

Westward Expansion

Fun Projects for U.S. History

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Westward Expansion

Welcome to an extensive collection of hands-on activities that focus on America's westward expansion. This book also comes with a CD-ROM featuring full-color presentations of each activity.

WESTWARD EXPANSION

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WESTWARD EXPANSION

GENERAL OVERVIEW

This collection of enrichment activities was designed to complement existing curricula and expand one's understanding of what it was like to live during the past. Studies have confirmed that using one's hands helps students retain information. If you are looking for creative and simple—yet stimulating and exciting—projects to spark learning, take the next step toward a highly engaging encounter.

Regardless of a student's age, learning by doing will help maintain their interest, improve retention of information, and foster a desire to learn now and in the future.

As an educator with 18-plus years of teaching and product development experience, it is my personal goal to encourage young people to be creative. Each of the activities included in this collection is based on actual artifacts and is representative of the era. A conscious effort was made to develop projects constructed from readily available materials that result in a stunning end product.

It is my heartfelt desire that both teacher and student will find the activities in this book a wonderful journey of creativity.

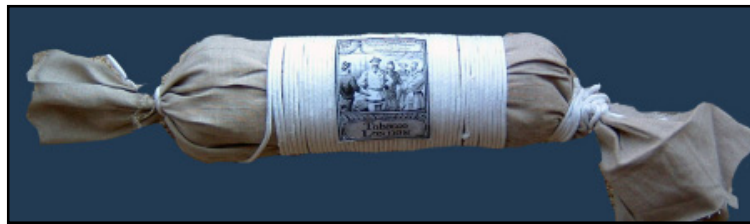
Jean Henrich



Miniature Canoe



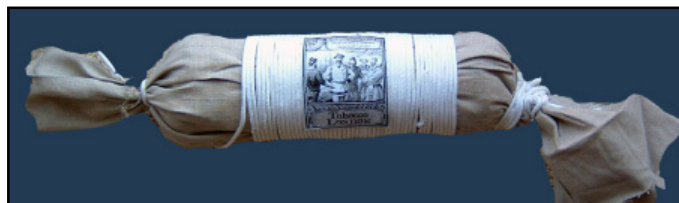
“Carrot” of Tobacco



WESTWARD EXPANSION

Make a Miniature Canoe

Canoes were the primary means of transportation for *voyageurs*, the tough-minded adventurers who set out to tame the wilds of the northern U.S. and Canada in the 17th and 18th centuries. Made of birchbark, the canoe allowed for travel along rivers and lakes, yet was light enough to be carried across land when necessary.



In this activity, you will make a miniature paper canoe and re-create a “carrot” of tobacco—one of the items used for trade and for payment by *voyageurs*.

MATERIALS NEEDED

- Photocopier (color preferred)
- Scissors
- Gluestick
- **Hot glue gun and glue (ADULT SUPERVISION REQUIRED)**
- Brown or black magic marker
- Cardstock-weight paper
- Cardboard
- Linen, muslin
- 1–3 pounds of newspaper
- Brown paper bags
- Source for water
- Thick cording such as clothesline
- Rubber bands

WESTWARD EXPANSION

1. MAKE THE CANOE PIECES

- Make a photocopy (preferably color) onto cardstock-weight paper of the canoe patterns on page 8 and the “bark” paper on page 9. If you don’t have a color printer, color the images with magic markers or watercolor paints.



Only add small amounts of color each time so the images on the bark can still be seen.

- Cut out each of the pattern pieces.
- Use a glue stick to attach each of the canoe sides to the back of the sheet of bark paper. Cut out each of the sides of the canoe.

- Use a glue stick to attach the bottom of the canoe to a piece of cardboard. Cut out the bottom.

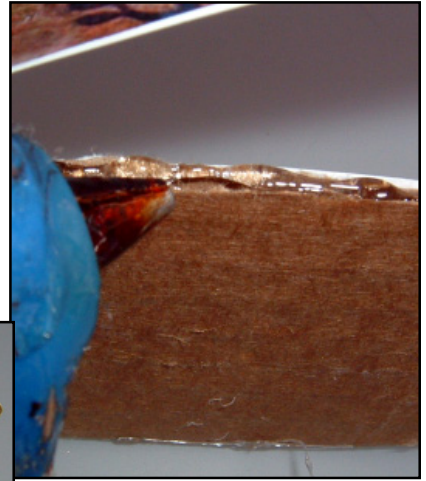


- Turn both ends of the bottom of the canoe slightly upward.

