Pre-1500
Schultz Site: Beginnings of Pottery in Nebraska

Written by archaeologist Damita Hiemstra, edited by Lonnie Moore and Karen Graff. Based on information about the Schultz Site found in Woodland-like Manifestations in Nebraska, by A.T. Hill and Martin Kivett, published in 1940 by the Nebraska State Historical Society. Created with the support of the Cooper Foundation of Lincoln, Nebraska.

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nebraska studies.org
activity

Discussion

Have students read the Schultz Site section on the Sites Reveal Changing Ways page on the Nebraska Studies site.

http://nebraskastudies.org/pre-1500/sites-reveal-changing-ways/

Then, have students examine and discuss the readings, visual evidence, and comprehension questions found on the following pages.

Social Studies Standards: SS 4.3.1; SS 4.3.2; SS 4.3.3; SS 4.3.4; SS 4.3.5; SS 4.4.2; SS 4.4.3; SS 4.4.4 | SS 8.3.2; SS 8.3.3
Schultz Site: Beginnings of Pottery in Nebraska (CE 1-500)

The Schultz Site is on the north bank of Mira Creek in the North Loop River drainage. It is the largest Plains Middle Woodland site in Nebraska. People lived at the Schultz site sometime between CE 1 and CE 500. During this period the use of pottery was just beginning, along with many other changes to prehistoric life for Nebraskans. Many early types of pottery and other tools were studied to learn more about these people.

Stone and pottery objects are not the only clues we have to this time period. Archaeologists found the impressions of Plains Middle Woodland houses along with storage and trash pits. By studying the shape, size and construction of the houses, we can form a picture of what the site looked like to Native Americans 1,500 years ago!

Residents of the Schultz site did not live alone on the land. They made contact with other Native American groups from places like the Ohio and Mississippi valleys. They traded for items that were not available locally. The trade network beginning at this time continued for hundreds of years, linking the people of Nebraska with groups all across the United States.

The Schultz Site is very important to archaeologists, because we can learn how ancient people traded with each other, and how a new technology like pottery changed their lives. Using the information in this lesson will let you see all of the things archaeologists have learned about the Plains Middle Woodland period and about the people who once lived in Nebraska.

Excavators uncovering a house floor in 1939.

Unless otherwise noted, images throughout this lesson are Courtesy of the Nebraska State Historical Society. The objects photographed for this lesson are from the collections of the Nebraska State Historical Society.
The Schultz Site is one of the earliest sites in Nebraska where pottery was being made. Native Americans used pots for cooking and storing meat, plants, roots and seeds. As seen in Drawing 1, pots were sometimes placed directly in a fire to cook food. Other times rocks were heated in a fire until they were extremely hot and dropped directly into the pot to cook the food!

Think about containers you use every day, like plates, bowls and glasses. Pots come in many different shapes, sizes and styles. Some have handles and some don’t. Some are decorated, while others are plain. What could very small pots be used for? What could very large pots be used for? How would different shapes of bowls determine how they were used? What could decoration on pots tell us?
Activity Grade Level 4 8

Setting the Stage: Historical Context

■ activity

Discussion

Have students read the First Farmers section on the Nebraska Studies site.

http://nebraskastudies.org/pre-1500/first-farmers/

Then, have students examine and discuss the reading and comprehension questions found on the following page.

Social Studies Standards: SS 4.3.1; SS 4.3.2; SS 4.3.3; SS 4.3.4; SS 4.3.5; SS 4.4.2; SS 4.4.3; SS 4.4.4 | SS 8.3.2; SS 8.3.3
Setting the Stage: Historical Context

The Plains Middle Woodland time period in Nebraska is a period of technological change in how Native Americans lived their lives. Pottery was just one of these innovations and was utilized in part due to the increased dependence on plants and seeds. In the periods before the Plains Middle Woodland, ancient Nebraskans did not camp in one area for long periods of time. However, in this time period between CE 1 and CE 500, people began to live in one area for the summer and in one area for the winter. Their summer houses were located in areas where many supplies could be found and gathered. Larger streams or rivers supplied many of these needs including fish, clams, small mammals, birds, and the larger mammals that came to drink at the water such as bison, deer, and antelope.

