulary understanding	
focused on fewer than 5 glaciers in chart and report	5 glaciers in chart and report	more than 5 glaciers in chart and report	
did not include visual images	included one image	included more than one image	
chart included fewer than 3 details	chart included 4-5 details	chart included more than 5 details	
presentation not satisfactory	presentation satisfactory	presentation excellent	
did not use innovative technology or visuals	used some innovative technology or visuals	used wide range of innovative technologies or visuals	

BAG A GLACIER WORK SHEET

NAME _____

DATE _____

1. HOW DO GLACIERS FORM? _____

2. WHAT IS THE LITTLE ICE AGE? _____

3. DESCRIBE THE DYNAMICS OF TIDEWATER GLACIERS. _____

4. **For additional credit:** WHY ARE MOST OF THE GLACIERS IN ALASKA FOUND BETWEEN 56° AND 64° NORTH LATITUDE INSTEAD OF NEAR THE ARCTIC CIRCLE AND THE ARCTIC OCEAN?

Vocabulary

Ablate: _____

Arête: _____

Bag (verb, as used here): _____

Bedrock: _____

Bergy Bits: _____

Brash Ice: _____

Calving: _____

Cirque: _____

Englacial: _____

Fjord (also spelled Fiord): _____

Growlers: _____

Hanging Glacier: _____

Ice Worm: _____

Medial: _____

Moraine: _____

Outwash: _____

Outwash Streams: _____

Terminal Moraine: _____

Terminus: _____

Terrain: _____

Tidewater Glacier: _____

BAG A GLACIER WORK SHEET ANSWERS

1. HOW DO GLACIERS FORM? Glaciers form when snow falls and accumulates faster than it melts. The snow compresses and reforms as ice, which then flows down slopes.
2. WHAT IS THE LITTLE ICE AGE? The Little Ice Age is a time of cold climate from 1350 to 1850 AD. Evidence shows that during this time, glaciers advanced.
3. DESCRIBE THE DYNAMICS OF TIDEWATER GLACIERS. Deep water at the glacier terminus is the strongest factor. Deep water causes ice to float and calve away. By contrast, glaciers that can deposit shelves of moraine materials, are able to advance.

For additional credit:

4. WHY ARE MOST OF THE GLACIERS IN ALASKA FOUND BETWEEN 56° AND 64° NORTH LATITUDE INSTEAD OF NEAR THE ARCTIC CIRCLE AND THE ARCTIC OCEAN? Glaciers form when there is more snow accumulating than can melt. There is very little snowfall in the far northern regions of Alaska compared with the region between 56° and 64° north latitude.

Vocabulary

Ablate: Melting.

Arête: Sharp & rugged ridge on a mountain.

Bag (verb, as used here): To collect.

Bedrock: Unbroken, solid rock.

Bergy Bits: Small ice bergs.

Brash Ice: Small fragments of crushed ice collected by winds or currents near the shore.

Calving: Breaking of a piece of a glacier, especially at the face of a tidewater glacier.

Cirque: Circular area in a mountain left by a melted glacier.

Englacial: From within the ice of a glacier.

Fjord: (also spelled Fiord) A long, narrow part of the sea bordered by steep cliffs; usually made by glacial erosion.

Growlers: Icebergs large enough to be a navigational hazard.

Hanging Glacier: Glacier that terminates high on a mountain slope.

Ice Worm: A worm that lives within a glacier, surrounding itself with a chemical anti-freeze that allows it to move though the ice. It feeds on the abundant organic matter frozen into the glacier itself.

Medial: Located in the middle.

Moraine: Boulders, gravel, and sand moved by a glacier; the deposit of this material left by a glacier.

Outwash: The material, usually sand or gravel, washed from a glacier by the action of meltwater.

Outwash Streams: Meltwater streams from a glacier.

Terminal Moraine: The deposit of materials left at the end of a glacier.

Terrain: Any land formation.

Terminus: End; on a glacier, also the "face" or front.

Tidewater Glacier: Seacoast glacier that terminates in ocean water.



Terminus of Barry Glacier, 1998.
Photograph by Kristine Crossen

LESSON THREE

The Harriman Alaska Expedition Retraced: A Century of Change

GLACIER CHART TEACHER GUIDE

Prepare a chart with information about five or more of the glaciers listed in the Web site/CD. Where appropriate, compare each glacier in 1899 and 2001. If the information is not available, write NA (Not Available), or research in other sources on the Internet or in print. In addition to glacier names, some of the details to include on the chart are:

- Location by adjacent geographical features.
- Origin of the name.
- Tidewater glacier or not?
- Size and/ or scale of the glacier compared in 1899 and in 2001.
- Movement record: stable or changing?
- For additional credit:
 - Locate the glaciers by latitude/longitude, listing their coordinates.
 - Identify and show the glaciers on a map.

GLACIER NAME	LOCATION	NAMED BY : * = from Dict. of AK Place Names	TIDE WAT ER?	SIZE/SCALE 1899/2001	MOVEMENT RECORD	LATITUDE/ LONGITUDE <small>*Dict. of AK Place Names</small>
Baltimore	Prince William Sound, College Fjord	* US Grant and DF Higgins in 1908 for the Woman's College of Baltimore, now Goucher College	no	NA	NA	* 61°17' N, 147°44' W
Barry	Prince William Sound, Harriman Fjord	* Capt EF Glenn, 1898	yes	Smaller in 2001	Current position since 1914	* 61°07' N, 148°09' W
Bryn Mawr	Prince William Sound, College Fjord	* Harriman Expedition in 1899 for the college	yes	NA	NA	* 61°13' N, 147°48' W
Cascade	Prince William Sound, Harriman Fjord	* Harriman Expedition in 1899 for its appearance	yes	Smaller in 2001	Current position since 1914	* 61°07' N, 148°10' W
Cataract	Prince William Sound, Harriman Fjord	* Harriman Expedition in 1899 for its appearance	yes	NA	NA	* 61°02' N, 148°23' W
Columbia	Prince William Sound, Valdez Arm	* Harriman Expedition in 1899 for the university	yes	Smaller in 2001	Dramatic retreat in 1970's. Retreated 10 miles in 25 years.	* 61°22' N, 147°09' W
Coxe	Prince William Sound, Harriman Fjord	* US Grant and DF Higgins in 1910 for the Rev. William Coxe who published a record of Russian discoveries	yes	Smaller in 2001	Current position since 1914	* 61°07' N, 148°08' W
Grand Pacific	Glacier Bay, Tarr Inlet	John Muir in 1879	yes	Smaller in 2001	Retreating and may soon become land bound	* 59°04' N, 137°03' W
Harriman	Prince William Sound, Harriman Fjord	Harriman Expedition in 1899	yes	Larger in 2001	Currently advancing	* 60°58' N, 148°26' W
Harvard	Prince William Sound, College Fjord	Harriman Expedition in 1899 for the college	yes	Growing	Advancing	* 61°40' N, 147°42' W
Hubbard	Disenchantment Bay near Yakutat	* For a founder of the National Geographic Society and regent of the Smithsonian Institution, 1890	yes	Growing. 86 miles long; height of 300 feet; face 6 miles wide. Largest tidewater glacier in the world.	Advancing	* 60°01' N, 139°30' W
Johns Hopkins	Glacier Bay	* Reid in 1893 for the University.	yes	Smaller by 10 miles. 1899, extended to Glacier Bay	Retreating	* 58°49' N, 137°07' W
Lamplugh	Glacier Bay	* For an English geologist, 1912,	yes	NA	NA	* 58°53' N, 136°55' W
Malaspina	Gulf of Alaska	Dall on earlier trip, 1874 ; * for Capt Malaspina, Italian navigator and explorer.	NA	*30 miles across 28 miles long	NA	* 59°42' N, 140°37' W
Margerie	Glacier Bay	* In 1923 for a French geologist	yes	Smaller in 2001; was part of the Grand Pacific	Retreating	* 59°02' N, 137°04' W
Muir	Glacier Bay	Discovered by Muir and named for him in 1880	yes	Smaller in 2001	Retreating	* 59°00' N, 136°10' W
Northwestern	Kenai Fjords National Park	*Reported by US Grant, named for the university in 1910	yes	NA	NA	* 59°47' N, 150°03' W
Reid	Glacier Bay	Harriman Expedition in 1899		Smaller in 2001	Retreating	* 58°50' N, 136°48' W
Sawyer and South Sawyer	Tracy Arm near Juneau	Commander H. B. Mansfield in 1889	yes	Smaller in 2001	Retreating	* 57°53' N, 133°10' W
Serpentine	Prince William Sound, Harriman Fjord	Harriman Expedition in 1899	yes	Smaller in 2001	Stagnant front	* 61°05' N, 148°18' W
Smith	Prince William Sound, College Fjord	Harriman Expedition in 1899 for the college	yes	NA	NA	* 61°14' N, 147°01' W
Tiger	Prince William Sound, Icy Bay	* In 1910 by US Grant	yes	NA	NA	* 60°11' N, 148°26' W
Turner	Disenchantment Bay	* 1894, named for a surveyor in Alaska	yes	NA	NA	* 60°01' N, 139°05' W
Vassar	Prince William Sound, College Fjord	* Harriman Expedition in 1899 for the college	no	Smaller in 2001	Retreating	* 61°12' N, 147°47' W
Wellesley	Prince William Sound, College Fjord	* Harriman Expedition in 1899 for the college	yes	Similar (see 1899 and 2001 photos)	NA	* 61°11' N, 147°52' W
Yale	Prince William Sound, College Fjord	* Harriman Expedition in 1899 for the university	yes	Growing	Advancing	* 61°12' N, 147°42' W

The Harriman Alaska Expedition Retraced: A Century of Change

"There is one word of advice and caution to be given those intending to visit Alaska for pleasure, for sight-seeing. If you are old, go by all means; but if you are young, wait. The scenery of Alaska is much grander than anything else of the kind in the world, and it is not well to dull one's capacity for enjoyment by seeing the finest first."

Henry Gannett, "General Geography," *Harriman Alaska Series, Vol. II*, quoted in "2001 Expedition Itinerary"

What is the role of an artist on an expedition? Is the artist a mere observer, a messenger sent to portray the scenery? Or does the artist play a role in furthering the larger purposes of the expedition? How do the images from the 1899 expedition influence you? How do images from the 2001 expedition influence you? What are the ways they affect you?

Activities:

Artists on the original and the retraced expeditions were responsible not only to their independent creative muses, but for sharing their visual experience with others. The 1899 expedition's leader, Edward Harriman, wanted to make the results of the expedition popular with the public by including photographs and paintings. During the dozen years following the expedition, the reports of the scientists and naturalists were compiled into the volumes known collectively as the Harriman Reports. The more than 5000 photographs and colored illustrations made during the expedition became valued illustrations of the experiences and the findings.

Likewise, the Harriman Expedition Retraced began with the goal of wide dissemination through television broadcast, Web site/CD and publications. Showing the results of the retraced expedition was intended to illustrate the theme of a "Century of Change." Digital images, still photos, videos, paintings and sketches captured the wonders of the journey. Because artists were included in the 1899 expedition, they were considered a logical part of the participant mix in the retraced expedition.

1. Students read the biographical introduction to the artists, descriptions of their works, notes and journal references that give clues to the background that might affect an artist's points of view.

Read about the artists in:

"1899 Expedition: Original Participants":

- "Edward Curtis"
- "Frederick S. Dellenbaugh"
- "Louis Agassiz Fuertes"
- "R. Swain Gifford"

Activities, continued on page 20

Level/Subject:

Grades 7 - 12
Art, Social Studies, Language Arts

Summary:

Students read about the artists and art of the two expeditions. They explore the Web site/CD, selecting two images from the original expedition and two from the retraced expedition. They formulate a position statement, using guiding questions in order to persuade classmates that these are the most powerful images of the 1899 and the 2001 expeditions. Students work individually or in groups.

Time:

4 or more class sessions. One to read selections; one to select images and draft a preliminary position; one to prepare the final oral presentation; one for oral presentations.

