# Examining the Westward Movement through a New Lens: The Donner Party 

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When teachers ask upper middle school and high school students what they know about the Westward movement, the students usually draw on their experiences with simulation games. Many students fondly remember engaging in their journeys West through interactive simulations. They recall the purchases made, the dangers and challenges encountered, and the satisfaction of finally reaching their destination. If a journey did not end happily, a student could replay the program by choosing different numbers for the variables and making different choices along the route.
Rather than rely on simulation games or texts to help students understand that era, we advocate moving middle or high school students from a simplistic to a sophisticated view of the Westward movement. By drawing on activities from primary and secondary sources, a teacher can ground the study of that historical period through the integration of data analysis, science, and geography. We believe the integration of interdisci-

[^0]plinary subjects is critical for student learning. In our rapidly changing world, we can no longer afford the luxury of compartmentalized teaching; our students need to appreciate the interconnectedness of knowledge so they can solve the complex problems that they will face.

To move students to a deeper understanding of the westward expansion era, we bring the period to life by studying the Donner party. Why study the Donner party? We believe that students can connect to this group, so surrounded by myth and legend, and have deep empathy with them. As Joseph A. King wrote,

Of the tens of thousands who made the crossing, only a few names are widely known today. Undoubtedly, that is because of the tragedy resulting from their entrapment in the deep snow of the Sierra Nevada, and the publicity given the subsequent events. (1992, xi)

From science, we borrow the learning cycle format. In the first lesson of the unit, students engage in an in-depth analysis of the Donner party during the winter of 1846-47. The students learn to interpret large amounts of raw data to draw their conclusions, thereby integrating social studies with science and mathematics.

Validity of Inquiry-based Instruction
The precedent for using active learning or inquiry-based instruction is well established (Bolick and McGlinn 2004, 198). As Van Sledright further notes,

The common preoccupation with having students commit one fact after another to memory based on history textbook recitations and lectures does little to build capacity to think historically. In fact, studies suggest that these practices actually retard the development of historical thinking. $(2004,232)$

This does not preclude the students from having a solid understanding of information associated with the period. It instead shifts the focus of the lesson from factual recall to a synthesis of information surrounding the facts. As Tomlinson states, historians do not "answer the questions at the end of the chapter" (1999, 32). By exploring resources and evidence from a specific time period, students can "craft an explanation that sticks as close as possible to a preponderance of that evidence" (Van Sledright 2004, 231). Evaluating evidence and forming viable explanations serve as a foundation for inquiry-based learning, which incorporates higher levels of thinking.
Teachers need to ensure that their lessons move to the "understanding of
history as a process of critical inquiry" (Sandwell 2004, 212). Jadallah contends that

> [t]he learning experience must involve students in a process of exploring, analyzing, evaluating, and synthesizing knowledge into a frame of reference that they then use to interpret and understand the new knowledge and continue their learning by building on prior knowledge. $(2000,222)$

These processes lead students to engage directly in the higher-order thinking skills of Bloom's taxonomy.

## Background of the Donner Party

In 1846, a group of pioneers set off from Independence, Missouri, heading west to the Sacramento Valley of California. They were not only leaving their kinsmen behind but also were leaving one country for another, because California was then still part of Mexico. Most of the people in what became known as the Donner party were successful businessmen and farmers and their families. The group consisted of thirteen families and sixteen individuals who pared off from the larger group of emigrants to take "Hastings' Cutoff" route rather than follow the established trail. Taking the untested route resulted in unexpected hardships and delays. The delays trapped the Donner party's eighty-one members in the Sierra Nevada when the extraordinary snowfalls began in October 1846. Some members of the party survived because, in desperation, they resorted to consuming human flesh. Other members, who refrained from that practice, also survived.

## The Lesson

A learning cycle lesson is generally divided into five main parts: engagement, exploration, explanation, expansion, and evaluation. Research about the learning cycle shows that exploration, explanation, expansion, in that order, are critical to the success of a lesson (Lawson, Abraham, and Renner 1989). We describe each part in detail.

## Engagement

To engage the students in the lesson, the teacher begins by showing the first thirty-five minutes of Ric Burns's video, The Donner Party, created for PBS's American Experience. The video segment provides students with a background about migration to the west. It also acquaints the students with members of the Donner party by providing personal histories and descriptions. The histories incorporate primary sources such as family photographs, personal journal entries, correspondence, and newspaper accounts. The teacher stops the video when the heavy snows begin to fall in the Sierra Nevada, thereby effectively trapping the Donner party in two separate camps. The teacher then tells the students that many of the Donner party did not survive the winter.