WESTWARD EXPANSION

2. ASSEMBLE THE CANOE

- **WITH ADULT SUPERVISION**, make a line of glue along one edge of the bottom of the canoe. You will have to work quickly and carefully to attach the bottom edge of one of the sides of the canoe to the line of glue. You want to wrap the side of the canoe around the outside of the bottom.



HELPFUL HINT: Before you glue any of the pieces in place, line them all up to make sure you know where to glue them. Once you place them onto the hot glue, it will be difficult to remove any of the pieces.

- Cut strips of the bark paper into $\frac{1}{4}$ " lengths.

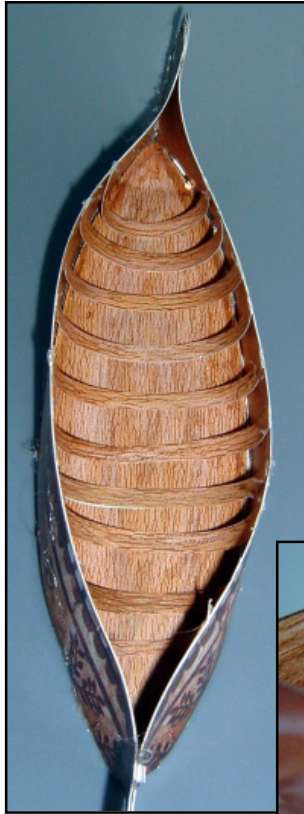


- **WITH ADULT SUPERVISION**, glue one end of the strip to the center inside of the canoe. Curve the strip inside the canoe as illustrated.
- **WITH ADULT SUPERVISION**, attach the other end of the strip to the inside of the canoe.

- Trim off the excess strip of bark paper.

WESTWARD EXPANSION

2. ASSEMBLE THE CANOE (continued)



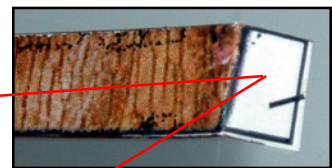
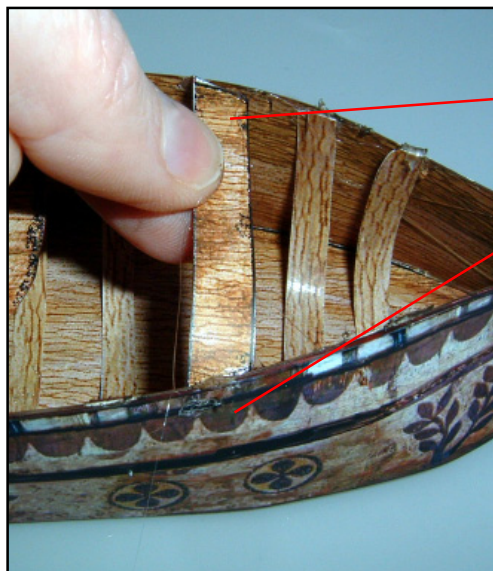
- Continue adding strips along the inside of the canoe as illustrated. Each strip should be spaced out approximately $\frac{1}{4}$ " inch from the other strips.



- Carefully go over any white edges with a brown or black magic marker.

- Fold over each of the glue tabs on the center and top and bottom bars.

- Before gluing, place the seats where you think they will fit best. Make any necessary adjustments.