These areas around streams were also a good place for plants to grow. People were just beginning to help plants grow, deliberately spreading the largest seeds around to help the next year’s plants to be stronger and bigger. This was the very first form of agriculture! The plants that ancient Nebraskans used were goosefoot, marsh elder, and sunflowers, all of which still grow in Nebraska today.

Since people only moved once or twice a year, they were able to have more belongings. Many of these items were left behind at the site when the people moved from their summer homes to go to their winter homes. Archaeologists find these items along with the places where houses, storage pits for food, and trash pits existed. Studying all of these things gives us a good picture of what life was like during this time period.

Further Questions:
1. Look up images of the plants ancient Nebraskans once used. Do you recognize any of them? Can you find out what parts of the plants ancient Nebraskans used?
2. Examine the graphics on the Central Plains Villages page of Nebraska Studies: http://nebraskastudies.org/pre-1500/first-farmers/central-plains-villages/
   Notice how farming has played a role in Nebraska, even this long ago. Discuss how rivers and streams affected farming and population.
Locating the Site

activity
Maps

Have students read the Schultz Site section on the Sites Reveal Changing Ways page on the Nebraska Studies site.

http://nebraskastudies.org/pre-1500/sites-reveal-changing-ways/

Then, have students examine the maps of the Schultz Site found on the following pages, and answer the questions.

Social Studies Standards: SS 4.3.1; SS 4.3.2; SS 4.3.3; SS 4.3.4; SS 4.3.5; SS 4.4.2; SS 4.4.3; SS 4.4.4 | SS 8.3.2; SS 8.3.3
Locating the Site

Map 1a: Schultz Site Location
(The Schultz Site is marked with a red triangle labeled 25VY1)

Map 1b: All Woodland Time Period Sites in Nebraska

Questions for Maps 1a and 1b
1. Can you find the Schultz site on the map?
2. Look at the position of all the sites from this time period. What do most of them have in common?
3. Using the scale in the lower left corner, how many sites lie within 25 miles of the Schultz site?
4. Count how many sites from this time period are found in Nebraska. Do you think this is a large amount or a small amount of places people lived. Why? (Remember how big the state is!)
When Native Americans lived in one area for a long time, the earthen floors of their homes was packed down where they walked over and over. This packed soil is a different color than the soil around the houses and archaeologists call these darker, stained living areas “features.” In the map above, the circles represent different features that were found at the Schultz Site. The letter “F” on the map means “Feature.”

Questions for Map 2
1. Find Feature 12 on the map. It is labeled “F12.” What is Feature 12’s diameter?
2. How far from the edge of Feature 12 is Feature 14? In which direction do you have to go to travel from Feature 9 to Feature 13?
3. Features 9 and 12 are very similar. Based on their size, what do you think these features are?
Map 3: Features found at the Schultz Site: Part 2

Questions for Map 3

1. How many shelters are at this site?
2. How many fire pits can you find?
3. If the total number of features is 32, what percentage of features is made up of storage/trash pits?
4. Do you think all of the shelters were used at the same time? Why or why not? Hint: How close would you want your neighbors to be to your house or storage pits?
Determining the Facts

**activity**

**Discussion**

Have students read the Schultz Site section on the Sites Reveal Changing Ways page on the Nebraska Studies site.

http://nebraskastudies.org/pre-1500/sites-reveal-changing-ways/

Then, have students read the supplementary materials on the following pages, and answer the questions.

**Social Studies Standards:** SS 4.3.1; SS 4.3.2; SS 4.3.3; SS 4.3.4; SS 4.3.5; SS 4.4.2; SS 4.4.3; SS 4.4.4 | SS 8.3.2; SS 8.3.3
Determining the Facts

Student Reading #1: Life at a Plains Middle Woodland Site (CE 1 - CE 500)

Before Europeans came to this country, Native Americans lived in Nebraska. Their way of life developed over thousands of years. Ancient people roamed around as nomads for much of that time, but beginning around CE 1, people began to remain in areas around rivers longer and to move only once or twice a year.

They would have different places to camp during the winter and in the summer. In the winter, they would have needed a place that was sheltered from the bad weather. The summer months were spent gathering supplies from all over the land. Their summer houses were found along a river because fish, birds, trees, plants, animals and trees could all be found there. Since they remained in one place for longer, their houses needed to be more durable.