Materials:

Oral Presentation Scoring Guide
See page 22.

LESSON FOUR



Woods at Creamers.
Painting by Kesler Woodward, 1996



Indian Seal Hunter's Hut, Yakutat Bay.
Painting by R. Swain Gifford, 1899



Patricia Savage working on a dining room table in the ship's day lounge as the *Clipper Odyssey* sails past coastal mountains and frosty glaciers.
Photograph by National Ocean Service, NOAA

The Harriman Alaska Expedition Retraced: A Century of Change

Activities, continued from page 19

"2001 Expedition: Harriman Retraced Participants":

- "Kim Heacox"
- "Patricia Savage"
- "Kesler Woodward"

We do not often assign the role of persuasion to artists. Kes Woodward, artist on the Harriman Expedition Retraced, asserts in his on-board lecture, "Images are never neutral. They take points of view, they make statements, and landscape paintings influence how others see places in powerful ways." Woodward continues, however, to describe the work of the two major landscape artists sailing on the original expedition—Dellenbaugh and Gifford—as "primarily documentary, topographical modes," implying that the artists were taking a less aggressive approach to their work. Continuing, Woodward lists roles for artists depicting Alaska's coasts: "...do today's painters see themselves as visitors, as explorers, as settlers, as pioneers, or as preservers?"

2. To understand more about these perspectives on art during a Century of Change, students read:

- "Nature and Art in Alaska" in "Century of Change;" and these On-board Lectures ("Expedition Log"):
- "The 1899 Harriman Alaska Expedition," Kay Sloan;
- "Painting the Alaskan Coast: The Harriman Expedition Paintings in Context," Kesler Woodward.

3. Students explore the paintings, photographs and illustrations on the Web site/CD as thoroughly as time permits, and then select a landscape painting and a photograph from the 1899 expedition to write about. They should also find a comparable painting/sketch and a photograph from the expedition retraced to write about. There are more than 500 images on the site, so caution them to choose carefully. In addition to answering the guiding questions, they will want to formulate a position statement that will persuade classmates that these are the most powerful images of the original and the retraced expeditions. Their goal is to convince classmates to select one or more of the images they have chosen for display in the classroom.

4. Students begin to draft a position paper, considering these guiding questions as they build their persuasive positions:

- What do you assume is the artist's purpose?
- How does the artist give you the sense of the scale of the picture's scene? By adding objects? By showing foreground "mini-scenes"? Through layering techniques? Through adjusting the width to height proportions of the image?
- How does the artist use color to influence you? Are the colors warm? Cool? Are the colors a lively range of hues and values, or quiet and monochromatic? How does the relationship of

Activities, continued on page 21

Activities, continued from page 20

- darks and lights in the picture affect you—does it give you a happy feeling? A gloomy feeling?
- Does the picture make you want to visit that place? Stay away from that place? Do you believe that you would recognize that place if you actually saw it for yourself?
5. Following their review of the chosen images, students should choose one painting, sketch, or photograph and prepare an oral presentation. They should use the “Oral Presentation Scoring Guide” to help them organize their presentations, and should include the following information in the presentation:
- How is the image identified? What is its title or name?
 - When was the image created?
 - Who is the artist who created this image? State at least three items of information about this artist.
 - Why is this image powerful? State at least three reasons.
6. Students make presentations. At the conclusion, the class selects the most powerful paintings or photographs. Students and teacher use the “Oral Presentation Scoring Guide” to evaluate presentations and as a voting guide for picture selections.
7. Display the chosen paintings/photographs.



Jaegers on the Wing.
Painting by Louis Agassiz Fuertes from the
Harriman Expedition Report, 1899

Assessment:

Evaluate with the Oral Presentation Scoring Guide. See page 22.

Vocabulary:

(from Oral Presentation Scoring Guide)

- Eloquent
- Enunciates
- Inflection
- Monotone
- Skimpy
- Sporadic
- Transitions

ORAL PRESENTATION SCORING GUIDE

SCORING: Speakers may receive a score from 1 to 5 in each of the seven dimensions when the presentation shows characteristics from more than one column. For example, a speaker's ideas and content may "show clear purpose" (5), but have "skimpy supporting details" (3). Thus the rating would be a 4 for ideas and content. (Sitka School District: Oral Checklist. 11/25/96)

Dimension/Score	1	3	5
Ideas/content	<input type="checkbox"/> Purpose unclear. <input type="checkbox"/> Central idea lacking. <input type="checkbox"/> Little/no knowledge of topic. <input type="checkbox"/> Details missing.	<input type="checkbox"/> Purpose reasonably clear. <input type="checkbox"/> Ideas could be more insightful. <input type="checkbox"/> Knowledge of topic limited. <input type="checkbox"/> Skimpy supporting details.	<input type="checkbox"/> Clear purpose. <input type="checkbox"/> Ideas conveyed in original, insightful manner. <input type="checkbox"/> Knows topic well. <input type="checkbox"/> Effective amount of detail. <input type="checkbox"/> Holds readers' attention.
Organization	<input type="checkbox"/> Little sense of direction or sequence. <input type="checkbox"/> Details, events do not relate to topic. <input type="checkbox"/> No clear beginning or ending. <input type="checkbox"/> No transitions.	<input type="checkbox"/> Ideas/details in sequence. <input type="checkbox"/> Details missing. <input type="checkbox"/> Weak start or finish. <input type="checkbox"/> Some transitions missing.	<input type="checkbox"/> Details fit, sequence effective. <input type="checkbox"/> Details enhance listeners' interest. <input type="checkbox"/> Strong introduction & satisfying conclusion. <input type="checkbox"/> Transitions work well.
Rapport	<input type="checkbox"/> Little effort to deal with topic. <input type="checkbox"/> Tone inappropriate for both audience interest and/or level of knowledge.	<input type="checkbox"/> Tries to deal honestly with topic. <input type="checkbox"/> Style/tone may or may not be appropriate to audience interest and/or level of knowledge.	<input type="checkbox"/> Honest, sincere, cares for topic. <input type="checkbox"/> Style and tone capitalize on audience interest and level of knowledge. <input type="checkbox"/> Speaks directly to listener.
Language Skills	<input type="checkbox"/> Limited vocabulary. <input type="checkbox"/> Incomplete thoughts make it hard to understand and follow.	<input type="checkbox"/> Adequate, but ordinary vocabulary. <input type="checkbox"/> Awkward wording occasionally make understanding unclear.	<input type="checkbox"/> Accurate, interesting vocabulary appropriate to topic. <input type="checkbox"/> Wording is full, rich, enhances understanding. <input type="checkbox"/> Eloquent, smooth, natural sentence structure.
Physical Delivery	<input type="checkbox"/> Delivery distracting, posture and movement. <input type="checkbox"/> Minimal or absent eye contact.	<input type="checkbox"/> Some nervous gestures, stiff, tense or too relaxed. <input type="checkbox"/> Sporadic eye contact or with only one person.	<input type="checkbox"/> Relaxed posture, confident. <input type="checkbox"/> Maintains eye contact with audience.
Vocal Delivery	<input type="checkbox"/> Enunciation, volume or pacing a problem. <input type="checkbox"/> Difficult to hear or understand. <input type="checkbox"/> Monotone. <input type="checkbox"/> Frequent pauses. <input type="checkbox"/> Difficult to follow.	<input type="checkbox"/> Generally uses appropriate enunciation, volume, pacing. <input type="checkbox"/> Sometimes difficult to understand. <input type="checkbox"/> Ordinary inflection. <input type="checkbox"/> Random pauses. <input type="checkbox"/> Some gap fillers ("um," "er," etc.).	<input type="checkbox"/> Enunciates clearly. <input type="checkbox"/> Easily understood. <input type="checkbox"/> Inflection conveys emotion and enhances meaning. <input type="checkbox"/> Pauses to collect thoughts or build suspense. <input type="checkbox"/> Easy to follow.
Visuals	<input type="checkbox"/> Visual aid is present. <input type="checkbox"/> Does not show careful preparation. <input type="checkbox"/> May be unrelated to topic.	<input type="checkbox"/> Visual aid adds meaning. <input type="checkbox"/> Preparation is adequate. <input type="checkbox"/> Visual aid is somewhat related to presentation.	<input type="checkbox"/> Visual aid enhances presentation. <input type="checkbox"/> Carefully prepared. <input type="checkbox"/> Interesting, appropriate to topic.

The Harriman Alaska Expedition Retraced: A Century of Change

"I have never painted anything other than nature. It has always pulled me and drawn me to paint it. Primarily I use photography, magazine photographs, and books to plan and paint from. Anywhere from 1 to 60 source images can go into one painting. Usually I get my ideas from what I am seeing." Patricia Savage "Demystifying How Artists Work"

What is the relationship between photography and "fine" art in the visual records of the Harriman expeditions?

Activities:

Photography was a relatively new art form when the 1899 Harriman Expedition set sail. Edward Curtis's fine images created a remarkable record of the voyage, and showed the promise of the brilliant career that he later enjoyed. Interestingly, many of Curtis's images were not reproduced as photographs in the published Harriman reports, but were commissioned as drawings copied from the photographs. Louise M. Keeler, wife of Expedition participant, Charles Keeler, was one of the artists hired to make these drawings from Curtis's photographs. Perhaps Harriman and Merriam, the Editor in Chief, saw a need to give variety to the texture of the printed pages. Perhaps they wanted to make sharper images because photographic print reproduction was not considered very sophisticated. Perhaps they had a bias that saw photographs as a lesser art form when compared to the drawings that could be made from them. Maybe they were simply following the print traditions set in earlier books about expeditions. We can only speculate on their reasons.

Photographers and artists also sailed on the Harriman Expedition Retraced in 2001. Photography was no longer a new art form. Indeed the technology of photography exploded in the last decade—as vividly explained by Kim Heacox in his On-board Lecture. For photographers today, the ability to capture the fleeting image has greatly improved, but for the landscape or wildlife painter, there have been no comparable technological miracles. Thus, many artists still rely on photography to "freeze" their images. Others reject photography as an aid and continue to relish the experience of the quick sketch or the impressionistic drawing. In her On-Board Lecture, Patricia Savage describes how three of her fellow artists use or do not use photography as a backup for the instant visual experience, and she explains her own use of photographs. In her biographical description Savage comments: "The idea is to recreate the feeling of the work in a

Activities, continued on page 24

Level/ Subjects:

Grades 7 - 12
Art, Social Studies

Summary:

Students learn how artists made some of the images on the original and retraced expeditions, and how some images were later altered and used in the publications of the expeditions. They read background information from the Web site/CD. They examine groups of images from the Web site/CD, refining observation skills. They produce a sketch using an image from the Web site/CD.

Time:

3 or more class sessions. One to read the On-board Lectures; one to examine and discuss image groups; one or more to produce a sketch.

Materials:

- Paper
- Pencils
- Pens

LESSON FIVE

The Harriman Alaska Expedition Retraced: A Century of Change

Activities, continued from page 23

sharper vision, to pull your eye not only to the abstraction of colors and lights and pattern but also to the wonders of living things." Kes Woodward, by contrast, shows us his sketches (see "Sketch Book" in "Expedition Log"), and says in his On-board Lectures that images changed by others have not been successful historically, for they have lost their sense of wonder. "Second-hand wonder is more subject to reliance on stereotype, and such stereotypes are often demeaning. One of the most obvious limitations of wonder is that it doesn't travel well."

There are three parts to this activity: (1) reading; (2) observing and discussing comparisons of photographs and paintings in the original and retraced expeditions; and (3) sketching and drawing based on a photographic image.