WESTWARD EXPANSION

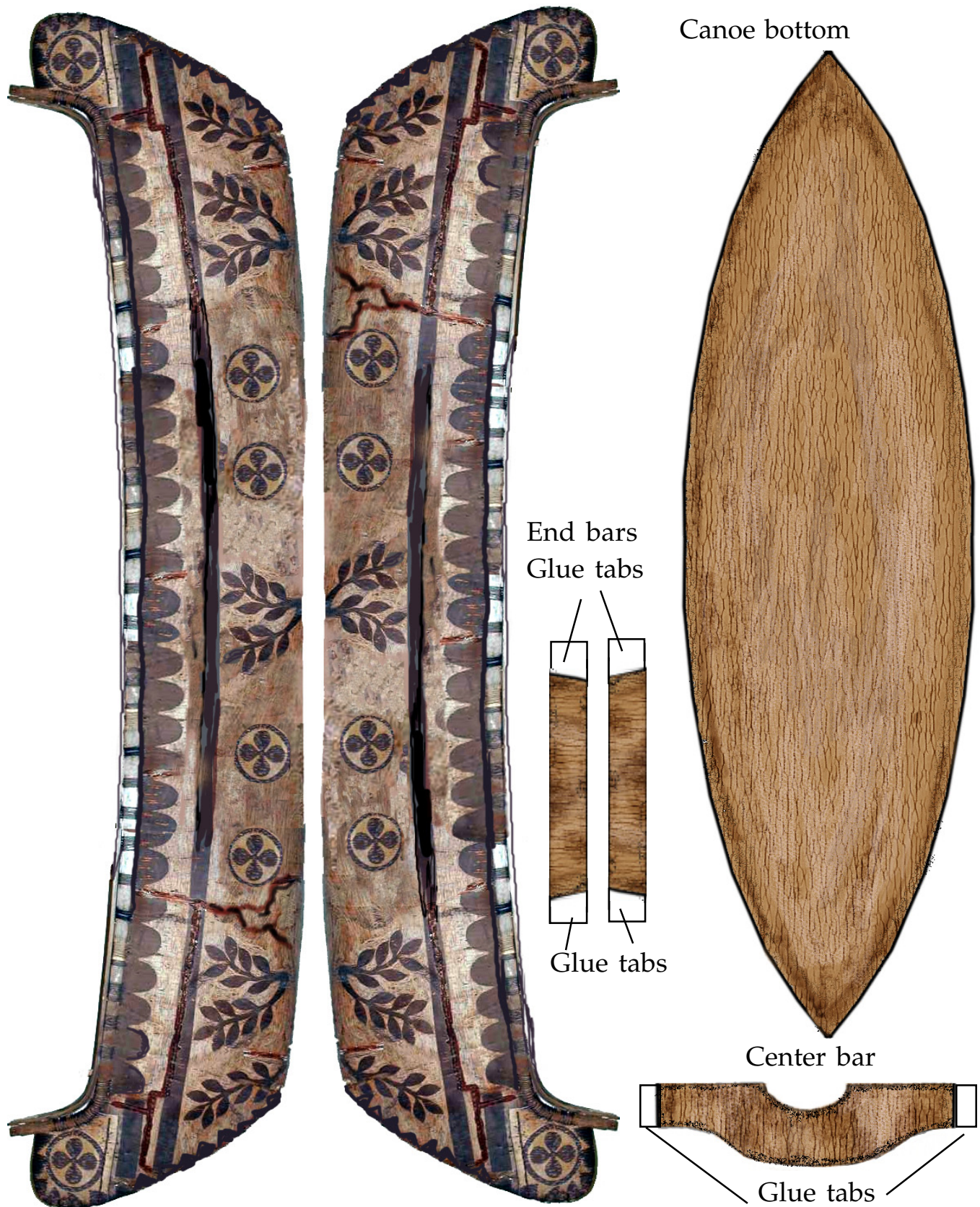
2. ASSEMBLE THE CANOE (continued)

- You should also color the glue tabs with a brown or black magic marker and then glue them to the inside of the canoe.
- Display as desired.



WESTWARD EXPANSION

VOYAGEUR CANOE PATTERNS



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WESTWARD EXPANSION

BARK PAPER

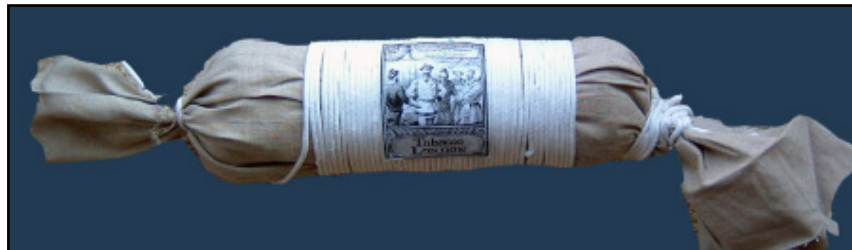


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WESTWARD EXPANSION

Make a “Carrot” of Tobacco



“Carrots “ were dried leaves of tobacco that were first wrapped in fabric and then bound together with twine.

Tobacco leaves grow to approximately 15"–18" in length. Limited shrinkage occurs after the leaves have

been hung up and dried. On average, each voyageur received three carrots of tobacco before setting out. A typical carrot held three to five pounds of tobacco.

In the following activity, you will make faux tobacco leaves and wrap them into a traditional “carrot” package commonly used during the 18th century.

MATERIALS NEEDED

- Scissors
- Muslin
- Twine or clothesline cording
- Brown paper bags
- Newspapers
- Rubber bands
- Water
- Copy machine
- All-purpose glue

HELPFUL HINT: The instructions for this project are for re-creating a three-pound carrot of tobacco. This is very large. You may wish to just make a one-pound version. If you do this, **do not enlarge** the leaf template. Instead, reduce the amount of newspapers and number of faux leaves.