## Exploration

To begin the exploration phase of the lesson, the teacher gives each group of three or four students a data sheet (see table 1) that contains information about the groups with the names, family association, age, sex, and final condition (lived or died) of the party members following the return of the last rescue team. During the exploration phase, the students' task is to look for patterns in the data. To help guide their exploration, students need to consider the following questions:

- Who lived?
- Who died?
- Did age, gender, or family play a role?

Students need a calculator and paper to begin their data analysis.

The teacher allows sufficient time, at least thirty minutes, for the students to analyze the data and discern patterns. Students may experience some initial frustration because they have not previously encountered such a large amount of data to analyze. Some patterns are not as obvious as others. The teacher needs to monitor the groups' progress and help facilitate whole-class discus-
sion of any difficult areas in the data analysis, which is essential because students can learn much from one another. After the discussion, the small groups return to finish their analysis.

## Explanation

During the explanation phase of the lesson, the students compile their data and present their findings to the class, using either a chart or overhead transparencies. Although overhead transparencies work well, it is often easier for the students to use large sheets of paper to construct a chart. They typically find more than one trend to report and transparencies may smear when many hands contribute to their creation.

After answering the three questions through data analysis, the groups then decide on a format to represent their findings. Means of data presentation can be diverse. If students are technologically savvy and have computer lab access, they can enter data into a spreadsheet and obtain results. Reporting their findings requires that the students to use higher-order thinking skills by making sense of factual knowledge. After making sense of it, they hypothesize why their findings may have occurred.

Following the groups' presentations, the teacher, using class data, leads a whole-group discussion about reasons for the findings. Many factors led to the survival and deaths of people in this pioneer group.

## Teacher Information

The following statistics were derived from the raw data:

- Of the eighty-one who made it to the mountain camps, forty-seven were men and thirty-four were women.
- In the mountain camps, twentyseven men ( 57 percent) and nine women (26 percent) died.
- Mean age of the survivors was seventeen years and of those who died, twenty-five years.
- Median age of survivors was fourteen years and of those who died, twentyfive years.


## TABLE 1. Data for the Members of the Donner Party

| Settler | Gender | Age | Date of death |
| :---: | :---: | :---: | :---: |
| Donner Family |  |  |  |
| Jacob Donner | M | 56 | died in Nov. in Alder Creek camp |
| George Donner | M | 62 | died in Apr. in Alder Creek camp |
| Elizabeth Donner | F | 45 | died in Mar. in Alder Creek camp |
| Tamsen Donner | F | 45 | died in Apr. in Alder Creek camp |
| Elitha Donner | F | 13 |  |
| Solomon Hook | M | 14 |  |
| William Hook | M | 12 | died Feb. 28 with first rescue party |
| Leanna Donner | F | 11 |  |
| George Donner | M | 9 |  |
| Mary Donner | F | 7 |  |
| Frances Donner | F | 6 |  |
| Isaac Donner | M | 5 | died Mar. 7 with second rescue party |
| Georgia Donner | F |  |  |
| Samuel Donner | M |  | died in Apr. in Alder Creek camp |
| Lewis Donner | M |  | died Mar. 7 or 8 in Alder Creek camp |
| Eliza Donner | F | 3 |  |
| Murphy-Foster-Pike Family |  |  |  |
| Levinah Murphy | F | 36 | died around Mar. 19 in Lake camp |
| William Foster | M | 30 |  |
| William Pike | M | 32 | died Oct. 20 by accidental gunshot |
| Sarah Murphy Foster | F | 19 |  |
| Harriet Murphy Pike | F | 18 |  |
| John Landrum Murphy | M | 16 | died Jan. 31 in Lake camp |
| Mary Murphy | F | 14 |  |
| Lemuel Murphy | M | 12 | died Dec. 27 with snowshoers |
| William Murphy | M | 10 |  |
| Simon Murphy | M | 8 |  |
| Naomi Pike | F | 2 |  |
| George Foster | M | 1 | died in early Mar. in Lake camp |
| Catherine Pike | F | 1 | died Feb. 20 in Lake camp |
| Graves-Fosdick Family |  |  |  |
| Franklin Graves | M | 57 | died Dec. 24 with snowshoers |
| Elizabeth Graves | F | 45 | died Mar. 8 with second rescue team |
| Jay Fosdick | M | 23 | died Jan. 5 with snowshoers |
| Sarah Fosdick | F | 21 |  |
| Mary Graves | F | 19 |  |
| William Graves | M | 17 |  |
| Eleanor Graves | F | 14 |  |
| Lovina Graves | F | 12 |  |
| Nancy Graves | F | 9 |  |
| Jonathan Graves | M |  |  |
| Franklin Graves, Jr. | M | 5 | died Mar. 8 with second rescue team |
| Elizabeth Graves | F | 1 |  |
| Breen Family |  |  |  |
| Patrick Breen | M | 51 |  |
| Margaret Breen | F | 40 |  |
| John Breen | M | 14 |  |
| Edward Breen | M | 13 |  |
| Patrick Breen, Jr. | M | 9 |  |
| Simon Breen | M | 8 |  |
| James Breen | M | 5 |  |
| Peter Breen | M | 3 |  |
| Isabella Breen | F | 1 |  |
| Reed Family |  |  |  |
| Sarah Keyes | F | 70 | Died before reaching California |
| James Reed | M | 45 |  |