A shallow pit was dug into the ground for the structure. This is commonly referred to as the house’s “footprint.” Next, poles were set along the outside. If the house wasn’t covered in animal skins, smaller poles and branches were used to fill in the walls and then covered with mud to seal the walls up. This kind of construction is called wattle and daub. The wattle refers to the woven branches and the daub refers to the clay mortar used for sealing. This construction protected the interior of the house from the weather. At the Schultz site, archaeologists recovered no evidence of a wattle and daub construction, so the houses were believed to have been covered by animal skins, bark or matting.

During this time period, a house was usually 6 to 23 feet (or 2 to 7 meters) across. Houses were circular or oval in shape. A house usually held only one family, with small groups of people living near each other at one site. Smaller group sizes were useful so there was plenty of food to go around. Some of the houses in the Plains Woodland time period had a central hearth or firepit in the center of the house. Storage and refuse pits were located in and around the homes and some still contain evidence of what was placed in side of them 1,500 years ago!

Summer homes were only one part of Plains Middle Woodland life. Just as we go to visit people in other towns, the Native Americans visited with other groups that moved through the area. These other groups traveled in similar patterns, but covered different territory. When two groups met each other they traded tools, animal hides, pots, and food.

Trading between groups was useful for many reasons. First the groups were able to trade for items they couldn’t find in their own territory, like special, high quality stone for making tools or furs from animals that didn’t live nearby. Second, by meeting up with other groups traveling, news could be shared like where the bison herds were running or where a good place to find fresh water was. Third, trade was good at keeping up friendships between groups. Think about your friends. Do you trade anything with them?

Comprehension Questions for Student Reading #1:

1. How large were the houses in the Plains Middle Woodland time?
2. From the reading we know that the houses were circular or oval in shape. Why do you think they were rounded instead of square? What are some of the advantages or disadvantages of a round house?
3. Houses were either covered in animal skins or wattle and daub. Which would you have used? Why?
4. Trading with other groups of people was very important. Do you remember the reasons why?
Student Reading #2: The Schultz Site Artifacts: What Do We Know?

At the Schultz Site, daily life was filled with many activities. Hunting, gathering plants, and fishing in the river were just the beginning. Each activity required special tools made by the Plains Middle Woodland people. These tools tell us what activities were happening 1,500 years ago.

We need tools to do many activities, even today. We can’t play baseball without a bat and a ball. To go fishing, we need a fishing pole, a hook and a net. We can purchase these tools from a store. Native Americans had no stores, so they had to make everything they needed.

To hunt bison, antelope and deer, Native Americans used two different weapons. The first is an atlatl (pronounced (at-lattle). An atlatl is a special stick that can help throw a spear farther than just by hand. This helped the hunters stay safely away from the animals they hunted so they wouldn’t get trampled. The second weapon the Plains Woodland people used is the bow and arrow. The bow and arrow was a lot lighter to carry than the heavier spears and the bow and arrow was more accurate to shoot. Both of these weapons were used depending on the animal and the terrain in which the Native Americans were hunting.

When the animals were killed, stone knives were used to cut the meat and remove the skin to be used for clothing and shelter. Stone scrapers were used to remove all the remaining flesh from the hide and make it smooth and clean. Small stone drills were used to make holes in the hide for easy sewing. All of these tools were used regularly and many were found used and broken at the Schultz Site, telling archaeologists that hunting was a part of daily life at this site.

Hunting was not the only activity that took place here. Gathering plants and seeds was just as important and required a different set of tools. Knives were used to cut the stems of some plants while sticks were used to dig up the roots of other plants. Just by looking at a knife, archaeologists can’t tell if it was used for hunting or for plant gathering. However, when scientists study the tiny particles left on the knife blade edge, they can tell us what it was used for because the patterns of wear on the blade are different if the knife was cutting meat or plants.

After the plants are gathered they are either cooked or stored in pots. The pots at the Schultz Site were made with thick walls, more closely resembling a crock pot we might use today. The pots were rounded or cone-like on the bottom with wide-mouth openings. Sand was mixed with the clay to make the pot stronger. Small ridged patterns, known as cord markings, were paddled into the outer surface of the pots. Archaeologists think that they cord marked the pots to help for gripping the pot, because a smooth outer surface may have been slippery.