WESTWARD EXPANSION

1. MAKE THE FAUX TOBACCO LEAVES



- Enlarge the tobacco leaf pattern on page 14 so that it is approximately 15"–18".
- Remove the bottoms from several brown paper bags.
- Place the enlarged template onto a stack of paper bags, trace around the template, and then cut out approximately 12–15 large leaves.

2. PREPARE THE "CARROT" MATERIALS

• To make the faux leaves, you will use brown paper bags, which will resemble the texture and weight of real tobacco leaves. Since it would take an enormous number of paper bag leaves to create enough to weigh three pounds, roll up newspaper to form a core shape and use it as filler.

• Weigh out approximately 2.5 pounds of newspaper.

• Tightly roll the newspaper together into a long bundle approximately 12" long.

• Hold the bundle together with rubber bands.



• Weigh the newspaper bundle until it's just a few ounces under three pounds.

WESTWARD EXPANSION

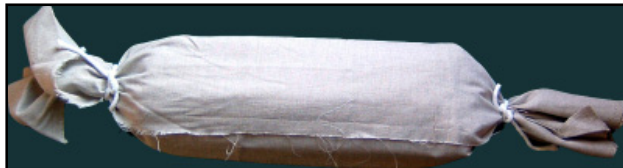
3. ADD THE "TOBACCO" LEAVES

- Lay the brown-paper tobacco leaves over the outside of the rolled newspaper in overlapping layers. Use one or more rubber bands to help you hold the leaves in place around the newspaper roll.



4. ADD THE FABRIC COVERING

- Cut a piece of muslin (or other natural fabric) large enough to wrap around the assembled roll and still have from 6"–8" of extra fabric on each end.

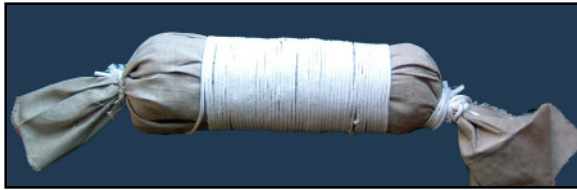


- Tie off each end with cording.

WESTWARD EXPANSION

5. WRAP THE CARROT WITH CORD AND ADD THE LABEL

- Begin at one end of the fabric-covered carrot and begin wrapping the clothesline around the outside. This may be a bit of a challenge because of the size of the carrot and the thickness of the clothesline.



- Continue wrapping the carrot until the center section is covered. Tie off the cording at the ends.