- Of those five years old and under, seven lived and twelve died.
- Of those between ages six and fifteen, twenty lived and three died.
- Of those between ages sixteen and thirty, thirteen lived and fifteen died.
- Of those older than thirty, six lived and ten died.
- Of nineteen adult men without families, three died on the trail and thirteen died in the mountains (or 84 percent perished).
- Of those with a family affiliation, 62 percent survived.

Two-thirds of the men died, whereas only one-third of the women died. Those with family affiliation survived at higher rates; only three who were traveling alone lived. The very young and the elderly did not survive, regardless of gender or family affiliation.

Although a number of factors led to survival, key among them are the physiological differences between men and women, the division of labor between the men and women, physical strength of the very young and very old, and the early rationing of food among the various families by the women of the families. Toward the end of the period, all families existed on boiled hides, and some also resorted to cannibalism.

## Expansion

Following the first lesson, which may take more than one class period, the teacher can fit in other topics with this study of the Westward movement. Students might study the physiology of men and women to verify their understanding of why more women than men survived. They might study the geography of the Donner route to California, establishing the party's starting point. Blank maps of the United States west of the Mississippi River, relief maps of the Western United States, topographic maps of the Sierra Nevada, photographs showing the east and west sides of the Sierra Nevada, Ric Burns' The Donner Party documentary, or the Gagliasson and Borgnine The Donner Party documentary are excellent resource materials for tracing the route and viewing the

TABLE 1. (Continued)

| Settler | Gender | Age | Date of death |
| :---: | :---: | :---: | :---: |
| Reed Family (continued) |  |  |  |
| Margaret Reed | F | 32 |  |
| Virginia Reed | F | 13 |  |
| Martha (Patty) Reed | F |  |  |
| James Reed, Jr. | M | 6 |  |
| Thomas Reed | M | 4 |  |
| Eddy Family |  |  |  |
| William Eddy | M | 28 |  |
| Eleanor Eddy | F | 25 | died Feb. 7 in Lake camp |
| James Eddy | M | 3 | died in early Mar. in Lake camp |
| Margaret Eddy | F | 1 | died Feb. 4 in Lake camp |
| Keseberg Family |  |  |  |
| Lewis Keseberg | M | 32 |  |
| Phillipine Keseberg | F | 23 |  |
| Ada Keseberg | F | 3 | died Feb. 24 with first rescue team |
| Lewis Keseberg, Jr. | M | 1 | died Jan. 24 in Lake camp |
| McCutchen Family |  |  |  |
| William McCutchen | M | 30 |  |
| Amanda McCutchen | F | 25 |  |
| Harriet McCutchen | F | 1 | died Feb. 2 in Lake camp |
| Williams Family |  |  |  |
| Eliza Williams | F | 31 | Sister of Baylis |
| Baylis Williams | M | 25 | died Dec. 16 in Lake camp |
| Wolfinger Family |  |  |  |
| Mr. Wolfinger | M | $?$ | killed around Oct. 13 by Reinhardt and Spitzer |
| (Doris?) Wolfinger | F | 20 |  |
| Unrelated Individuals |  |  |  |
| Mr. Hardkoop | M | 60 | died around Oct. 8; abandoned by Lewis Keseberg |
| Patrick Dolan | M | 35 | died Dec. 25 with snowshoers |
| Charles Stanton | M | 35 | died around Dec. 21 with snowshoers |
| Charles Burger | M | 30 | died Dec. 29 in Lake camp |
| Joseph Reinhardt | M | 30 | died in Nov. or early Dec. in Alder Creek camp |
| Augustus Spitzer | M | 30 | died Feb. 7 in Lake camp |
| John Denton | M | 30 | died Feb. 24 with first rescue team |
| Milford (Milt) Elliot | M | 28 | died Feb. 9 in Lake camp |
| Luke Halloran | M | 25 | died Aug. 29 of tuberculosis |
| William Herron | M | 27 |  |
| Samuel Shoemaker | M | 25 | died in Nov. or early Dec. in Alder Creek camp |
| James Smith | M | 25 | died in Nov. or early Dec. in Alder Creek camp |
| John Snyder | M | 25 | killed Oct. 5 by James Reed |
| Jean Baptiste Trudeau | M | 16 |  |
| Antonio | M | 23 | died Dec. Lake camp |
| Noah James | M | 16 |  |
| Luis | M | ? | Killed by William Foster |
| Salvador | M | ? | Killed by William Foster |