1. Read the essays in "Expedition Log": On-board Lectures:

- "Demystifying How Artists Work," Patricia Savage
- "A Sense of Wonder: Alaskan Art," Kesler Woodward
- "A Celebration of Birds: The Life and Art of Louis Agassiz Fuertes," Robert McCracken Peck
- "Alaska Light: A Presentation on Photography," Kim Heacox

Also read:

- "Sketch Book" in "Expedition Log"
- "Nature and Art in Alaska" in the "Century of Change"
- "Photojournalism—Alaska's People and Places," by Megan Litwin in "For Educators & Students: Student Projects"



Members of the Harriman Expedition camping at Point Gustavus.
Photograph by Edward Curtis



Members of the Harriman Expedition camping at Point Gustavus.
Drawing by WE Spader from a photograph by Edward Curtis

2. Look at one or more of the groups of images. See list, page 26. Suggestions are not intended as a limit on others that students may find.
3. Discuss: How does a photographer like Curtis display "wonder" in his art? Do students agree with Kes Woodward and Patricia Savage that a "sense of wonder" is an essential ingredient in a work of art? After looking at the images, what do students like about each? What do they not like? Which do they prefer? Why? What is gained or what is lost in the transition from photograph to drawing? Are there disparities between them? Why would an artist want to use photographs? Why would an artist refuse to use photographs? Ask students: What sense of wonder they bring to this work, especially if they have never been to Alaska?
4. Students select a photographic image from the many on the Web site/CD. Using pencil and paper, they develop a sketch of the image, while trying to capture the feel of motion and emotion that are contained in the photograph(s). Students

Activities, continued on page 25

Vocabulary:

Copyright
Disparities

Activities, continued from page 24

should look again at the work of the other artists to understand how they have been successful in showing a sense of wonder.

For example, using the Fuertes painting of jaegers as inspiration, sketch from one of the kittiwake photographs.

5. Time permitting, students create a final version of the sketch.

Students should be cautioned that many photographers copyright their pictures—which means that the photographs should not be copied, even in drawings or paintings, without permission. For some educational purposes such as this lesson, limited use of these images can be made. However, no commercial use should ever be made of a photographer’s work without specific written permission.



Unga Island.
Photograph by Megan Litwin



Unga Island abandoned building.
Painting by Megan Litwin

Assessment:

Evaluate the discussions, and each student’s sketches, using a rubric similar to this:

	NOT SATISFACTORY	SATISFACTORY	EXCELLENT
Student participated in discussions:			
Student discussion reflected understanding of the historical relationship of photographs and original art work:			
Student sketch captured the feel of motion and emotion that was in the photograph:			
Student sketch captured a “sense of wonder”:			

IMAGE GROUPS: COMPARISONS OF PHOTOGRAPHS AND PAINTINGS IN THE HARRIMAN EXPEDITIONS

A. Bird or animal groups, such as:

- “Feeding flock of kittiwakes and murre,” photograph by Fadely; on view in “Expedition Log: On-board Lectures: Seabirds in the Marine Environment by Vivian M. Mendenhall.”
- “Black-legged kittiwakes, Chignik,” photograph by Kim Heacox; on view in “Expedition Log: Heacox Photo Album.”
- “Jaegers on the Wing,” painting by Louis Agassiz Fuertes; on view in “Expedition Log: On-board Lectures: A Celebration of Birds: The Life and Art of Louis Agassiz Fuertes by Robert Peck.” (Note how each shows a different view of the bird.)

B. Glaciers or ice fields, such as:

- Barry Glacier in 1899 and in 1998, photographs by J. Hart Merriam and Kris Crossen; on view in “Expedition Log: On-board Lectures: Alaska’s Glaciers by Kris Crossen.”
- “Barry Glacier. Entrance to Harriman Fiord, Prince William Sound,” painting by R. Swain Gifford; on view in “Expedition Log: On-board Lectures: A Sense of Wonder: Alaskan Art by Kesler Woodward.”
- “Glacier Cave,” photograph by NOAA; on view in “Expedition Log: Souvenir Album”: July 28, 2001.
- “Frozen Blue,” painting by Patricia Savage; on view in “Expedition Log: On-board Lectures: Demystifying How Artists Work by Patricia Savage.”

C. Dwellings or buildings, such as:

- “An Eskimo summer house and fireplace, Plover Bay, Siberia,” illustration by W. E. Spader; on view in “1899 Expedition: Alaska Native Communities on Harriman’s Route.”
- “Eskimo Woman in front of her winter hut in Plover Bay Siberia,” photograph by Edward Curtis; on view in “1899 Expedition: Science Aboard the *Elder*.”
- “Indian Seal hunter’s Hut, Yakutat Bay,” painting by R. Swain Gifford; on view in “Century of Change: Nature and Art in Alaska.”
- “Log Houses, Kodiak Village,” painting by Frederick Dellenbaugh; on view in “Century of Change: Anchorage Museum Gallery.”
- Unga Island abandoned Village, photograph by Megan Litwin and “Unga Island,” painting by Megan Litwin; on view in “For Educators & Students: Student Projects: Photojournalism—Alaska’s People and Places.”

D. Mountains, such as:

- “Mt. Fairweather from the Northwest,” painting by Frederick Dellenbaugh; on view in “Expedition Log: On-board Lectures: Painting the Alaskan Coast: The Harriman Expedition Paintings in Context by Kesler Woodward.”
- Mt Fairweather from the West, photo; “Expedition Log: Souvenir Album”: July 28, 2001.
- “Denali Park September, 2000,” painting by Kesler Woodward on view in “Expedition Log: On-board Lectures: A Sense of Wonder: Alaskan Art by Kesler Woodward.”
- “Mt. Shishaldin on Unimak Island as seen from the *Clipper Odyssey*,” photograph by NOAA; on view in “Expedition Log”: August 10, 2001.

E. Close-ups, such as:

- “Birch Portrait #61,” painting by Kesler Woodward; on view in “Expedition Log: On-board Lectures: Painting the Alaskan Coast: The Harriman Expedition Paintings in Context by Kesler Woodward.”
- “Petrified Wood Stump,” photograph by Natasha Dallin; on view in “Expedition Log”: August 9, 2001.
- “Driftwood,” painting by Kesler Woodward; on view in “After the Expedition.”

F. Other images, such as:

- flowers
- people individually or in groups
- bird portraits
- marine mammals such as sea lions

The Harriman Alaska Expedition Retraced: A Century of Change

"The original Harriman Expedition demonstrated that its members had eyes to see either of 'two Alaskas' — one Alaska of rich economic resources ripe for exploitation and the other of the kind of awe-inspiring, pristine wilderness that John Muir felt was akin to a mystical experience."
Kay Sloan, "The 1899 Harriman Alaska Expedition"

"As always, there are two sides to the conversation and the 'Two Alaskas' theme once again emerges: the Alaska that is America's wilderness and frontier, and the Alaska that has been blessed with many natural resources ready to benefit humans and their economies."
Brad Barr and Tom Litwin, "Bagging a Bear: Then and Now"

What attitudes and opinions do you have about resources and resource use in Alaska? How do they compare to attitudes about resources that you find described in the 1899 Harriman Alaska Expedition or the 2001 Harriman Alaska Expedition Retraced?

Activities:

1. If your class is not familiar with concept mapping, prepare a demonstration map with the whole class participating. If you want more information about making concept maps, there are several excellent Web sites to examine. Please note some of these may have changed when you begin the lesson:
 - <http://classes.aces.uiuc.edu/ACES100/Mind/Cmap.html>
 - <http://cmap.coginst.uwf.edu/info/printer.html>
2. Form small groups. Prior to reading, each group prepares a concept map of opinions about Alaska's resources. Save the original maps to compare with maps made after reading the Web site/CD information. Ask students to discuss and show on their concept maps:
 - a. What are Alaska's resources? Possible suggestions:
 - Fisheries
 - Timber
 - Oil
 - Mining
 - Mammals: land and marine
 - Humans
 - Wilderness
 - Land
 - Water
 - b. How are the resources used? Now? In 1899?
 - c. Are the supplies of the resources abundant? In jeopardy?
 - d. What are the consequences (economic or otherwise) to Alaskans if resource uses are limited or prohibited?
 - e. What are the consequences (economic or otherwise) outside of Alaska if resource uses are limited or prohibited?

Activities, continued on page 28

Level/Subject:

Grades 9 - 12

Science, Social Studies, Language Arts

Summary:

Students show their assumptions about Alaska's resources on concept maps. Students view the videotape (as needed) and read information on the Web site/CD about the expeditions. They discuss the readings and re-construct their concept maps.

Time:

4-6 class sessions. One to organize groups and introduce concept map making, make preliminary concept maps, and begin readings; two to view videotape, if needed; one to conclude readings; one to make a new concept map; one to summarize conclusions and assess.

Materials:

- Large sheets of paper, c. 3' X 3'
- Large size "sticky" notes
- Pens (several colors optional)
- Tape or holders for display
- Printouts of Reading Set A or B as needed (see page 29)
- Monitor, VCR and Videotape: *Harriman Alaska Expedition Retraced* (optional)

LESSON SIX



A PARTY OF MINERS GOING IN BY THE SKAGWAY OR WHITE PASS TRAIL.

A party of gold miners near Skagway on the White Pass Trail, 1897.



A sea otter feeding in Glacier Bay.
Photograph by Jim Bodkin



An oil tanker takes on a full load at Valdez, on the shores of Prince William Sound.
Photograph by National Ocean Service, NOAA

The Harriman Alaska Expedition Retraced: A Century of Change

Activities, continued from page 27

3. If students have not yet seen the videotape, *Harriman Alaska Expedition Retraced*, show the videotape following the note-taking recommendations described in Lesson One. The videotape may also be useful for students to review in order to organize their final concept maps.
4. Each group reads the recommended Web site/CD materials. Two sets of readings are listed. Groups should read SET A, and continue with SET B, time permitting. Students may wish to divide readings among group members rather than everyone reading all of them. (This may necessitate printing out the readings.) Students should take notes while reading, paying particular attention to information that will change or add to the next session of concept mapping. Have them ask themselves questions “a-e” in step 2 above, as they read. Notes will be turned in at the end of the activity. Notes should include the essay title and author.
5. After reading the Web/CD information and/or viewing the videotape, students make a new concept map, either in small groups or as whole class.
6. Discuss: What attitudes—if any—have students changed after reading the information? Are there ways to join the “Two Alaskas” or will they always be in conflict? Is it possible to provide for sound resource use in Alaska?
7. Students write a review essay to be included in assessment. The essay covers the following three points:
 - What are the “Two Alaskas”?
 - Describe one resource that was an issue during the 1899 expedition and is still an issue.
 - Name three Alaska resources and summarize the issues associated with them.

Assessment:

Evaluate the discussions, concept maps and each student’s notes, using a rubric:

STUDENT:	NOT SATISFACTORY	SATISFACTORY	EXCELLENT
Demonstrated increased awareness of issues in concept map.			
Demonstrated increased awareness of issues in discussion.			
Contributed to group.			
Demonstrated use of Web site/CD in concept map.			
Reflected reading material understanding in notes.			
Demonstrated lesson content retention in review essay.			