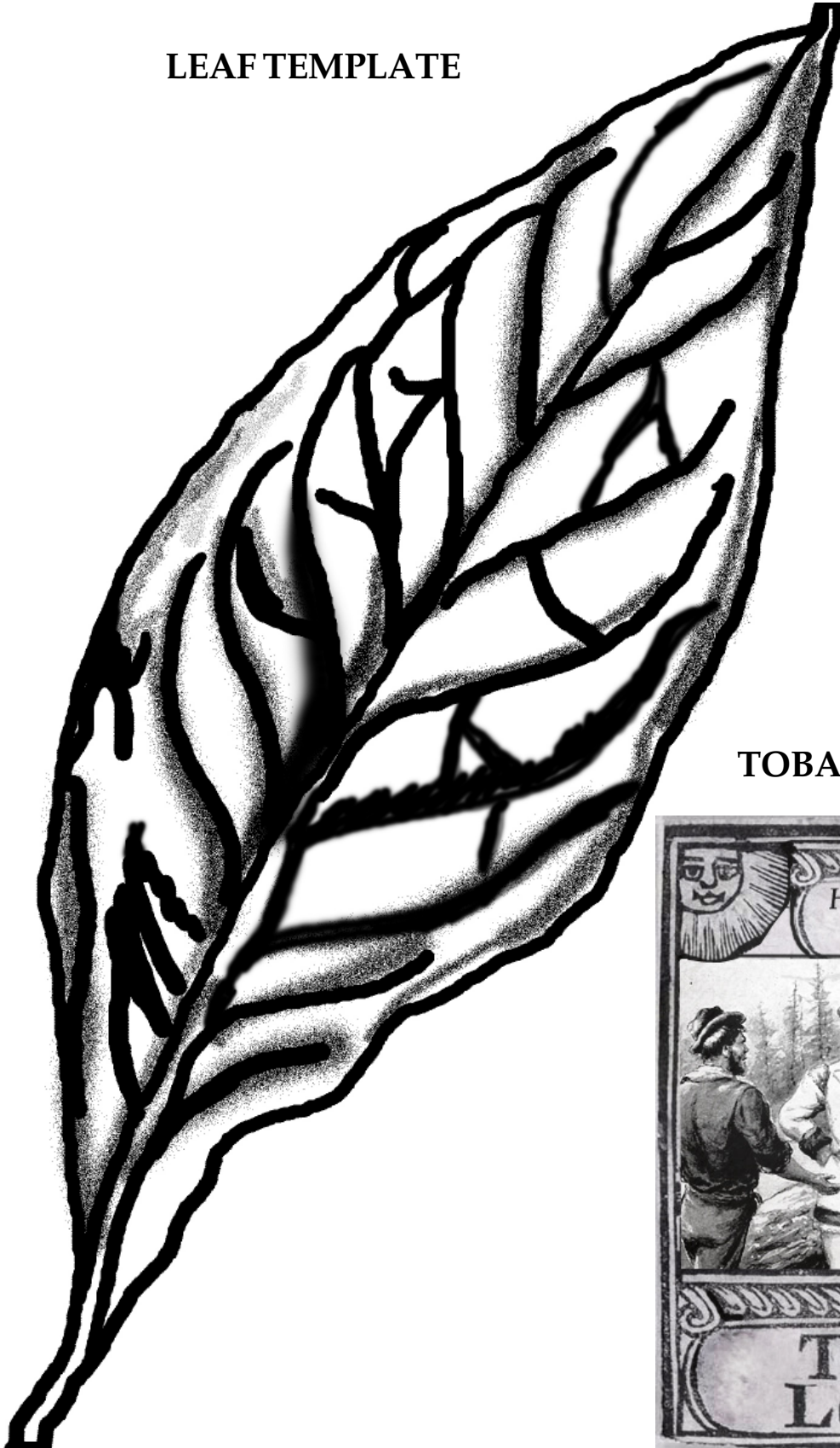


- Make a photocopy of the tobacco label on page 14.
- Spread glue on the back side of the label and attach to the center of the carrot.

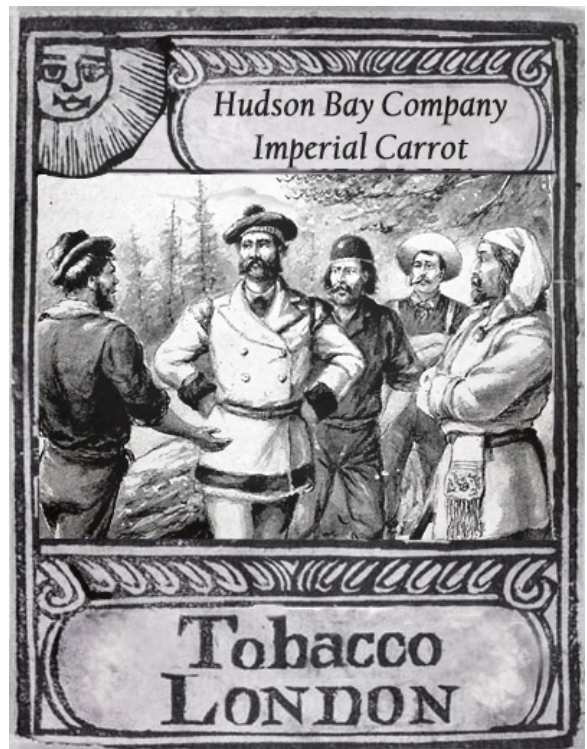


WESTWARD EXPANSION

LEAF TEMPLATE



TOBACCO LABEL



WESTWARD EXPANSION



“Possibles” Bag



WESTWARD EXPANSION



Make a “Possibles” Bag

A “possibles” bag contained a mountain man’s personal items, such as a pipe and tobacco, a bullet mold, a tin cup, fabric patches, and even a large buffalo robe or blanket.

Most possibles bags were made from leather. Some bags were simple; others had fringe on the bottom and beaded floral motifs based on the designs of the Ojibwa Indians.

In this activity, you will make a smaller version of the possibles bag using readily available felt fabric and a simple beading technique.

