Cereal Box Dioramas of Native American Cultures: 
A Collaborative Project

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A social studies methods instructor and college students collaborated with an elementary teacher and fifth grade students to produce exciting cereal box dioramas of Native American cultures from different parts of the United States. The dioramas were constructed of a cereal box with a model of a historic Native American home on the front. The box was cut to open like a book to reveal the inside of the home and a ceremonial scene. The back and sides of the box featured crafts, clothing, food, transportation, or other information. Seven steps were implemented to guide this project-based learning experience. 1) Project’s goal: to engage students in active, meaningful learning, integrated with art, challenging in complexity and three-dimensional spatial reasoning, while addressing the values of Native Americans. 2) Involve students in researching and illustrating, “What were the lives of Native Americans like?” 3) Plan assessment of student research notebooks. 4) Plan assessment of final project’s required components. 5) Map how the project will unfold. 6) Respond to the challenge of making a three-dimensional model by providing examples and assistance. 7) Manage the project through collaboration between pre-service teachers and elementary students along with involvement of other school personnel.

Key words: dioramas, elementary students, Native Americans, culture, pre-service teachers, project-based learning, social studies methods

Introduction

Fifty people filled the large classroom, but only a few quiet voices could be heard. The six groups of pre-service teachers and fifth graders sat around tables or desks, totally occupied with their work. No one looked to another group with jealous eyes to see what they were constructing. Every student was contentedly engaged in completing the crafts for his or her Native American diorama with the help of pre-service teachers. This work continued for an hour without disruption.

Dioramas are an effective way of involving students in active social studies learning. Gary Fertig (2005) demonstrated how fourth graders could become motivated to study the often dry topics of pioneer land ordinances, homestead laws, and the politics of government land policies through the production of authentic homestead dioramas, along with constructing related letters and documents. Similarly, Paula Dambrauskas (1999) reported sixth graders honed observation skills, learned historical research skills, and developed an appreciation for community members’ contributions through the construction of historic town buildings during a local history unit.
These project-based activities promoted application of higher-order thinking skills, rather than mere memorization of facts. They also integrated art. “Art is at the heart of the diorama experience,” reported Maura Flannery (1998, p. 381) in her discussion of the history of museum dioramas. Creating scenes that are pleasing to the eye while being true to life and choosing materials that simulate reality, are artistic endeavors. Incorporating ways to peek behind the scenes through cutaway windows or doors that open adds to the interest and spatial complexity of the task.

Although standardized tests have their role in student assessment, paper and pencil examinations do not address many internal factors, such as creativity and persistence, which lead to success (Hoerr, 2008-2009). Students should be allowed to construct images, diagrams, and dioramas to show what they know in more creative ways that address multiple intelligence areas. Jennifer Nastu (2009) advocates project-based learning because of its positive effects on student motivation and the deeper levels of thinking accessed by students as they answer their own questions, analyze what they have found, and make connections. In this article, we present a diorama project focused on Native American cultures. Our unique dioramas (See figures 1-5) were made from cereal boxes, recycled cardboard, copy paper, and glue that were decorated with acrylic paints, images, and crafts. Not only did students research information about Native Americans through this project, they also learned spatial construction along with other art skills and gained experience in task commitment with a complex, long-term project. Project-based learning, though student-centered and somewhat fluid, is not without structure. Seven steps (Buck Institute for Education, 2009a) were implemented in the exciting cereal box dioramas we present here. See the Buck Institute for Education (2009b), the George Lucas Educational Foundation (2009), Global SchoolNet (2000), and Johnson and Lamb (2007) for additional information on project-based learning.

Figure 1. Selection of fifth graders’ finished dioramas on display in the school library.

Figure 2. Exterior of Seminole chickee.
Steps in Diorama Project Implementation

Beginning with the End in Mind

This project was a collaboration between a college professor teaching social studies methods, her three college classes of pre-service teachers, a fifth grade teacher, the school’s special education and enrichment specialist, a graduate student interested in project-based learning, and 23 fifth grade students. We had several goals for this endeavor. We wanted to develop a creative, hands-on project that would involve fifth graders in finding and applying information about the culture and lifestyles of historic Native Americans from different regions of the country, part of the school’s fifth grade social studies curriculum that addressed the National Council for the Social Studies (NCSS, 1994) thematic strand of Culture. We wanted to involve pre-service teachers in a
complex project to give them experience in teaching powerful social studies lessons that were active and hands-on, meaningful to students, integrated with art, challenging in complexity and three-dimensional spatial reasoning, and which addressed the values of Native Americans (NCSS, 1994). Finally, we wanted the work to be an enriching and successful experience for all students in this diverse elementary class of students with a broad range of abilities. We decided that the end product would be a cereal-box diorama portraying three-dimensional elements from the culture of a chosen group of native North American people.