Vocabulary:

Concept map

READING SET A (17 selections)

"Expedition Log":

(A.1) July 25, "Speech by Governor Tony Knowles"

On-board Lectures:

(A.2) "The 1899 Harriman Alaska Expedition," Kay Sloan

(A.3) "Ecology and Politics in the Tongass National Forest," Paul Alaback

(A.4) "A Panel Discussion on People, Politics and Subsistence in Alaska"

(A.5) "It's Just a Fish: Alaskan Salmon and Halibut Fisheries," David Policansky

(A.6) "A Panel Discussion on Oil and Alaska's Search for Economic Diversity and Environmental Protection"

(A.7) "Co-Management of Natural Resources in Alaska," Kathy Frost

(A.8) "Marine Mammals in the Gulf of Alaska: Conservation Issues and More," Kathy Frost

(A.9) "Harriman Alaska Expedition," Robert Peck

(A.10) "The Bering Sea Ecosystem: The Big Picture," Vera Alexander

(A.11) "Bering Sea Marine Mammals: Ecology and Conservation," Kathy Frost

(A.12) "Fisheries and the Bering Sea Ecosystem," David Policansky

(A.13) "A Panel Discussion on Conservation of the Alaskan Marine Ecosystem"

(A.14) "New Ideas on the High Seas: Conservation in 2001," Brad Barr

(A.15) "Discovering Alaska," Richard Nelson

(A.16) "Seabirds in the Marine Environment," Vivian Mendenhall

(A.17) "Bagging a Bear: Then and Now." Brad Barr and Tom Litwin

READING SET B (16 selections)

"1899 Expedition":

"Original Participants":

(B.1) "John Burroughs"

(B.2) "George Bird Grinnell"

(B.3) "John Muir"

(B.4) "Science Aboard the Elder"

"Growth and Development Along Alaska's Coast"

(B.5) "Sea Otters in Alaska"

(B.6) "The Rat Threat in Alaska"

"Expedition Log":

(B.7) August 2, 2001

On-board Lectures:

(B.8) "A Century of Change in Alaska: Tourism and the Environment," Pam Wight

(B.9) "Coming Home to Sitka," Richard Nelson

(B.10) "A Panel Discussion on Glacier Bay"

(B.11) "The Alaska Native Science Commission," Elaine Abraham

(B.12) "Herring in the Prince William Sound Ecosystem," Brenda Norcross

(B.13) "A Panel Discussion on Fisheries Management in the Bering Sea"

(B.14) "What Vitus Bering Started, and How the Bering Sea Replied," Vera Alexander

(B.15) "Alaska Light: A Presentation on Photography," Kim Heacox

"After the Expedition"

(B.16) Journal: Clare Baldwin



Water color and poem by poet, Charles Keeler, done aboard the *Elder*, 1899.

The Harriman Alaska Expedition Retraced: A Century of Change

"In exploring the surface of a glacier I found that many insects encountering the cold currents from the ice were numbed and drifted over the surface of the ice to be lodged in crevices. In collecting these insects I used my ice pick to enlarge the crevices and to my surprise found that embedded in the clear ice were numbers of small brown worms."

Trevor Kincaid, in an unpublished memoir, writing about his research with the Harriman Expedition, quoted in "Science Aboard the Elder"

What biological specimens were recorded by the expeditions? Are the same specimens found in your neighborhood?

Level/Subject:

Grades 7 - 10
Science, Language Arts

Summary:

Using several lists of animals, birds, and fish, students "collect" specific references with information, and illustrations in the time allowed. They then research which—if any—of their "specimens" also occur in their region.

Time:

3 class sessions. One or more to "collect" Harriman Expedition specimens; one or homework time to look for local specimens; one to report on findings.

Materials:

- Printouts of lists
- Paper
- Pen or pencil
- Field guides appropriate for your region
- List of resource agencies or personnel appropriate for your region

Activities:

1. Students go on a hunt to collect as many specimens as they can in the Harriman Expedition Web site/CD. Using the mammal and bird lists in "After the Expedition," and the lists included here, they collect as many specific references, items of information, and illustrations as possible in the time allowed, listing the URL for each collection location. They should state if the specimen is collected from the 1899 expedition or the 2001 expedition. They should state if any of the specimens were or are rare or endangered. They fill out a specimen record chart similar to the one shown on page 32.

LISTS ARE IN

- "After the Expedition"
- "Mammal List July 21 to August 5"
- "Bird List July 21 to August 5"
- "Mammal List August 5 to August 20 "
- "Bird List August 5 to August 20"

Students might also be able to "find" these:

- Steller Sea Cow
- Kodiak Fox
- Ring Seal
- Bearded Seal
- Woolly Mammoth
- Halibut
- Salmon
- Herring
- Pollock
- Capelin
- Sandlance
- Octopus
- Sea Urchin

Activities, continued on page 31

Activities, continued from page 30

- Insect: *Tipula septentrionalis*
- Insect: *Hymenoptera*
- Glacier Worm
- Worm, other: *Lumbricillus merriami*
- Worm, other: *Taniosoma princeps*
- Worm, other: *Mesenchytraeus harrimani*

Plants: (for plants, see Web site/CD lesson plan: "Harriman and Plant Identification")

2. Using field guides appropriate for the local region, students determine which, if any, of their collected specimens can be found in the local region. Migratory visitors are acceptable as are resident species. If local field guides do not have the information needed, contact experts and biologists in the local wildlife offices or universities.



B. K. Emerson and G. K. Gilbert examine a rock specimen found in a glacial moraine.

Photograph by Edward Curtis, 1899



Biologists examine a Tufted Puffin found near the Chiswells, 1999.

Assessment:

Evaluate based on:

1. Volume of specimens collected, (40 points maximum).
2. Exploration of resources to identify (or eliminate possibility of) local specimens (30 points maximum).
3. Recall quiz (30 points).

Recall Quiz: 30 points total

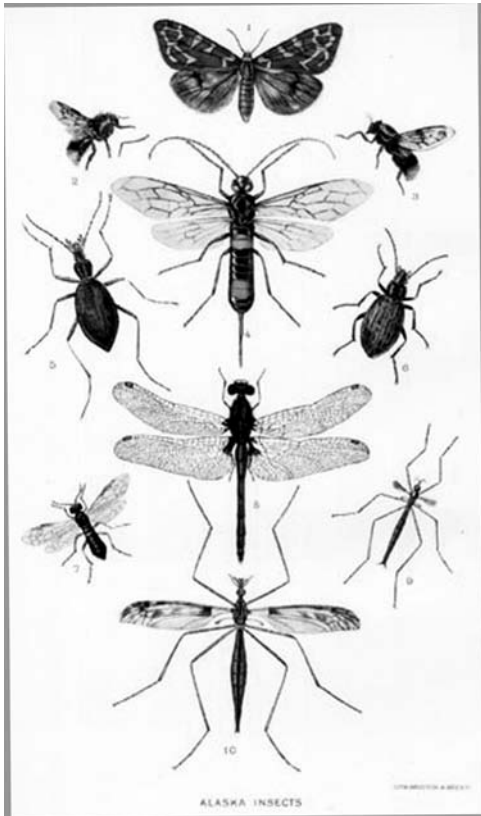
- Name one of the collecting scientists on the Original or Retraced Expedition (3 points).
- Name three birds you collected (3 points for each; 9 total).
- Name three mammals you collected (3 points for each; 9 total).
- Name three other specimens —not birds or mammals— that you collected. (3 points for each; 9 total).

Vocabulary:

- Species
- Specimen

SPECIMEN RECORD CHART (EXAMPLE)

Common Name	Species	Where collected in 1899?	Where collected in 2001?	Found locally?	Endangered?	Rare?	Web site/CD URL where found



Alaska insects collected by the Harriman Expedition, 1899. Trevor Kincaid observed the special adaptations of many insect species found here. *Arctophila flagrans*, unrelated to the common bumblebee, exhibited mimetic morphology — meaning it looked a great deal like the stinging bumblebee, and therefore was avoided by predatory birds that otherwise might eat it. Figure 9 shows *Tipula septentrionalis* noted to be short-winged, an adaptation to the high winds of the island.



Map of brown bear density in Alaska.
Credit: Alaska Geographic Alliance



Pair bonding between a male and a female brown bear in Geographic Harbor.
Photograph by Megan Litwin

NATIONAL AND INTERNATIONAL CONTEXTS OF THE HARRIMAN EXPEDITIONS

LESSON EIGHT

The Harriman Alaska Expedition Retraced: A Century of Change

"The collecting of Native objects – including everyday objects, art and ceremonial pieces, and even human remains – can, in a way, be traced back to a packet boat that arrived in New York harbor in 1838 with 105 bags of gold on board. This was the fortune of James Smithson, a British mineralogist who had never once set foot on American soil." "The Collection and Return of Native Objects"

What influences affected Alaska in 1899? What influences affected the planning and implementation of the 1899 Harriman Alaska Expedition? As an optional extension, the same questions are asked about the 2001 expedition.

Activities:

1. This lesson will require background preparation by the teacher. If this is a World History or American History class, relate what students have learned about events and trends at the turn of the twentieth century to information on the Web site/CD. As a review of the information contained on the videotape, ask the students who focused on the topic "Outside Interests" in Lesson One to remind the class which outside interests the narration discussed or mentioned.
2. Distribute the 1899 Fact Sheets (pages 37-39) and discuss them. Students can use this information as background when they explore the Web site/CD for information about the 1899 expedition. You might also want them to use outside sources that are pertinent to your class's previous lessons. Discuss: What is meant by "national and international context"? Ask for, or give examples from today of the ways national or international events affect local endeavors.
3. Refer students to the Alaska timeline on the Web site/CD for additional historic context (www.pbs.org/harriman/1899/development.html).
4. Each student group will design and produce a front page for a fictional newspaper. To prepare them for this activity, bring in newspaper front pages from several papers. Display them and ask students to help determine what makes a good front page. Factors might include:
 - Visual appeal. What makes a front page eye catching? Where are the illustrations or photographs placed? How large are they in relation to the text?
 - Catchy headlines. Note the absence of articles ("a" and "the"), use of alliteration or other literary devices. Discuss the most successful headlines and what they have in common.

Activities, continued on page 34

Level/Subjects:

Grades 9 - 12
Social Studies, Language Arts
(Journalism), Technology (optional extension)

Summary:

Students are provided with information about the world and nation in 1899. They research the Harriman Web site/CD to find examples of ways the expedition was affected by the national and international situation, and write and publish a fictional newspaper that reflects those ties. An optional extension takes the students to a similar exploration about world events in 2001. Students produce Web pages to display their conclusions.

Time:

5 class sessions for the 1899 activity. One for background about world and national events; one to discuss effective newspaper design and content; three to research, design, produce, and share the newspaper front pages. The optional extension requires an additional 3 class sessions: one to discuss effective Web page design and construction and begin research, two to undertake and complete the construction.

Materials: (see page 34)

LESSON EIGHT

The Harriman Alaska Expedition Retraced: A Century of Change

Materials:

- Issues of local and national newspapers
- 1899 Fact Sheet (pages 37-39, one per student)
- Paper supplies for the production of student newspapers

Activities, continued from page 33

- Important issues. Which stories make the front page and why? How are they different from articles that are buried in the middle of the newspaper?
5. After your review of newspaper front pages, consider inviting a newspaper professional to speak to the class about choices he or she makes in writing headlines and designing front pages.
 6. Divide students into four groups, and assign a category to each group from among those listed on the 1899 Fact Sheets (pages 37-39). Describe the group tasks, as follows:
 - Explore the Web site/CD for evidence of how the information about their topic relates to the goals and mission of the 1899 Harriman Expedition.
 - Explore the Web site/CD for evidence of how the information about their topic relates to the situation the 1899 expedition members found when they arrived in Alaska.

- Explore the Web site/CD for evidence of how the information about their topic relates to the expedition's results.

Each group will write, design, and produce the front page of a fictional newspaper that ties the 1899 Harriman Expedition with the group's topic. Although this is a fictional newspaper, it should be based on fact. Each newspaper front page must have as a minimum the following:

- A "look" that is appropriate to an 1899 newspaper. See, for example, The North Star Tourists' Special Edition on the Web site/CD (http://www.pbs.org/harriman/images/century/tourism_img2_lg.jpg).
- A title for the paper.
- Date and city where the paper is published.
- A headline article with a graphic: a picture, map, drawing, graph, or photograph. (It can come from the Web site/CD.)
- At least two other articles on related topics, at least one of which must have a graphic element, which can come from the Web site/CD.
- By-lines for the student authors.
- References. (Although not normally part of a newspaper article, students will need to cite the sources of their information.)

7. Refer again to the 1899 Fact Sheets. Determine the ground rules for the assignment. For example, you might restrict students to information on the Harriman Web site/CD. Or, you might



An 1897 tourist newspaper published in Sitka.

Activities, continued from page 34

- require that students bring in at least two other resources, either Internet or print.
8. Allow students time to research their topics on the Web site/CD, and school library, and to work together to write and produce their newspaper articles.
 9. Share and post the newspaper front pages.