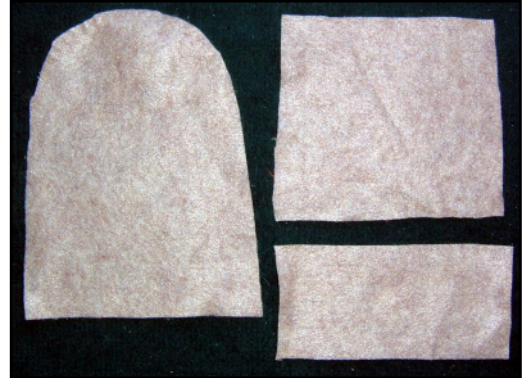
MATERIALS NEEDED

- Tan or light-colored felt
- Scissors
- Beading needle
- Darning needle
- Copy machine
- Seed beads
- Double-sided adhesive paper
- Cording
- Pony beads

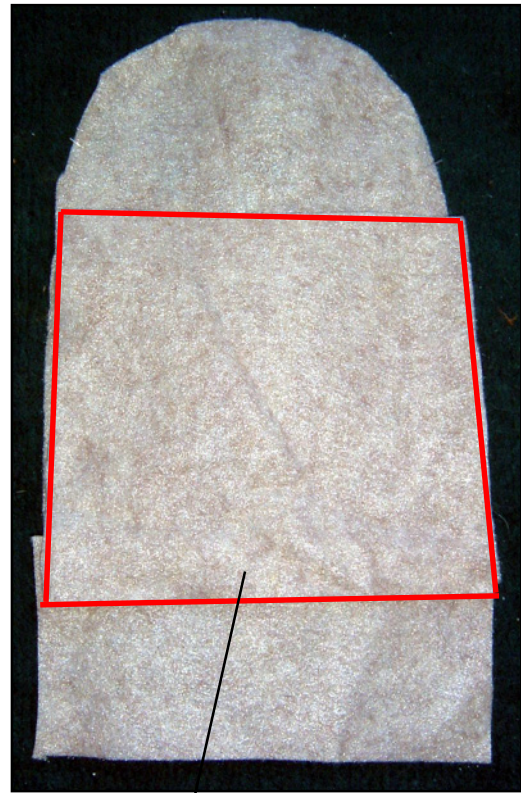
WESTWARD EXPANSION

1. PREPARE THE PATTERN PIECES

- Make a copy of the pattern pieces on pages 22–23.
- Cut out the pattern pieces and pin them to a piece of tan or light-colored felt. Cut out each piece.



Place the fringe strip along the bottom edge of the back pattern.



Place the bag front on top of the fringe strip.

2. ADD THE DECORATIVE BEADING

In authentic beading done by woodland Indians, each bead was sewn onto the bag individually—a very time-consuming task. For the beading for your possible bag, we have selected a modified version—sticky paper and sewing.

- Decide where you want to add any beading embellishments and select one or more of the designs on page 24. Keep the design simple and bold.
- Use a pencil to draw the design onto the front or the flap.
- Use a beading needle and thread to add simple lines of beads, as illustrated above.



To sew on the beads, follow these simple steps:

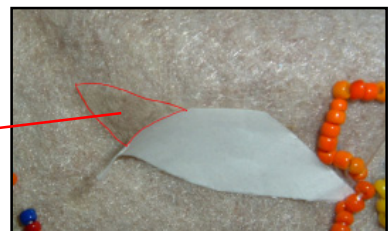
1. Tie a knot at the end of a length of thread. From the back of the fabric, bring the thread through to the front side.
2. Select between three and five beads to put on the string. Push the needle and thread back through the fabric, pulling the beads tightly against the front.

3. Push the needle through to the front, string the last two beads, and bring the needle through to the back. Repeat.

- Cut out a simple flower or leaf from the sticky paper. **Note:** This paper is not washable, so if you decide to use it, just remember not to wash the bag.

- Remove one side of the protective paper from the sticky paper and place it where you wish.

- Peel back the remaining side of the protective paper.



2. ADD THE DECORATIVE BEADING (continued)

- Tie a knot into a length of beading thread and pull it through from the back to the front of the bag piece you want to embellish.

- Put a line of beads onto the thread and slide them down to the bottom of the thread.

- Carefully line up the strand of beads along the outside edge of the sticky paper and press to secure. In the photo above, we outlined the sticky paper with red to help you see where it was placed on the felt.