Driving Question

Our key question was, “What were the lives of Native Americans like?” After reading in their textbooks about Native American groups from different regions, students chose one of five groups (Iroquois, Seminole, Plains, Hopi/Navajo, and Haida) on which to focus. They began by exploring books and websites to find information about the lifestyles of their people. We asked them to locate information about the environment (climate, landscape, flora, and fauna), housing, food, clothing, religious beliefs, ceremonies, and handcrafts of their people.

Initial Assessment Planning

The fifth grade teacher designed special notebooks for students to record the facts they found. Students also gave short group presentations to the class on the people they researched. Both of these activities were graded and occurred before the pre-service teachers became involved with the elementary students. These activities provided a knowledge foundation for the fifth graders, which was helpful in their future work with pre-service teachers in furnishing and completing the dioramas.

Final Product Assessment

We decided that students would individually produce an elaborate diorama made from a cereal box that portrayed a three-dimensional model of Native American housing on the front, and opened like a book to reveal the inside of the dwelling and a ceremonial scene with an explanation. A student-made reproduction of a Native American handcraft such as a miniature sand painting, a beaded item, or textile, was to be placed on the back with information about food and clothing on the remaining smaller sides of the box. The diorama structure was constructed by cutting a typical cereal box to open like a book and adding cardboard “shelves” inside to keep the cover from falling inward (See Figures 6 and 7), and as a place to glue an explanation of the ceremony that would be depicted in the recessed area. A small three-dimensional model of the house was made with cardboard. Its outline was traced on the cover, and then cut out so that after attachment, the inside of the house could be viewed by opening the front cover. Every surface was covered with a form of papier-mâché consisting of torn white copy paper pieces attached with white craft glue. The diorama was then coated with white gesso and parts were painted with acrylic paint. Finally, the diorama was decorated with glued-on images, crafts, and explanations to show all of the required features. This final product was made with the help of pre-service teachers from the social studies methods classes. Students who completed all required parts of the diorama were considered to have satisfied the criteria for acceptable completion of the product.

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Figure 6. Iroquois longhouse interior and false face dance healing ceremony.

Figure 7. Haida home interior and totem pole raising ceremony.
Mapping the Project

As a trial idea, the college professor made several prototype dioramas of Native American groups from the Midwest including an earth lodge of the Mandan people, a reed-covered wigwam of the Ioway people, and a bark-covered wickiup of the Meskwaki people. She brought her diorama models and discussed the project with the classroom teacher and special education enrichment specialist. After they agreed the idea showed promise, the possible project (along with example cereal box dioramas of Midwest groups) was presented to fifth graders to determine their interest level in this sort of project. Students were unanimous in wanting to make their own elaborate cereal box dioramas and were excited to begin.

The classroom teacher scaffolded teaching of research skills so that students would be successful in locating and processing information about their chosen Native American group. She used “The Big Six Skills” approach of Mike Eisenberg and Bob Berkowitz (1990, 1997) to structure the students’ work in locating and processing information. First, she defined the task by telling students they were going to locate information for making a group presentation about their Native American group. The class brainstormed a list of possible resources (library books, student-owned books, internet sites, encyclopedia, magazines, travel brochures) during the next information-seeking phase. During the location and access step, the school librarian brought a large number of books to the classroom. Students visited the computer lab where they researched and printed pertinent information. To build skills for use of information, the teacher reviewed how to scan for information, determine main ideas, and write ideas in one’s own words. During the fifth step, synthesis, students recorded ideas in the teacher-made notebooks, planned their class presentations, and discussed how they might apply this knowledge to a diorama.

During the last step, they used a rubric to self-evaluate their presentations; the classroom teacher used the same rubric to evaluate their work, and discussed the similarities and differences between student and teacher perspectives with each student individually.