OPTIONAL LESSON EXTENSION TO 2001 EXPEDITION RETRACED

1. Explain the purpose of the next activity to students: they will work individually or in pairs to design Web pages that focus on Alaska in the context of national and international events and issues as of 2001. Determine what resources students are allowed to use in their research. You might want to extend that list beyond the Harriman Web site/CD itself, since it contains limited information on current world events. Consider asking students to do Internet searches for news articles, as well as actual newspaper articles.
2. Be sure that students are familiar with the task of building a Web page. If necessary, ask your school's technology specialist to the class to work with the students on this task. Alternatively, ask one of the students who has had experience to provide a quick tutorial to those who have not already produced a Web page.
3. Discuss the characteristics of a good Web page. For example:
 - What is it about a Web page that makes you want to stop and read it?
 - What font type and size are most readable in a Web page?
 - How many concepts or ideas should a single Web page contain?
 - How can the author of a Web page convince the reader that the information is reliable?

Send the students to the Web site/CD to find examples of exemplary Web pages. Each student or pair of students chooses a favorite Web page, prints it out (if possible), and reports back to the rest of the class on the elements that make it especially noteworthy.

4. As during the previous lesson, divide the task into four topics. Each student or pair of students chooses one topic and considers its impact on the expedition. The topics are:
 - Economics
 - Scientific and technological knowledge
 - Politics
 - Arts and culture

Activities, continued on page 36



Commemorative drawing from the 4th of July festivities in Kodiak, 1899.



Baskets from Unalaska.
Photograph by Edward Curtis

LESSON EIGHT

The Harriman Alaska Expedition Retraced: A Century of Change

Activities, continued from page 35



"On the Great Divide." The special train from New York stops to let the travelers explore the western prairie, 1899.



A group photograph of the Harriman Alaska Expedition taken on the beach at Cape Fox, July 26, 1899.
Photograph by Edward Curtis

5. In order to find evidence that shows the effects of economics, advances in knowledge, politics, and arts and culture on Alaska in 2001, students will need to refer to the lectures by resident scholars. Brainstorm other pages within the site that might contain valuable information on the topic.
6. Provide time for research and Web page production. Share Web pages. Discuss:
 - What sources were most helpful in researching the topic?
 - What topics were easiest to research?
 - Discuss some of the most successful Web pages produced by the class. What made them successful?

Vocabulary:

Context
Imperialism
Industrialization
Monopoly
Monroe Doctrine
Social Darwinism

Assessment:

Assess students for this lesson according to the following:

- Was an appropriate "look" designed for the newspaper?
- Was a catchy paper title chosen?
- Were the publication date and location included?
- Quality of information in the headline article and the two smaller articles
- Quality of writing in the headline article and the two smaller articles
- Were there at least two graphics on the front page?
- Were by-lines for the student authors included?
- Were references included?
- Quality of group dynamics during the research and production.

Assess the optional lesson extension according to the following:

- Was the Web page attractive?
- Was the Web page informative?
- Was the Web page accurate?
- Was the Web page focused?
- Did the author use appropriate resources?
- Did students participate in class discussions?
- If students worked in pairs, did they work well together?

1899 FACT SHEET

Instructions: The people who took part in the 1899 Harriman Expedition were influenced by the world around them as they planned and carried out the voyage. Similarly, the people of Alaska were influenced by what was happening in the rest of the world. This worksheet contains information about what was going on in economics, science, politics, and the arts in 1899.

Your task is to look at one of these four topics, which your teacher will assign to you. You will research the Harriman Web site/CD for ways that world affairs about that topic related to the expedition, and compose your own newspaper front page based on that information. Your front page must contain three articles: a long feature article and two shorter articles.

For example, you might decide that the increase in immigration to the United States meant that businessmen like Edward Harriman made huge amounts of money as people took his railroad west, and that he was therefore able to afford his expedition. Your feature story headline might read,

AMERICANS FLOCKING WEST IN RECORD NUMBERS; BOON TO TRANSPORTATION INDUSTRY!

Remember:

- Give your newspaper a name, date, and location.
- Give your newspaper the look of an 1899 publication.
- Write a long feature article.
- Write two shorter articles.
- Include at least two graphics, one for your feature story and the other for one of your other stories. The graphics can be photos, graphs, maps, etc.
- Write by-lines (one-sentence biographical sketches) about the student authors.
- Include references (although this is not normally part of a newspaper article, you will need to cite the sources for your information). If your teacher instructs you to do so, you may use outside resources for more background on your topic.

Topic 1: Economics and Industrialization

The population of the US doubled to 76 million from 1870 to 1900.

The US population swelled by the arrival of more than 25 million European immigrants between 1870 and 1900.

Monopolies controlled the steel, oil, and railroad industries.

Union membership was extended to unskilled workers at the end of the 19th Century.

A new "science of industrial efficiency" sought to revolutionize the way the typical workplace operated.

People moved to cities in record numbers by the turn of the 20th Century.

Oil began to look like the industry of the future as automobiles and other engines became more and more common.

Whale populations in the Atlantic were nearly depleted after almost a century of whaling, and the Pacific pods were also declining.

An economic depression was felt worldwide; Unemployment was rampant.

Gold was found in the Klondike, spurring many — especially unemployed young men — to head north.

Topic 2: Growth of Scientific knowledge and other technological advances

In 1895 X-rays were discovered.

The "germ theory" was taking hold in medicine at the turn of the 20th Century.

Radioactivity was discovered in 1898.

The Russian scientist Pavlov conducted his famous experiment on animal motivation: he was able, through conditioning, to cause dogs to salivate every time a bell rang.

A museum president and ex-banker named Jesup launched a research expedition to the North; it lasted from 1897 to 1902.

The telephone, phonograph, and wireless telegraph were in common use by the turn of the 20th Century.

Thomas Edison's electric light, invented in 1879, revolutionized households.

The internal combustion engine, which ran on gasoline, suggested to many that the automobile might be the wave of the future.

Harriman's improvements in rail lines made transcontinental rail travel easier than ever.

Governor Theodore Roosevelt (New York) brought the issue of conservation to the forefront of the national consciousness.

Topic 3: Political Realities

The US rushed to have an empire like its European neighbors (England, France, Netherlands, Portugal, Spain).

Alaska had become part of the US only 32 years ago; from 1741 to 1867, it had been a Russian colony.

By 1899, a handful of European countries and the US controlled nearly the entire world.

The 19th Century was a period of westward expansion and increased American nationalism.

The industrialization of the world meant there was a need for raw materials to fuel the factories; this sent people to other lands for conquest.

Feelings of racial and cultural superiority were the rule among Western European nations, and the US. The theory of Social Darwinism prevailed.

The Dawes Act of 1887 attempted to disband Native American tribes in the US by giving land ownership to individual Native Americans. At the same time it allowed the US government to sell half the lands to non-Native Americans.

US Open Door Policy opened China to trade in 1899.

During the Spanish American War of 1898, the US promised to make Philippines free of Spain, but reneged on the promise; Spain lost Cuba, Puerto Rico, Philippines, and Guam to the US.

US took over Hawaii from the Native Hawaiian government in 1898.

The Monroe Doctrine of 1823 was called upon to "defend" "American" (both North and South America) territory from European powers. According to the doctrine, the US had the right to fight any country wanting to establish new colonies or expand old ones.

Topic 4: Art and culture

Religious fervor and missionary zeal were common as missionaries accompanied the conquering governments to new colonies.

Kipling's 1897 poem "The White Man's Burden," shows the prevailing attitude toward people of color at the time:

Take up the White Man's burden –
Send forth the best ye breed –
Go bind your sons to exile
To serve your captives' need;
To wait in heavy harness
On fluttered folk and wild –
Your new-caught, sullen peoples,
Half-devil and half-child.

There was support for universal government-sponsored education; but the races were often segregated.

All languages but English were suppressed in public and religious education in the US.

By the mid-1800s, more than 500 newspapers were published in the US.

There was a new recognition that people needed open spaces in cities (in 1858 Central Park in New York had been built).

Cultural opportunities had become available to middle classes in cities (museums, concerts).

Landscape art was popular in America.

"Collections of curiosities" started in Alaska in the 1700s with the coming of would-be colonists, traders and explorers. Collecting became more systematic and increased in volume after the Civil War.

The Smithsonian Institution was established in Washington, D.C. 1846.

The "Museums Movement" was in full swing by the 1870s with growth of museums in Europe, many in response to romanticism and nationalism of the 1840s. This was spurred by both fascination with the primitive and the realization that civilization was destroying the "primitive" peoples and their cultures.

A university education promoted a well-rounded individual (the Renaissance man ideal); specialization into different scientific and humanistic fields was just beginning at the turn of the 20th Century.

Romanticism of the early 19th Century held the "primitive," "natural," and "folk culture" in high regard, particularly in Europe.

The "back-to-nature" movement was strong in the US at the turn of the 20th Century.

The Harriman Alaska Expedition Retraced: A Century of Change

“What do you show when you want to tell the biography of a 19th Century scientist, like William Healey Dall or Charles Palache, when only one or two fuzzy photographs exist? . . . What voices do you use for the characters, when no recordings of their speech were ever made?”

“The Documentary Film: Filming History”

How do we know what we know about the people and landscape of Alaska now and in 1899? What role does perspective play in historical interpretation? Whose story did the 1899 Harriman Alaska Expedition tell? Whose story did the Harriman Alaska Expedition Retraced tell? Who will tell the story of Alaska’s future?

Level/Subjects:

Grades 8 – 12
Social Studies, Language Arts

Summary:

Students inventory the kinds of information available from the two Harriman expeditions. They evaluate them for validity and reliability. Each student then undertakes a diachronic case study from among three offered (Yakutat, Cape Fox, and Metlakatla) to discover the effect of the observer’s perspective on the history he or she writes.

Time:

3 class sessions. One for class discussion and beginning research; one for continuing research; and one for class reports.

Materials:

- Three case studies, pages 43-45

Activities:

1. Review the difference between primary and secondary sources with students. Begin with a review of the ways students know about the world around them. These might include:
 - personal observation;
 - testimony from a trusted source;
 - physical evidence (such as a smoking gun, an artifact, an old map);
 - gossip;
 - convincing arguments that appear in print or the media;
 - books;
 - the Internet;
 - television and radio.
2. Ask students to explain how they determine whether information they obtain is true (valid) or not. Explain that there are two tests for judging a source’s validity: authenticity (the information is authentic and not manufactured) and reliability (the source is trustworthy). Examples of ways of determining validity might include:
 - Direct knowledge through the senses.
 - A reliable source, one who has proven to be trustworthy in the past.
 - A trail of reliable sources (no anonymous breaks in the chain of evidence).
 - Physical evidence or reliance on physical evidence.
 - The evidence fits, or makes sense, based on other information received (i.e., cross-referencing).
 - The information comes from an expert in the field, someone who has spent a great deal of time in the region or on that particular project.
 - The evidence is recent so that memory can be relied on.
 - Written descriptions or pictorial representations were made at the time of the event (the further removed they are in time from when the event occurs, the less reliable they are).