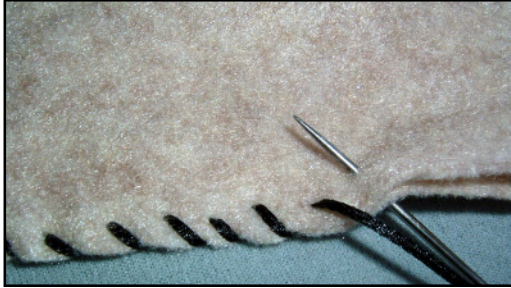


- You can continue to add lines of beads to the sticky paper until you are satisfied with the completed design. For our example, we made the outline of the leaf green, followed by another outline of white beads, and then filled in the center with black beads.

- Of course, you can add a lot of detailed beadwork using the sticky paper and strands of beads. It isn't difficult, but it does take practice and patience.

WESTWARD EXPANSION

3. SEW THE BAG AND CREATE THE FRINGE



- Use a darning needle and a thin length of cording to make overhand stitches along the sides and a simple running stitch along the bottom.



- After the bag has been sewn together, carefully snip the bottom fabric into $\frac{1}{4}$ "-wide strips.
- String some pony beads on each strip and tie knots at the ends to keep the beads in place.



WESTWARD EXPANSION

4. ADD A STRAP

- Add a strap to the top of the bag by cutting two small Xs into the flap (as illustrated).
- Tie a knot in one end of a length of cording or fabric and insert it through the bottom of the flap.
- Bring the strap over and down through the other side of the flap and tie this end into a knot as well.



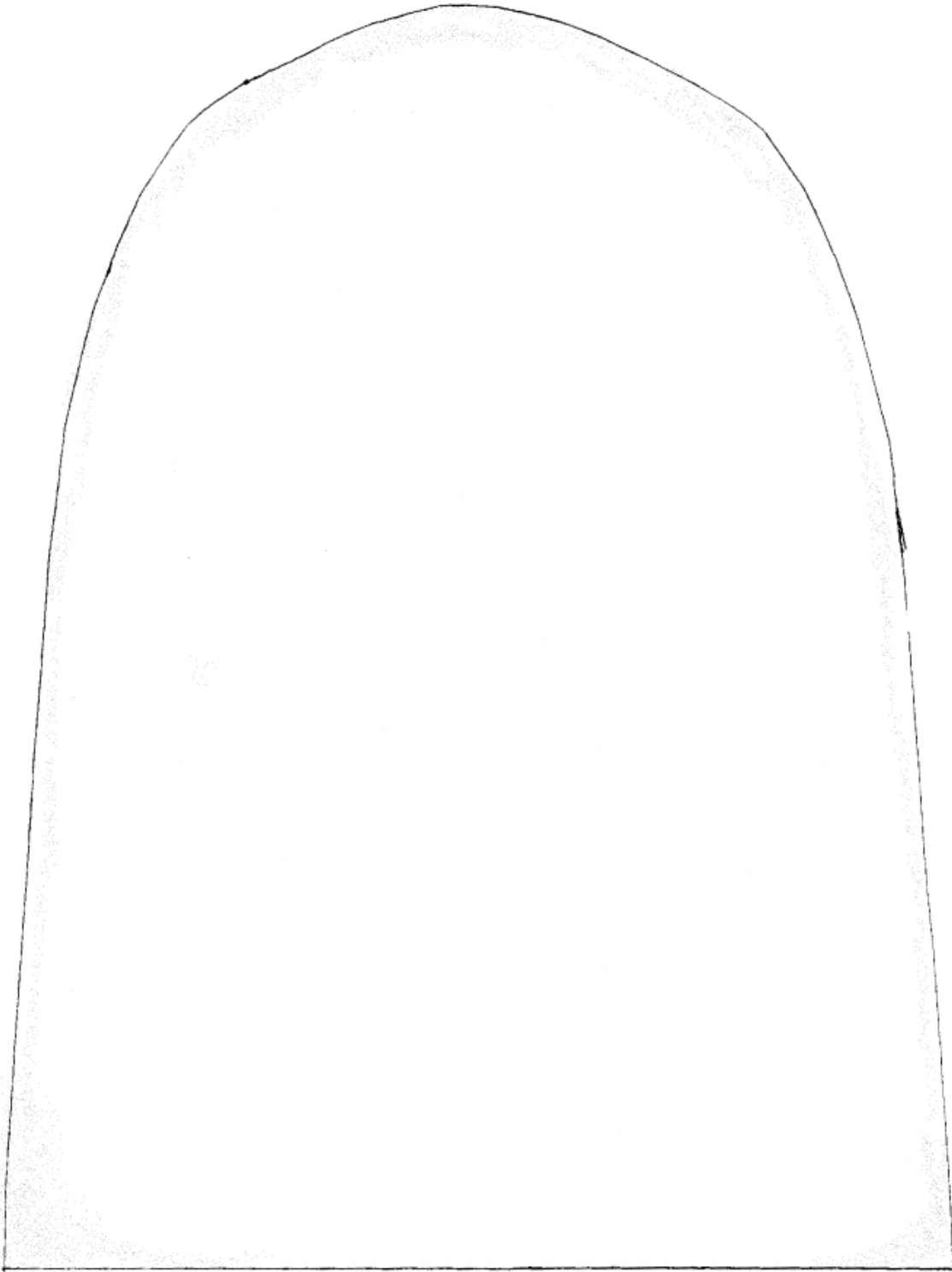
- Tie pony beads onto the fringe. Secure with a knot.
- Fill the possibles bag with small personal items.