The college professor and special education/enrichment specialist worked with small groups of students (while the teacher taught the rest of the class) to help them construct the basic diorama house and cereal box structures, cover them with white copy paper, and paint them so that they would be ready for the next stages. This process occurred as schedules permitted over several months during the fall.

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During the following spring semester, pre-service teachers began their involvement. To better understand the diorama process, each preservice teacher made a complete Native American cereal box diorama of his/her own. Each of the three sections of social studies methods classes was divided into five equal groups of pre-service teachers, with each group focusing on one of the five Native American cultures. In this way, when pre-service teachers of the various sections visited the fifth grade classroom, they were evenly distributed among and easily integrated with the five groups. The instructor asked pre-service teachers to research information about the foods, crafts, housing, clothing, transportation, beliefs, and ceremonies of their chosen Native American group for homework. She checked out several library books about each culture and brought them to class as resources to use during planning sessions. Each group reported what they had found and suggested items or images that might be used in the dioramas. The instructor also provided dollhouse and general craft books as resources. One of the methods class discussions centered on how specific information might be transformed into a simple craft (perhaps something made of felt, craft foam, fabric, twigs, or beads) that fifth graders might construct. The instructor emphasized that the items offered to fifth graders needed to include choices (some items to use and others to exclude, various colors, assorted arrangements, different ways of decorating) and ways to incorporate input or additional items supplied by the elementary students. Many images were made with clipart, or drawn in PowerPoint and printed in color to be cut out and applied later with glue.

Each of the three methods classes was assigned a different part of the diorama project to work on with the fifth graders. One section of social studies methods students devised ways to decorate the exterior and furnish the interior of the miniature homes authentically, another planned how to create a three-dimensional ceremony scene and a side panel about food, and the third section constructed reproductions of Native American crafts for the back surface using common materials, with another side panel describing clothing. All groups of pre-service teachers were also responsible for finding a legend or creation myth of the people, and preparing to tell it orally to the fifth graders. Storytelling of the myths was practiced during their methods class so that everyone benefitted from learning this new cultural information. Each class of pre-service teachers had a one-hour work session with the fifth graders and planned their work so that each session resulted in the completion of the assigned parts. See Figures 8 and 9 for images of preservice teachers working with fifth graders.

Unfortunately, because of tight scheduling, each class section of pre-service teachers had only a single session with the fifth graders (resulting in a total of three hours of contact time between the fifth graders and the three different classes of pre-service teachers). The methods instructor had interacted with the fifth graders the previous semester and knew the progress they had made on their research into Native American cultures. She conveyed this information to the pre-service teachers they presented their research findings on Native American cultures. She conveyed this information to the pre-service teachers they presented their research findings on Native American cultures.
American lifestyles to the rest of their methods class. Therefore, pre-service teachers not only knew what they had researched, but also information the children had generated. To smooth the transition and help pre-service teachers and fifth graders become acquainted, each lesson began with pre-service teachers asking the elementary students what they knew about their Native American group. They reviewed key information about the environment in which the people lived and made connections to aspects of their culture. Then the pre-service teachers presented new information along with the plans for items they had designed, helping students place images, construct objects, and glue on explanations to represent the content they had learned through the diorama. For example, students applied Hopi designs with a marker to miniature pottery jars, constructed a ladder from craft sticks, drew and cut out felt heads and strung necklaces for them, cut out geometric designs from felt for a simulated Chilkat blanket, and made a simulated symmetrical sand painting on sandpaper with colored sand and powdered spices. Pre-service teachers ended their work sessions by telling and discussing a legend of their people. Figures 10-15 show students working on their cereal box dioramas.

**Responding to Challenges**

The construction of a three-dimensional diorama was a challenge to pre-service teachers. Only about half of them had ever made a diorama before, and those persons had just decorated a shoebox with a backdrop and a few objects in the foreground — usually plastic animals. Therefore, the pre-service teachers needed explicit instructions in creating the basic structure. The college professor provided step-by-step directions illustrated with photographs for pre-service teachers to follow in creating their basic diorama structures. Pre-service teachers made their own individual dioramas to experience the challenges of con-
structing them firsthand, and also to have a record of their work for the future classroom teaching. As part of this work, they created copyright-free images to be used in the diorama with elementary students and step-by-step instructions for furnishing/decorating the dioramas (See Rule & Lindell, 2009). Much productive discussion occurred as pre-service teachers talked about the difficult aspects of what they were trying to make and suggested ways of improving the process.