Activities, continued on page 41

Activities, continued from page 40

- The author's biases or intentions are clearly stated so a reader can take these into account in judging the source's validity.
3. Explain to the students that they will be asked to judge the authenticity and reliability of the information gathered by the two Harriman expeditions based on the above criteria, and others they might think of later. But first, quickly note the types of information the Web site/CD contains, based on students' previous research at the site. A fairly comprehensive list would contain:
- Photographs and drawings.
 - Ethnographic and museum objects (photographs and descriptions).
 - Maps.
 - Daily logs.
 - Summaries of log entries.
 - Scientific observations.
 - Journal entries describing the writers' reactions to the day's events.
 - Written versions of ancient oral traditions.
 - Letters stating voyagers' opinions and feelings.
 - Essays expressing the writers' judgments or feelings about particular topics.
 - Biographical sketches of participants.
 - Summaries of various cultures.
 - Community descriptions with demographic and historic information.
 - Works of literary and visual art produced by the voyagers.
 - Print references and Web site/CD links.
4. From among the list generated, ask students to identify the primary source material. Mark those items. Discuss the validity of one primary source (e.g., daily logs).
5. The sources that remain unmarked are derivative, or second-hand sources. Choose one (e.g., essays) and discuss:
- What type of information does it provide? For instance, an essay might provide information about the author's point of view as well as scientific data.
 - How valid (authentic and reliable) is it?
6. Introduce the idea of perspective in history: that all history is written by someone who hails from a particular historic and cultural context, and that this context inevitably affects the history that he or she writes. Begin a class discussion with the question, "Who writes history?" You might help students deal with the question by breaking it down: When did the history writer live (i.e., how long after the events he or she described)? Where does he or she live? What is the author's cultural background? How does he or she know what to write? Why is



As part of a "Celebration of Healing" in Ketchikan, expedition members brought offerings of food to a fire on the beach prepared by descendants of the old Cape Fox community. 2001 Expedition member Rosita Worl (left) acted as intermediary to Cape Fox representatives Irene Shields (center) and Eleanor Hadden (right). The blankets they are wearing identify their clan affiliations.

Photograph by National Ocean Service, NOAA



Lydia Henry, Shunkukeidi Clan, and Martha Mallott, Luknxadi Clan, aboard the expedition ship *Clipper Odyssey*.
Photograph by Megan Litwin

LESSON NINE

The Harriman Alaska Expedition Retraced: A Century of Change

Activities, continued from page 41

she or he writing a history? Turn to a book or source you have used in your class and find the author's name. Ask students what they can tell about the author from the book he or she wrote.

Students will conclude that the author is not merely a reporter of facts, but is an active part of the resultant history; that his or her culture, identity, and politics affect what is written. Have students generate examples of the ways a person's perspective or point of view might influence the history book he or she produces. Examples might include:

- The types of information a person considers important enough to record.
- The types of information a person notices.
- The issues in which the person is interested.
- A theory about cause and effect.

7. Students will now undertake a case study that will illustrate for them the concept of perspective or point of view. There are three cases available on the site. Divide the class into three groups, assigning one to each case study:

Metlakatla, Cape Fox, and Yakutat.

8. Each group is to research its case study and report back to the whole, orally and in writing, with the following:

- Restate the issue for the rest of the class.
- Describe the perspectives of the 1899 Harriman Expedition scientists.
- Describe the perspectives of the 2001 Harriman Expedition Retraced participants.
- Assess the validity of the information provided by the various reporters.
- Assess the validity of the various types of information you were able to find.
- Describe any information you could find from the point of view of the Alaskans whose situations were being described.
- What additional information would you like to learn so that you can have a more complete understanding of the issue?

9. Depending on time and the availability of Internet access, have students continue their search for information from the perspective of the Native people themselves, and in directions they have identified in the last question above.

10. As a wrap-up to the lesson, discuss the question, "Who will tell the story of Alaska's future one hundred years from now?" How will that story be told? Ask students whom they would trust to tell their own stories to future generations. How can they ensure that the story told about them is authentic and reliable? From what perspective do they think their stories will be told?



Metlakatla Village fish cannery.
Photograph by Julia O'Malley

CASE STUDY A: METLAKATLA

Your Task: In 1887, the Reverend William Duncan, an Anglican priest, led a group of Tsimshians from Canada to Metlakatla Island in Alaska territory. The members of the 1899 Harriman Expedition had definite opinions about the move and the effects it had on the Tsimshian. The issue is to revisit the Metlakatla community in 2001 and determine whether 21st Century visitors have the same reaction to the situation. Explore how the perspectives of the observers affect the way they understand the situation. What does this say about the validity of the information provided in each case? How might a Tsimshian from Metlakatla have described the situation in 1899? 2001? Pages from the Web site/CD to explore:

- Description of the “1899 Expedition”
(<http://www.pbs.org/harriman/1899/1899.html>).
- “Brief Chronology” of the Harriman Expedition
(<http://www.pbs.org/harriman/1899/chronology.html>)
- “Science Aboard the *Elder*”
(<http://www.pbs.org/harriman/1899/elderscience.html>)
- “Growth and Development Along Alaska’s Coast: 1745-1900”
(<http://www.pbs.org/harriman/1899/development.html>)
- “Alaska Native Communities on Harriman’s Route”
(<http://www.pbs.org/harriman/1899/native.html>)
- Charles Palache’s letters, particularly June 4, in “1899: Original Participants”
(http://www.pbs.org/harriman/1899/1899_part/participantpalache.html)
(http://www.pbs.org/harriman/1899/1899_part/palache_letters.html)
- Charles Keeler letters, particularly June 4, in “1899: Original Participants”
(http://www.pbs.org/harriman/1899/1899_part/participantkeeler.html)
(http://www.pbs.org/harriman/1899/1899_part/keeler_letters.html)
- “Expedition Log”: daily summary for July 23, 2001
(http://www.pbs.org/harriman/explog/072301_log.html)
- “Souvenir Album”: July 23, 2001
(http://www.pbs.org/harriman/explog/072301_photos.html)
- “Perspective Maps” for Southeast Alaska
(http://www.pbs.org/harriman/maps/perspective_maps.html)
 - SE region large map:
(http://www.pbs.org/harriman/images/maps/seregion_map_lg.jpg)
- Sites available through “Harriman Links” (<http://www.pbs.org/harriman/aboutsite/links.html>) notably:
(<http://www.tlingit-haida.org>)

Assessment:

Assess this lesson according to the following criteria:

- Participation in class discussions.
- Quality of group work.
- Clear statement of the issue.
- Clear discussion of the perspectives of the members of the two Harriman expeditions.
- Completeness of research and resource use.
- Well-reasoned judgment of the validity of the various resources used.
- Quality of discussion of Alaskans’ perspectives.

Vocabulary:

Authenticity
Haida
Perspective
Primary sources
Reliability
Repatriation
Tlingit
Tsimshian
Validity

CASE STUDY B: CAPE FOX REPATRIATION

Your Task: In 1899, the Harriman Expedition members visited a seemingly abandoned Tlingit village and removed totem poles and other clan items which they later placed in various museums throughout the country. In 2001, the expedition members returned those items to the descendants of their owners. What brought about the change in attitude? Explore the perspectives of the two groups of scientists. How can the same situation appear to have different meanings, depending on who is looking at it and when? What additional perspective is available in 2001 and what does it teach you? Pages in the Web site/CD to explore include:

- Description of the "1899 Expedition"
(<http://www.pbs.org/harriman/1899/1899.html>)
- "Brief Chronology" of the Harriman Expedition
(<http://www.pbs.org/harriman/1899/chronology.html>)
- "Science Aboard the *Elder*"
(<http://www.pbs.org/harriman/1899/elderscience.html>)
- "Growth and Development Along Alaska's Coast: 1745-1900"
(<http://www.pbs.org/harriman/1899/development.html>)
- "Alaska Native Communities on Harriman's Route"
(<http://www.pbs.org/harriman/1899/native.html>)
- Charles Palache's letters, particularly July 26 and 27, in "1899: Original Participants"
(http://www.pbs.org/harriman/1899/1899_part/participantpalache.html)
(http://www.pbs.org/harriman/1899/1899_part/palache_letters.html)
- "The Collection and Return of Native Objects" (www.pbs.org/harriman/1899/collection.html)
- "Community Profile: Ketchikan/Cape Fox"
(<http://www.pbs.org/harriman/current/profiles/ketchikan.html>)
- "Expedition Log" for July 23, 2001
(http://www.pbs.org/harriman/explog/072301_log.html)
- "Souvenir Album" for July 23, 2001
(http://www.pbs.org/harriman/explog/072301_photos.html)
- "Introduction to the Tlingit Culture and Repatriation," Rosita Worl
(<http://www.pbs.org/harriman/explog/lectures/worl.html>)
- "The 1899 Harriman Alaska Expedition," Kay Sloan
(<http://www.pbs.org/harriman/explog/lectures/sloan.html>)
- "Perspective Maps" for Southeast Alaska
(http://www.pbs.org/harriman/maps/perspective_maps.html)
 - SE region large map:
(http://www.pbs.org/harriman/images/maps/seregion_map_lg.jpg)
- "Harriman Links" sites
(<http://www.pbs.org/harriman/aboutsite/links.html>)
 - Louis Agassiz Fuertes journal pages:
(<http://rnc.library.cornell.edu/Alaska/Default.html>), then to
(cidc.library.cornell.edu/Fuertes2000/harriman/Journal.asp?jrdate=82) and
 - Library of Congress Web site for the *Harriman Expedition Souvenir Album*:
(<http://rs6.loc.gov/mss/amrvvm/vmh/vmh.html>) then to pages 244-245;
Page 244 (photo quality) — "The talking, [sic.] of the Totems" - sketch.
(memory.loc.gov.8081/mss/amrvvm/vmh/vmh200r.jpg)
 - University of Washington Libraries Digital Collections for images:
<http://content.lib.washington.edu/Eharriman/index.html>
- The videotape *Harriman Alaska Expedition Retraced* contains an extended treatment of this episode in both expeditions. You may wish to use some of the perspectives in your report.

CASE STUDY C: YAKUTAT

Your Task: In 1899, the ship visited a Yakutat Tlingit seal camp. In 2001, the voyagers visited the community again. The nature of the interactions, and the people doing the interacting were very different during the two expeditions. Compare them and explore how the perspectives of the visitors affected what they saw and learned. How did the perspectives of the residents of Yakutat affect what was described? Pages from the Web site/CD to explore:

- “Brief Chronology” of the Harriman Expedition
(<http://www.pbs.org/harriman/1899/chronology.html>)
- “Growth and Development Along Alaska’s Coast: 1745-1900”
(<http://www.pbs.org/harriman/1899/development.html>)
- “Alaska Native Communities on Harriman’s Route”
(<http://www.pbs.org/harriman/1899/native.html>)
- Charles Palache’s letters, particularly June 21, in “1899: Original Participants”
(http://www.pbs.org/harriman/1899/1899_part/participantpalache.html)
(http://www.pbs.org/harriman/1899/1899_part/palache_letters.html)
- Charles Keeler letters, particularly June 21, in “1899: Original Participants”
(http://www.pbs.org/harriman/1899/1899_part/participantkeeler.html)
(http://www.pbs.org/harriman/1899/1899_part/keeler_letters.html)
- “Community Profile: Yakutat”
(<http://www.pbs.org/harriman/current/profiles/yakutat.html>)
- “Expedition Log” for July 29, 2001 (2 entries)
(http://www.pbs.org/harriman/explog/072901a_log.html)
(http://www.pbs.org/harriman/explog/072901_log.html)
- “Souvenir Album” for July 29, 2001 including audio/video of Yakutat Elder
(http://www.pbs.org/harriman/explog/072901_photos.html)
- “Perspective Maps” for Southeast Alaska
(http://www.pbs.org/harriman/maps/perspective_maps.html)
 - SE region large map:
(http://www.pbs.org/harriman/images/maps/seregion_map_lg.jpg)
- “The Alaska Native Science Commission,” Elaine Abraham.
(<http://www.pbs.org/harriman/explog/lectures/abraham.html>)
- “The 1899 Harriman Alaska Expedition,” Kay Sloan.
(<http://www.pbs.org/harriman/explog/lectures/sloan.html>)
- “Tlingit Children in Yakutat Tell Oral Histories”
(<http://www.pbs.org/harriman/explog/lectures/yakutat.html>)
- “Harriman Links” site to the University of Washington Libraries Digital Collections
for images
(<http://www.pbs.org/harriman/aboutsite/links.html>)
(<http://content.lib.washington.edu/Eharriman/index.html>)

EVALUATING THE EXPEDITIONS LESSON TEN

The Harriman Alaska Expedition Retraced: A Century of Change

"In addition to the important connection between Muir and Harriman, the expedition produced thirteen volumes of scientific reports that have been a long-standing resource for information about Alaska." Kay Sloan, "The 1899 Harriman Alaska Expedition"

Was the 1899 Harriman Alaska Expedition successful? Was the Harriman Alaska Expedition Retraced successful? What would you have done differently during either expedition? What is the role of exploration today?