*Data available from many sources including: Dan Rosen's Web site: http://members.aol.com/ danmrosen/donner/survivor.htm; Jared Diamond's "Living through the Donner Party."
actual area. The teacher can provide the students with a list of points to plot on their blank maps to recreate the pioneer party's route. Students need to pay close
attention to the location of Hastings, Cutoff, the Wasatch Mountains, the Great Salt Lake, the Great Basin Desert, the Humboldt and Truckee rivers, and
the pass through the Sierra Nevada near Truckee and Donner lakes.

## Additional Expansion Ideas

Other possible areas of expansion and application for a study of the Westward movement include the following:

Sociology and history. Why were the group's members moving west? Why did they go all the way to California? Who moved west? What did it take to make the move west? How did they decide which way to go? How were wagon parties organized?

Geography and meteorology. Why did Hastings' Cutoff have such an effect on the Donner party's travel? Why would it have been difficult for them to pass over the mountains? Why does it snow so much in the Sierra Nevada? Why is it so dry east of the Sierra Nevada? What route would today's students take if they were leading a pioneer party?

Biology. What foods were typical for the pioneers? Compare their diet to a modern balanced diet. How did the pioneers preserve their food? What are calories? How many calories are needed each day for an average adult man, adult woman, or a child? What is metabolism? How does it differ in men and women? Could that difference have played a role in the Donner party? What role did the cold weather and altitude play in survival?

Language arts. The teacher has the students read the diary of Patrick Breen and the letters of Tamsen Donner. They then compare and contrast those with journals of other pioneers heading west.

## Evaluation

Teachers may choose to evaluate each phase of the Westward movement lessons separately or with a culminating project for the unit. Because we chose to focus specifically on the initial data analysis lesson, we provide a rubric in figure 1 that teachers can use to evaluate student work. The rubric can be modified to fit each teacher's expectations.

| 1 | 2 | 3 |
| :--- | :--- | :--- |
| Students calculate only <br> one or two statistics <br> from the data sheets | Students calculate <br> some statistics from the <br> data sheets | Students calculate <br> many statistics from the <br> data sheets |
| Students use data to <br> support only one argu- <br> ment about why Don- <br> ner party members sur- <br> vived or died | Students use data to <br> support two or three <br> arguments about why <br> Donner party members <br> survived or died | Students use data to <br> support multiple argu- <br> ments about why Don- <br> ner party members sur- <br> vived or died |
| Graphs show little or <br> no student understand- <br> ing of graphing princi- <br> ples | Graphs show some stu- <br> dent understanding of <br> graphing principles | Graphs show clear stu- <br> dent understanding of <br> graphing principles |
| Chart is difficult to <br> read | Chart is generally read- <br> able | Chart is easy to read |
| Chart is messy | Chart shows some <br> attention to design <br> details | Chart is well designed <br> with attention to details <br> and design elements |

> 1 = Inadequate progress
> $2=$ Adequate progress
> $3=$ Excellent progress

FIGURE 1. Surviving the Donner party grading rubric.

We suggest that the student groups and the teacher evaluate each product. That gives students an opportunity to reflect actively on the quality of their work rather than to accept the teacher's scores passively. Giving students opportunities to be responsible for their learning is important. Having students articulate their justifications for their scores helps ensure student responsibility in the learning process.

## Summary

Providing students with the opportunity to engage in well-defined, active learning opportunities helps increase their understanding. In these lessons, the integration of social studies with other disciplines serves students well. Our proposal to study the Westward movement with the Donner party as the focus challenges and excites the students.

Actively involving students with real data helps them draw meaningful conclusions about the Westward movement so that they gain a realistic understanding about this era. Like Gary Paulsen's Brian, the students will move from the idea of learning as "simply getting by, trying to learn just enough to pass the tests and never really knowing anything" $(2003,9)$ to developing a "great thirst to understand, to know" (10).

Key words: active learning, the Donner party, integrating social studies with science, using raw data

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