At the Schultz Site, archaeologists found many pieces of broken pots. Some of these pieces were found to have come from the same pot, and archaeologists put them together like a jigsaw puzzle. By studying the reconstructed pots, archaeologists noticed blackened areas where the pots sat in the fire to cook food. In some cases, tiny food particles were even still attached to the insides of the pots. Scientists can perform residue analysis and tell us what was cooked in that pot 2,000 years after that meal was eaten!

Comprehension Questions for Student Reading #2:
1) What tools were used in hunting?
2) What tools were used for gathering plants and seeds?
3) Why do archaeologists think pots were cord marked?
4) What does residue analysis tell us?
activity

Discussion

Have students read the Schultz Site section on the Sites Reveal Changing Ways page on the Nebraska Studies site.

http://nebraskastudies.org/pre-1500/sites-reveal-changing-ways/

Then, have students examine the images of pottery on the following pages, and answer the questions.

Social Studies Standards: SS 4.3.1; SS 4.3.2; SS 4.3.3; SS 4.3.4; SS 4.3.5; SS 4.4.2; SS 4.4.3; SS 4.4.4 | SS 8.3.2; SS 8.3.3
Questions for Photo 1

1. All of these pots were reconstructed from fragmented pieces found all over the site. If you found pieces from four different pots, how would you figure out which pieces go to each pot? Hint: what kinds of clues do you use when you put together a puzzle?

2. The three larger pots have cord roughened sides while the smallest one has smooth sides. Based on the readings, why do you think the smallest one would have smooth sides?
Some of the pots at the Schultz site were cracked through many episodes of use. Instead of discarding the cracked pot, Native Americans repaired them and continued to use them. The photo above shows how the repair job was done. Holes were drilled on either side of the crack and then leather or fiber cording was used to pull the crack together. Pine resin (sticky sap) was then used to seal the holes and crack.

Questions for Photo 2

1. Can you see the drill holes used in to repair the pot?
2. Why do you think they repaired this pot instead of making a new one?
3. Can you think of items in your own home that have broken and needed to be repaired like a chair or a blanket?
4. Do you think this pot works as well as it did before it was cracked? If this pot was used to hold water and then it cracked and needed to be repaired, what could it be used for now?
Visual Evidence: Images and Tables

Photo 3: Artifacts from the Schultz Site

Questions for Photo 3
1. In the photo above, can you tell which tools are made of animal bone?
2. What do you think are some activities that would need an animal bone tool?
3. Stone was also used for making tools. Approximately what percentage of the tools shown above is made of stone?
4. If you had to pick only one tool to carry with you, what would it be? Why?
The stone tools on the left are all scrapers. Scrapers are used to remove the flesh from hides. These tools are very common artifacts because they were used often. Hides from animals were used to cover shelters, make into clothes and make covers for beds. The clothing made from hides was punctured with a bone awl, pictured above. Shell buttons, also shown above were used for fasteners.

Questions for this photo are on the next page.
Hide processing, shown in Photo 4a, is very hard work. The hide was pulled taut and staked down on the ground. A mixture of cooked brains, urine and intestines was worked into the newly scraped hide to soften the leather. The mixture would then be scraped off and the hide would be ready to be used.

Questions for Photos 4 and 4a:

1. Using these kinds of tools to make clothing, how long do you think the whole process would take?
2. Many scrapers and awls are found at sites dating to the Woodland time period. What are some of the reasons for why there is an increase in these kinds of tools?
3. The buttons shown above are made from shell. If five buttons can be made from one shell, and we need 35 buttons for the shirts we are making, how many shells do we need to collect?
Graph 1: Pie Chart of Artifact Categories at the Schultz Site

Questions for Graph 1

1. How many different categories of artifacts are shown above?
2. What two groups make up the largest percentage of all the artifacts?
3. If all of the categories that came from living things were added together, what is their approximate percentage of all artifacts?
4. Why do you think there are more bones found than shell?
5. Why do you think there is such a small amount of tooth and antler?
Graph 2: Artifact Levels across the Schultz Site

*Percentages based on a select group of artifacts-not representative of the entire site.