Level/Subjects:

Grades 7 – 12
Social Studies, Language Arts

Summary:

Students design rubrics to determine the success of the 1899 and 2001 Harriman expeditions. Each student or small group researches a single criterion of success. Students write essays about the future of exploration to sum up the unit.

Time:

2 class sessions. One to design the class rubric and begin research; one to complete essays.

Materials:

No special materials required.

Activities:

1. As a class, design a rubric to determine whether or not the two expeditions were successful. Categories to evaluate include:
 - Did the expedition provide new scientific information about the biology, geology, and geography of Alaska?
 - Was the new information published or publicized so the general public could benefit from it?
 - Were there long-range results of the expedition in such areas as economic development, conservation, or interethnic relations?
 - Did the expedition provide new information about the people of Alaska?
 - Did the expedition provide anything of value to the people of Alaska? To the people of the US?
 - Did the expedition provide anything of value to the expedition participants?
 - Did the expedition provide anything of value to the communities it visited?
 - Was the expedition cost effective?
 - What results other than increase in data or information were attained through the expedition?
 - Did Harriman get his bear? Did the 2001 crew see all the wildlife it hoped to see?
2. If you follow the above ten categories, divide the class into twenty groups, each assigned the task of fleshing out a single rubric for one of the expeditions. Some groups might need to double up on some of the criteria, at your discretion.
3. Students will devise markers for the achievement of their rubric at four levels. For instance, the rubric for increase in scientific knowledge might have the following four markers:
 - Far exceeded expectations: New species of plants, fish, birds, sea mammals, and land mammals were identified

Activities, continued on page 47

Activities, continued from page 46

- and samples were collected. At least four new glaciers were discovered and named; samples of little-known species were collected; systematic data was collected on the health of sea mammal, bird, and fish populations; detailed weather data was maintained; the shoreline was surveyed and maps improved.
- Exceeded expectations: At least three new species of animals or plants were identified and two new glaciers discovered; samples of little-known species were collected; systematic data was collected on the health of sea mammal, bird, and fish populations; detailed weather data was maintained; the shoreline was surveyed and maps improved.
 - Met expectations: samples of little-known species were collected; systematic data was collected on the health of sea mammal, bird, and fish populations; detailed weather data was maintained.
 - Did not meet expectations: surveys of plants, animals, and natural features were spotty rather than systematic; collection of samples was haphazard; weather reports were anecdotal rather than scientific and systematic.
4. Each group researches an area different from the one for which it prepared the rubric. In other words, the students who designed the rubric for increase in scientific knowledge must research a different topic. Determine who will research which area, and for which of the two expeditions, and send students to the Web site/CD to complete their research. Each group fills in the assigned rubric and compiles a "portfolio" that includes evidence justifying the judgment. The portfolio can contain printed or quoted passages from the expedition log, journals, photograph albums, or other places on the Web site/CD.
 5. Students share their judgments. In class discussion, come up with a class-wide summative judgment: In what areas were the two expeditions most successful? Least successful? Do students have suggestions for ways that the expeditions might have been improved? What do students think is the effect of the conclusions that expedition members came to, particularly considering the time each expedition spent "in the field"? Students should read the section "The importance of 'Being There'" in Brad Barr's essay "New Ideas on the High Seas: Conservation in 2001," where he bemoans the fact that important decisions are made by people who spend little time in the field.
 6. Have students write brief essays on the topic of the role of exploration in the future. Their essays should consider:

Activities, continued on page 48



Head of Pomarine Jaeger. Painting by Louis Agassiz Fuertes, June 20, 1899 as reproduced in the Harriman Expedition Report.



Walruses in the northern Bering Sea, 2001.

LESSON TEN

The Harriman Alaska Expedition Retraced: A Century of Change

Activities, continued from page 48

- What topic or area of the world or universe needs to be explored?
- Who will do the exploration (be explicit about the types of people and skills that will be needed)?
- Besides people, what resources will be needed for the exploration?
- What evidence will be needed to convince others of the results of the exploration?
- What will the results of the exploration be?
- What will the benefits of the exploration be to society at large?



Harriman Glacier and Head of Harriman Fjord, 1899.

Assessment:

Students will have devised their own rubrics which can be used in assessing their performance in this lesson. In addition, assess:

- Participation in class discussion.
- Working relationship in the group.
- Quality of the rubric devised in the group.
- Quality of the arguments in the essay.
- Quality of the writing in the essay.



Harriman Glacier was "discovered" by the original Harriman Alaska Expedition and named by the participants in honor of their patron, 2001.

Vocabulary:

Rubric

The Harriman Alaska Expedition Retraced: A Century of Change

VOCABULARY (#) is lesson number

Ablate (3): Melting.

Arête (3): Sharp & rugged ridge on a mountain.

Authenticity (9): The state of being genuine, trustworthy, or reliable.

Bag (verb, as used here) (3): To collect.

Bedrock (3): Unbroken, solid rock.

Bergy Bits (3): Small ice bergs.

Botanical (2): Having to do with the science of plants, their life, structure, growth, and classification.

Brash Ice (3): Small fragments of crushed ice collected by winds or currents near the shore.

Calving (3): Breaking of a piece of a glacier, especially at the face of a tidewater glacier.

Cirque (3): Circular area left by a glacier high on a mountain.

Concept map (6): A chart of relationships among ideas.

Context (8): The whole situation, background, or environment relevant to some happening or personality.

Copyright (5): Legal protection for the use of literary, art, or musical works.

Demographic (1): Having to do with vital statistics, such as births, deaths, marriages, etc. of populations.

Disparities (5): Differences.

Elite (1): The choice or most carefully selected part of a group.

Eloquent (4): Forceful and appropriate expression.

Englacial (3): From within the ice of a glacier.

Enunciates (4): Clearly says and pronounces spoken language.

Eskimo (2): A term widely applied to indigenous people of the Arctic and subarctic; the term is believed to have derived from neighboring tribes and is not the name that the people call themselves.

Ethnographic (2): Having to do with the description of cultures and groups of people.

Expedition (1): A journey for a specific purpose, such as exploration or battle.

Expertise (2): The skill or knowledge of an expert.

Fjord (3): (also spelled Fiord) A long, narrow part of the sea bordered by steep cliffs; usually made by glacial erosion.

Growlers (3): Icebergs large enough to be a navigational hazard.

Haida (9): An indigenous people of British Columbia and Southeast Alaska.

Hanging Glacier (3): Glacier that terminates high on a mountain slope.

Ice Worm (3)(7): A worm that lives within a glacier, surrounding itself with a chemical antifreeze that allows it to move through the ice. It feeds on the abundant organic matter frozen into the glacier itself.

Imperialism (8): The policy and practice of forming and maintaining an empire; in modern times, it is characterized by a struggle for the control of raw materials and world markets, the subjugation and control of territories, and the establishment of colonies.

Industrialization (8): The act of economic organization characterized by large industries, machine production, and concentration of workers in towns and cities.

Inflection (4): Change in pitch and tone of voice.

- Inupiaq** (2): The language spoken by the indigenous people of northern Alaska (also called “Northern Eskimos” by outsiders); in the Inupiaq language, the word means “Real person.”
- Inupiat** (2): The plural (three or more) of Inupiaq.
- Medial** (3): Located in the middle.
- Monopoly** (8): Exclusive control of a commodity or service in a market.
- Monotone** (4): A single tone of speech.
- Monroe Doctrine** (8): A doctrine stated by President Monroe (1823) that the United States would regard as an unfriendly act any attempt by a European nation to interfere in the affairs of the American countries or increase its possessions on the American continents.
- Moraine** (3): Boulders, gravel, and sand moved by a glacier; the deposit of this material left by a glacier.
- Outwash** (3): The material, usually sand or gravel, washed from a glacier by the action of meltwater.
- Outwash Streams** (3): Meltwater streams from a glacier.
- Perspective** (9): The point of view from which a scene or situation is viewed or considered.
- Primary sources** (9): Sources that derive directly from participants in the original event, having been produced at the time of the original event.
- Reliability** (9): That which can be relied upon; dependable and trustworthy.
- Repatriation** (9): The return of objects to their original owners.
- Rubric** (10): A goal statement followed by a measurement to determine to what extent the goal has been met.
- Skimpy** (4): Too few or too little of something.
- Social Darwinism** (8): A belief from the nineteenth century that the best or fittest people would rise to the top of the social and economic ladder in society; often used as rationale to keep the status quo.
- Species** (7): The basic category of biological classification.
- Specimen** (7): A part or an individual that is an example of a whole group of animals, plants, or other categories.
- Sporadic** (4): Irregular, occasional.
- Technology** (1): The equipment or machinery used in an endeavor or field; the system of use of the equipment.
- Terminal Moraine** (3): The deposit of materials left at the end of a glacier.
- Terminus** (3): End; on a glacier, also the “face” or front.
- Terrain** (3): Any land formation.
- Tidewater Glacier** (3): Seacoast glacier that terminates in ocean water.
- Tlingit** (9): An indigenous people of Southeast Alaska.
- Transitions** (4): Movement from one part to another.
- Tsimshian** (9): An indigenous people of British Columbia, some of whom moved to Southeast Alaska in the 1800’s.
- Tycoon** (1): A wealthy and powerful industrialist or financier.
- Validity** (9): The quality of being sound or well grounded on principles of evidence.
- Zoological** (2): Having to do with the science that deals with the classification of animals and the study of animal life.

TABLE OF CONTENTS LESSON MATRIX WITH THE ON-BOARD LECTURES LIST	LESSON NUMBER									
	1	2	3	4	5	6	7	8	9	10
2001 EXPEDITION							X			
Harriman Retraced Participants	X									
Elaine Abraham	X									
Paul Alaback	X						X			
Vera Alexander	X						X			
Brad Barr	X						X			
Lawrence Charters	X									
William Cronon	X									
Kristine Crossen	X		X							
Aron Crowell	X									
Kathryn Frost	X						X			
Alison Hammer	X									
Kim Heacox	X			X						
David Koester	X									
Tom Litwin	X						X			
Vivian Mendenhall	X						X			
Richard Nelson	X									
Sheila Nickerson	X									
Brenda Norcross	X						X			
Robert Peck	X						X			
David Policansky	X						X			
Patricia Savage	X			X						
Kay Sloan	X									
Pam Wight	X									
Kesler Woodward	X			X						
Rosita Worl	X									
2001 Expedition Itinerary		X	X				X			
Community Profiles										
Ketchikan/Cape Fox	X	X								B
Sitka	X									
Juneau	X	X								
Yakutat	X						X			C
Cordova	X	X								
Anchorage										
Homer	X									
Dutch Harbor/Unalaska	X									
St. Paul	X						X			
Gambell	X									
Little Diomedes	X									
Teller	X									
1899 EXPEDITION									X	X
Original Participants	X						X			
Edward H. Harriman	X									
The Boyhood of Edward Harriman	X									
Prof. William H. Brewer	X						X			
John Burroughs	X						B	X		
Frederick V. Coville	X						X			
William Healey Dall	X		X				X			
Bernhard Fernow	X						X			
G. K. Gilbert.	X		X				X			
George Bird Grinnell	X						B			
Charles Augustus Keeler	X						X		A,C	
Trevor Kincaid	X		X				X			
C. Hart Merriam	X						X			
John Muir	X		X				B	X		
Charles Palache	X						X		X	
William E. Ritter	X						X			