Management and Evaluation of the Project

The implementation of this project benefited greatly from many instructors working together with small groups of children. In this way, instruction was individualized to meet students’ needs. The small group “hands on” activities allowed for casual conversations between students and adults that resulted in building new relationships. The social nature of the interactions also allowed students to focus on their own efforts and virtually eliminated any comparisons of student work. Each student, regardless of skill level or perceived creativity, was able to be actively engaged, develop an increased understanding of other cultures, and experience a considerable level of accomplishment. The construction of these dioramas was an excellent example of how an enrichment activity can motivate one set of students who may lack interest in a subject, while at the same time inspiring others who thrive on the challenge of digging deeply into a subject.

Fifth graders shared their final dioramas with the class, explaining what they had learned about the lifestyles and cultural values of their group of Native Americans. Many students were able to construct generalizations related to the project. Generalizations connect two or more concepts and are among the most useful and powerful ideas in social studies education (Schwab, 1974). For example, the students researching the Seminole people

Figure 12. Navajo style sand painting.

Figure 13. Student cutting out components.
remarked on how different chickee housing with no walls, so that the warm breezes could penetrate the interior, was from their own continental climate Iowa homes. Those studying the Haida mentioned how those people needed accurate ways of determining the dates of salmon runs so that they would embark on fishing expeditions at the optimal time. Many groups also made connections between native people’s names and sport team names, noting how athletic teams wished to emphasize their bravery and physical fitness.

Some comments from fifth graders after completion of the project included:

*I thought this project was really interesting .... I found it really fun to compare and contrast different facts and information from the internet or books. I also consider myself a very artsy person, so the crafty part of the project was really cool! I actually learned a lot of interesting information that I didn’t already know.*

*The thing I liked about the project most was putting the stuff inside the diorama. I liked this because it was fun seeing and decorating it. It was also fun seeing the projects at the end because they looked really neat! I learned tons about the Lakota Native Americans; specifically their celebrations and ceremonies.*

These dioramas were then put on display in the school library for other students to enjoy. The librarian reported that many middle school students admired the projects and were inspired by the work the fifth graders had done. Parents also saw them during parent conferences. They remarked how this was one school project that would not be discarded, but treasured for its charm, detail, and valuable information.

Pre-service teachers reported satisfaction with their work with the elementary students.

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and the dioramas. On a project reflection gathered by the graduate student who was assisting on this project, several observed:

I can tell that students have learned a lot about Native Americans from this project. It incorporated hands-on and group work because each student had a separate part of the heritage to look up. It was worked on over time so that students had time to complete each step.

I realized how much fun it was to learn about another culture and their history. The learning process provided time for reflection and research on what we were to do. I also think that the many steps of making the houses provided the fifth grade students and teacher candidates a means to demonstrate the multiple intelligences we all possess. For example, constructing the house involves spatial intelligence and decorating the house with art involves artistic intelligence.

I learned how much information could be presented in this project. It would be a great activity in any class. It allows them to learn while creating art rather than writing a report or doing worksheets. This project could take the place of one of those tedious activities.

Students enjoy working on a project that is long-term and involved. I should not be hesitant to make lesson plans that are longer term and allow for students to create finished projects that summarize their learning instead of a paper or oral report.

Conclusion

A well-planned and purposeful enrichment activity such as the one outlined in this article can have multiple outcomes for a variety of audiences. Classroom teachers are constantly looking for meaningful ways to engage and challenge students who are advanced and at times not challenged by the general curriculum. Dioramas are excellent tools that promote students’ use of higher order thinking skills to investigate and present information. Likewise, teachers are often seeking creative ways to provide information to students who may not learn or gather information in traditional ways; the hands-on and “no limits” approach offered by this type of investigation gives those students a more interactive way to participate and learn. The adults (including parents) who participate or observe the outcomes of such an activity are almost always amazed with the product and reminded that there are multiple ways to assess a student’s knowledge and potential.

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