Four excavation units were compared to see if similar amounts of artifacts were being found in each. An excavation unit is a square or rectangular space. Archaeologists dig each of these excavation unit spaces separately. Each excavation unit space gets a number. The first unit (N10/E3) is 5 meters away from the next three units. The three remaining units are all adjacent to one another. The percentages of three types of artifacts were used to compare each excavation unit. The graph above compares percentages of Stone, Ceramic and animal Bone artifacts.

Questions for Graph 2
1. Approximately how many bone artifacts were found in Excavation Unit N5/E2?
2. How do the percentages for stone and ceramic artifacts compare between all the excavation units sharing the “N5” designation?
3. One type of material is similarly represented in the four excavation units. Can you tell which type of material it is?
4. How would you explain why the number of bones is so much higher in the N10/E3 excavation unit than in the other units?
Putting It All Together: Possible Activities

Activity 1: Trade Relations

Trading with other groups was a vital part of Plains Middle Woodland life. Many groups interacted and traded goods not found locally. Have your students think about all the items found in their homes that come from a long distance away. These items could be appliances, clothing, tools, decorations, and mementos from trips they have taken as a family. Even our food is grown in other states. Discuss where these items have come from as a class and what those connections with other cities, states and countries tell us about our culture.

Now have your students come up with a list of items found in the classroom that have come from other places. How does this list compare with the lists from home? If they are similar point out that it is still part of our culture. If they are different, point out the activities and purposes that are different between the two places. Archaeologists rely on this type of information to tell us about the different functions of buildings and places when we have few clues about the construction of those buildings.

Activity 2: Making Pots

Pottery was an important tool of the Plains Middle Woodland time period. Pots served many functions and were the most abundant artifact found on the Schultz Site. They were used for storing plants and seeds, cooking over fires, etc. Have your students make their own clay pots. Remind them that the size, shape and style of their pot will determine how it would have been used during the Plains Middle Woodland. Ask them to explain why they constructed their pots the way they did and what possible function that pot might have served. Use of decoration on pottery could have been an indication of who used that pot or what the pot was used for. Have your students be creative and design the outside of their pots to represent the maker or the function of the pot.

Activity 3: Mural of Plains Middle Woodland Life

Supply your students with a new, large bed sheet. With paints, have your students draw a mural of what they now know about Plains Middle Woodland life. Discuss all the aspects of the time period. What was the landscape like? How large were the houses and what did they look like, based on their footprints? What kinds of tools did they use and what were the activities for which they were used? How did the pots look? Represent the use of pots for cooking, storing food and transporting things. What kinds of food were being consumed? Show people eating and gathering the food. Discuss all these aspects with them before they begin drawing, possibly making a list on the board of things they need to include.
Pre-1500 Schultz Site: Beginnings of Pottery in Nebraska

LESSON PLAN
Schultz Site: Beginnings of Pottery in Nebraska

Supplementary Resources for Teachers

- http://www.nebraskastudies.org/pre-1500/sites-reveal-changing-ways/
- https://history.nebraska.gov/archeology
- https://www.archaeolink.com/nebraska_archaeology.htm

Some Basic References

Duddleson, J. Ryan
2003 Plains Woodland Pottery: A Use-Alteration Perspective. MA Thesis on file at the University of Nebraska-Lincoln, Anthropology-Geography Department, Lincoln.

Hill, A. T. and Marvin Kivett

Nebraska State Historical Society
1939 Excavation Picture: Picture taken from the Nebraska State Historical Society web site:
  https://history.nebraska.gov/
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resources

National Archives: Map Analysis Worksheet 25
National Archives: Photograph Analysis Worksheet 26

Nebraska Department of Education Academic Standards
https://www.education.ne.gov/contentareastandards/
Nebraska Department of Education Social Studies Standards
National Archives http://www.archives.gov/index.html

nebraskastudies.org
### National Archives: Map Analysis Worksheet

#### 1. TYPE OF MAP (check one)
- Raised relief map
- Topographic map
- Political map
- Contour-line map
- Natural resource map
- Military map
- Bird’s-eye view
- Artifact map
- Satellite photograph/mosaic
- Pictograph
- Weather map
- Other (  )

#### 2. PHYSICAL QUALITIES OF THE MAP (check one or more)
- Compass
- Handwritten
- Date
- Notations
- Scale
- Name of mapmaker
- Title
- Legend (key)
- Other

#### 3. DATE OF MAP
- .............................................................

#### 4. CREATOR OF MAP
- .............................................................

#### 5. WHERE WAS THE MAP PRODUCED?
- .............................................................

#### 6. MAP INFORMATION

**A. List three things in this map that you think are important:**

1. .............................................................
2. .............................................................
3. .............................................................