CONTENTS MATRIX

The Harriman Alaska Expedition Retraced: A Century of Change

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William Trelease	X						X			
Edward Curtis	X		X	X						
Frederick S. Dellenbaugh	X			X						
Louis Agassiz Furtres	X			X			X		B	
R. Swain Gifford	X			X						
Brief Chronology		X	X				X	X	X	
Science Aboard the <i>Elder</i>	X		X			B	X		A,B	
Exploration and Settlement on the Alaskan Coast									X	
Growth and Development Along Alaska's Coast							X	X	X	
Sea Otters in Alaska		X				B	X			
The Collection and Return of Native Objects										B
U.S. and British Newspapers Respond to the Sale of Alaska										
The Rat Threat in Alaska						B	X			
Alaskan Native Subsistence Today										
Alaska Native Communities on Harriman's Route		X						X	X	
EXPEDITION MAPS	X									
Historic Maps	X		X							
Perspective Maps	X									
Southeast Region: Lowe Inlet	X						X			
Southeast Region: Metlakatla	X						X		X	
Southeast Region: Glacier Bay	X		X							
Southeast Region: Sitka	X						X			
South Central Region: Long Island	X						X			
Alaskan Peninsula & Aleutians Region: Popof Island	X						X			
Alaskan Peninsula & Aleutians Region: Bogoslof	X						X			
Bering Sea Coast Region: St. Paul Island	X						X			
Bering Sea Coast Region: Port Clarence	X						X			
Southeastern Alaskan Fly Throughs			X							X
Western Alaskan Fly Throughs										
Virtual Tour			X				X			
EXPEDITION LOG	X	X			X	A,B	X	X	X	
On-board Lectures										X
Three Poems of Juneau, Alaska - Sheila Nickerson										
The 1899 Harriman Alaska Expedition - Kay Sloan	X		X	X	X	A	X		B,C	
Introduction to the Tlingit Culture and Repatriation - Rosita Worl										B
Ecology and Politics in the Tongass National Forest - Paul Alaback	X					A	X			
Dreaming the Klondike - Bill Cronon	X						X			
A Century of Change in Alaska: Tourism and the Environment - Pam Wight	X						B	X		
Coming Home to Sitka - Richard Nelson						B	X			
A Panel Discussion on Glacier Bay						B	X			
A Panel Discussion on People, Politics and Subsistence in Alaska						A	X			
Sovereignty and Cultural Survival - Allison Eberhard	X									
The Alaska Native Science Commission - Elaine Abraham						B				C
Tlingit Children in Yakutat Tell Oral Histories										C
It's Just a Fish: Alaskan Salmon and Halibut Fisheries - David Policansky						A	X			
Herring in the Prince William Sound Ecosystem - Brenda Norcross						B	X			
A Panel Discussion on Oil and Alaska's Search for Economic Diversity and Environmental Protection	X					A	X			
Alaska's Glaciers - Kris Crossen		X	X		X					
Co-Management of Natural Resources in Alaska - Kathy Frost						A	X			

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Painting the Alaskan Coast: The Harriman Expedition Paintings in Context -Kes Woodward	X			X	X					
Demystifying How Artists Work - Patricia Savage			X	X	X					
A Celebration of Birds: The Life and Art of Louis Agassiz Fuertes - Robert Peck				X	X		X			
Crossing the Alutiiq Homeland: Heritage and Identity - Aron Crowell										
Poems from Feast of the Animals: An Alaskan Bestiary - Sheila Nickerson					X			X		
Harriman Alaska Expedition - Robert Peck			X			A		X		
Living on the Edge: People in the Gulf of Alaska Environment - Aron Crowell			X					X		
Aleutian Volcanoes and Plate Tectonics on the Pacific Rim - Kris Crossen										
Alaskan Seabirds and How to Identify Them - Vivian Mendenhall								X		
What Vitus Bering Started, and How the Bering Sea Replied – Vera Alexander	X					B		X		
The Bering Sea Ecosystem: The Big Picture - Vera Alexander						A		X		
Kennecott Journey - Bill Cronon										
Fisheries and the Bering Sea Ecosystem - David Policansky	X					A		X		
National Marine Sanctuaries: Making the Link - Brad Barr										
A Panel Discussion on Conservation of the Alaskan Marine Ecosystem						A		X		
Bering Sea Marine Mammals: Ecology and Conservation - Kathy Frost						A		X		
Marine Mammals in the Gulf of Alaska: Conservation Issues and More – Kathy Frost	X					A		X		
Seabirds in the Marine Environment - Vivian Mendenhall						A		X		
A Sense of Wonder: Alaskan Art - Kes Woodward				X	X					
A Panel Discussion on Fisheries Management in the Bering Sea						B		X		
New Ideas on the High Seas: Conservation in 2001 – Brad Barr	X					A		X		X
Alaska Light: A Presentation on Photography - Kim Heacox						B				
Discovering Alaska - Richard Nelson						A				
The Historical Dynamics of Politics, Culture and Social Life in the Russian Far East - David Koester										
Apparition in the Mirror: Soviet and Post-Soviet Life in Northern Native Communities across the Bering Sea - David Koester	X									
Bagging a Bear: Then and Now -- Brad Barr and Tom Litwin						A		X		
2001 Souvenir Album	X	X	X		X		X		X	
Sketch Book	X		X	X	X					
Alaska Geographic Alliance Photos	X		X		X		X			
Heacox Photo Album	X		X		X		X			
FOR EDUCATORS & STUDENTS										
Young Explorers Team	X									
Layton Lockett	X									
Clare Baldwin	X									
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	1	2	3	4	5	6	7	8	9	10
Julia O'Malley	X									
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Devon Ducharme	X									
Elizabeth Litwin	X									
Megan J. Litwin	X									
Student Projects										
Tracking Whales in Alaska								X		
Alaskan Oceans – Temperature and Salinity			X							
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The Roadless Policy – Forest Resource Management in Alaska								X		
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<u>Geography</u> : A Neighborhood Expedition 2nd – 5th										
Assessing and Making Maps 4th – 7th	X		X							
Learning About Location: Charting the Path of the George W. Elder 5th – 12th	X		X							
<u>History</u> : How Has Transportation Changed Since the 1899 Harriman Alaska Expedition? K										
What Do We Learn from the Repatriation of Alaska Native Artifacts? Grade level 6th – 8th										
Key Figures of the 1899 Harriman Alaska Expedition Grade level 7th – 12										
<u>Language Arts</u> : Glaciers on Main Street 5th – 12th			X							
Can We Be Consumers and Conservationists? 9th – 12th							X			
<u>Science</u> : Harriman and Plant Identification 3rd – 6th								X		
A Field Study of an Integral Species 7th – 12th								X		
Extra Credit										
Suggestions for Further Reading										
Looking at Primary Sources		X								
THE DOCUMENTARY FILM										
Producers and Crew										
Program Preview										
The Alaskan Perspective										
On Location										
Filming History										
A CENTURY OF CHANGE										
An Alaskan Gazette								X	X	
Alaska Tourism									X	
Nature and Art in Alaska					X					
Anchorage Museum Gallery					X					
Poetry in Alaska										
AFTER THE EXPEDITION										
Journals from the 2001 Expedition										
Journal: Clare Baldwin			X			B	X			
Journal: Jonas Parker			X							
Journal: Doug Penn			X							
Mammal List July 21 to August 5								X		
Bird List July 21 to August 5								X		
Mammal List August 5 to August 20								X		
Bird List August 5 to August 20								X		
ABOUT THIS SITE										
REFERENCES										
HARRIMAN LINKS										
										X

STANDARDS SUMMARY

The National Standards listed here come from the following sources:

LANGUAGE ARTS: National Council of Teachers of English.

SCIENCE: National Academies of Science.

SOCIAL STUDIES (SS):

CIVICS AND GOVERNMENT: the Center for Civic Education.

ECONOMICS: The National Council on Economic Education.

US HISTORY/WORLD HISTORY: National Council for the Social Studies.

GEOGRAPHY: National Council for Geographic Education.

TECHNOLOGY: International Society for Technology in Education.

VISUAL ARTS: Consortium of National Arts Education Associations.

A Web site for further information about National Standards can be found at: <http://www.educationworld.com/standards/national>

STANDARD	LESSON NUMBER									
	1	2	3	4	5	6	7	8	9	10
Language Arts 6: Applying knowledge.				X						
Language Arts 1: Reading for perspective.	X					X	X			
Language Arts 12: Applying language skills.	X							X	X	X
Language Arts 3: Evaluation strategies.								X	X	X
Language Arts 4: Communication skills.	X			X				X	X	X
Language Arts 7: Evaluating data.						X				
Language Arts 8: Developing research skills.	X						X	X	X	X
Language Arts 9: Multicultural understanding.								X	X	X
Science 2: Physical science.				X						
Science 3: Life science.		X					X			
Science 4: Earth and space science.		X	X							
Science 6: Personal and social perspectives.		X				X				
Science 7: History and nature of science.	X	X	X			X	X	X		X
SS Civics and Government 2: Foundations of the American Political System.									X	
SS Civics and Government 4: What is the relationship of the United States to other nations and to world affairs?						X				
SS Economics 1: Productive resources.						X		X		
SS Economics 10: Institutions evolve in market economies to help individuals and groups accomplish their goals.						X				
SS Economics 14: Entrepreneurs.				X	X					
SS Economics 2: Effective decision making.						X				
SS Economics 7: Markets exist when buyers and sellers interact.		X						X		
SS Geography Standard 1: How to use maps and other geographic representations, tools, and technologies to acquire, process, and report information.	X	X								
SS Geography Standard 4: The Physical and human characteristics of places.				X				X	X	X
SS Geography Standard 6: How culture and experience influence people's perception of places and regions.						X		X		
SS Geography Standard 7: The physical processes that shape the patterns of Earth's surface.				X						X
SS Geography Standard 9: The characteristics, distribution, and migration of human populations on Earth's surface.	X	X						X		

STANDARDS

The Harriman Alaska Expedition Retraced: A Century of Change

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SS Geography Standard 10: The characteristics, distributions, and complexity of Earth's cultural mosaics.		X						X	X	X
SS Geography Standard 11: The patterns and networks of economic interdependence on Earth's surface.								X		X
SS Geography Standard 12: The process, patterns, and functions of human settlement.	X	X						X		
SS Geography Standard 13: How forces of cooperation and conflict among people influence the division and control of Earth's surface.								X	X	
SS Geography Standard 14: How human actions modify the physical environment.						X				X
SS Geography Standard 15: How physical systems affect human systems.										X
SS Geography Standard 16: The changes that occur in the meaning, use, distribution, and importance of resources.						X		X	X	X
SS Geography Standard 17: How to apply geography to interpret the past.		X						X	X	X
SS Geography Standard 18: To apply geography to interpret the present and plan for the future.										X
SS U.S. History 4: Expansion and reform (1801-1861).								X		
SS U.S. History 6: The development of the industrial United States (1870-1900).		X		X	X	X		X		X
SS U.S. History 7: The emergence of modern America (1890-1930).					X	X		X		X
SS U.S. History 10: Contemporary United States (1968 to the present).				X	X	X		X		
SS World History 6: The emergence of the first global age, 1450-1770.								X		
SS World History 7: An age of revolutions, 1750-1914.								X		
SS World History 9: The 20 th Century since 1945: Promises and paradoxes (Optional lesson extension).								X		
SS Contents of Historical Thinking: 3: Historical Analysis and Interpretation.						X				
Technology 1: Basic operations and concepts.	X							X		X
Technology 3: Technology productivity tools.	X							X		
Technology 5: Technology research tools.	X							X	X	
Visual Arts 1: Understanding and applying media, techniques, and processes.					X					
Visual Arts 3: Choosing and evaluating a range of subject matter, symbols, and ideas.				X						
Visual Arts 4: Understanding the visual arts in relation to history and cultures.				X	X					
Visual Arts 5: Reflecting upon and assessing the characteristics and merits of their work and the work of others.				X	X					
Visual Arts 6: Making connections between visual arts and other disciplines.				X	X					



The Alaska Standards for Culturally Responsive Schools can be found on the Web site of the Alaska Native Knowledge Network: <http://www.ankn.uaf.edu/standards/>