**B. Why do you think this map was drawn?**

- .............................................................

**C. What evidence in the map suggests why it was drawn?**

- .............................................................

**D. What information does the map add to the textbook’s account of this event?**

- .............................................................

**E. Does the information in this map support or contradict information that you have read about this event? Explain.**

- .............................................................

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Pre-1500 Schultz Site: Beginnings of Pottery in Nebraska

Designed and developed by the Education Staff • National Archives and Records Administration, Washington, DC 20408 • http://www.archives.gov

nebraska studies.org
## National Archives: Photograph Analysis Worksheet

### STEP 1. OBSERVATION

A. Study the photograph for 2 minutes. Form an overall impression of the photograph and then examine individual items. Next, divide the photo into quadrants and study each section to see what new details become visible.

B. Use the chart below to list people, objects, and activities in the photograph.

<table>
<thead>
<tr>
<th>PEOPLE</th>
<th>OBJECTS</th>
<th>ACTIVITIES</th>
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### STEP 2. INFERENCE

Based on what you have observed above, list three things you might infer from this photograph.

- ...........................................................................................................................................................................................................
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### STEP 3. QUESTIONS

A. What questions does this photograph raise in your mind?

- ...........................................................................................................................................................................................................
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B. Where could you find answers to them?

- ...........................................................................................................................................................................................................
- ...........................................................................................................................................................................................................
### Social Studies Standards

#### 4

**SS 4.3.1** Explore where (spatial) and why people, places, and environments are organized in the state and around the world.

**SS 4.3.2** Compare the characteristics of places and regions and their impact on human decisions.

**SS 4.3.3** Explain how human and natural forces have modified different environments in Nebraska and how humans have adapted.

**SS 4.3.4** Compare and contrast the characteristics of culture statewide.

**SS 4.3.5** Use geographic skills to make connections to issues and events.

**SS 4.4.2** Analyze and explain multiple perspectives of events in Nebraska, including historically marginalized and underrepresented groups.

**SS 4.4.3** Analyze past and current events throughout Nebraska history.

**SS 4.4.4** Develop historical inquiry and research skills.

#### 8

**SS 8.3.2** Examine how regions form and change over time.

**SS 8.3.3** Determine how the natural environment is changed by natural and human forces and how humans adapt to their surroundings.
**Language Arts Standards**

**4**

LA 4.1.6 Comprehension: Students will construct meaning by using prior knowledge and text information while reading grade-level literary and informational text.

LA 4.2.1 Writing Process: Students will apply the writing process to plan, draft, revise, edit, and publish writing using correct spelling, grammar, punctuation, and other conventions of standard English appropriate for grade-level.

LA 4.3.3 Reciprocal Communication: Students will develop, apply, and adapt reciprocal communication skills.

**8**

LA 8.1.6 Comprehension: Students will construct meaning by applying prior knowledge, using text information, and monitoring comprehension while reading increasingly complex grade-level literary and informational text.

LA 8.2.1 Writing Process: Students will apply the writing process to plan, draft, revise, edit, and publish writing using correct spelling, grammar, punctuation, and other conventions of standard English appropriate for grade-level.

LA 8.3.3 Reciprocal Communication: Students will develop, apply, and adapt reciprocal communication skills.
Science Standards

8

SC 8.1.1 Students will design and conduct investigations that will lead to descriptions of relationships between evidence and explanations.
SC 8.1.2 Students will apply the nature of science to their own investigations.
SC 8.3.1 Students will investigate and describe the structure and function of living organisms.
Math Standards

4
MA 4.1.2 Operations: Students will demonstrate the meaning of addition and subtraction of whole numbers and fractions and compute accurately.
MA 4.3.3 Measurement: Students will perform and compare measurements and apply formulas.
MA 4.4.3 Probability: Students will interpret and apply concepts of probability.

8
MA 8.1.2 Operations: Students will compute with exponents and roots.
MA 8.4.1 Representations: Students will create displays that represent data.
MA 8.4.3 Probability: Students will interpret and apply concepts of probability.