EXTENSION IDEA: For a project/report, select pictures of items commonly carried in possibles bags by mountain men. Glue the image to one side of an index card. On the opposite side, write a brief description of the object. Place the index cards into the possibles bag.



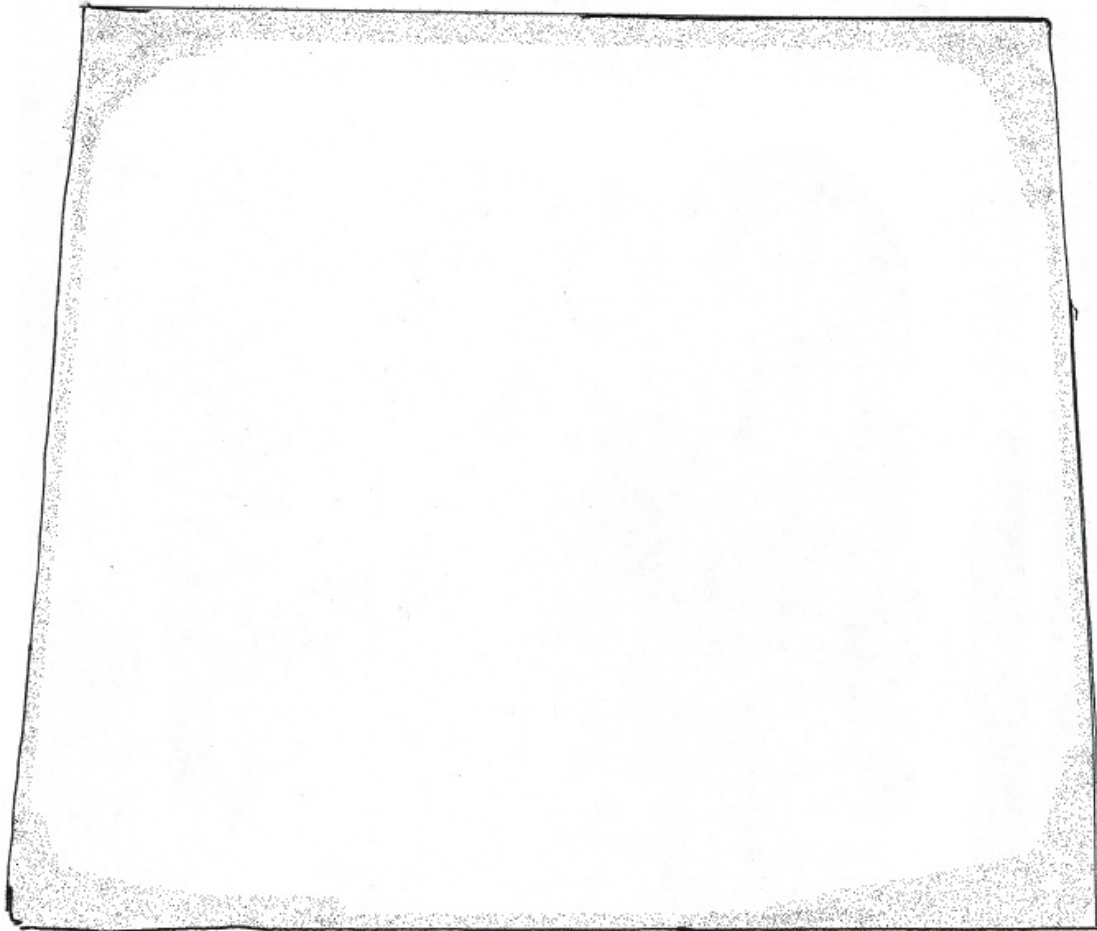
WESTWARD EXPANSION

"POSSIBLES" BAG BACK PATTERN

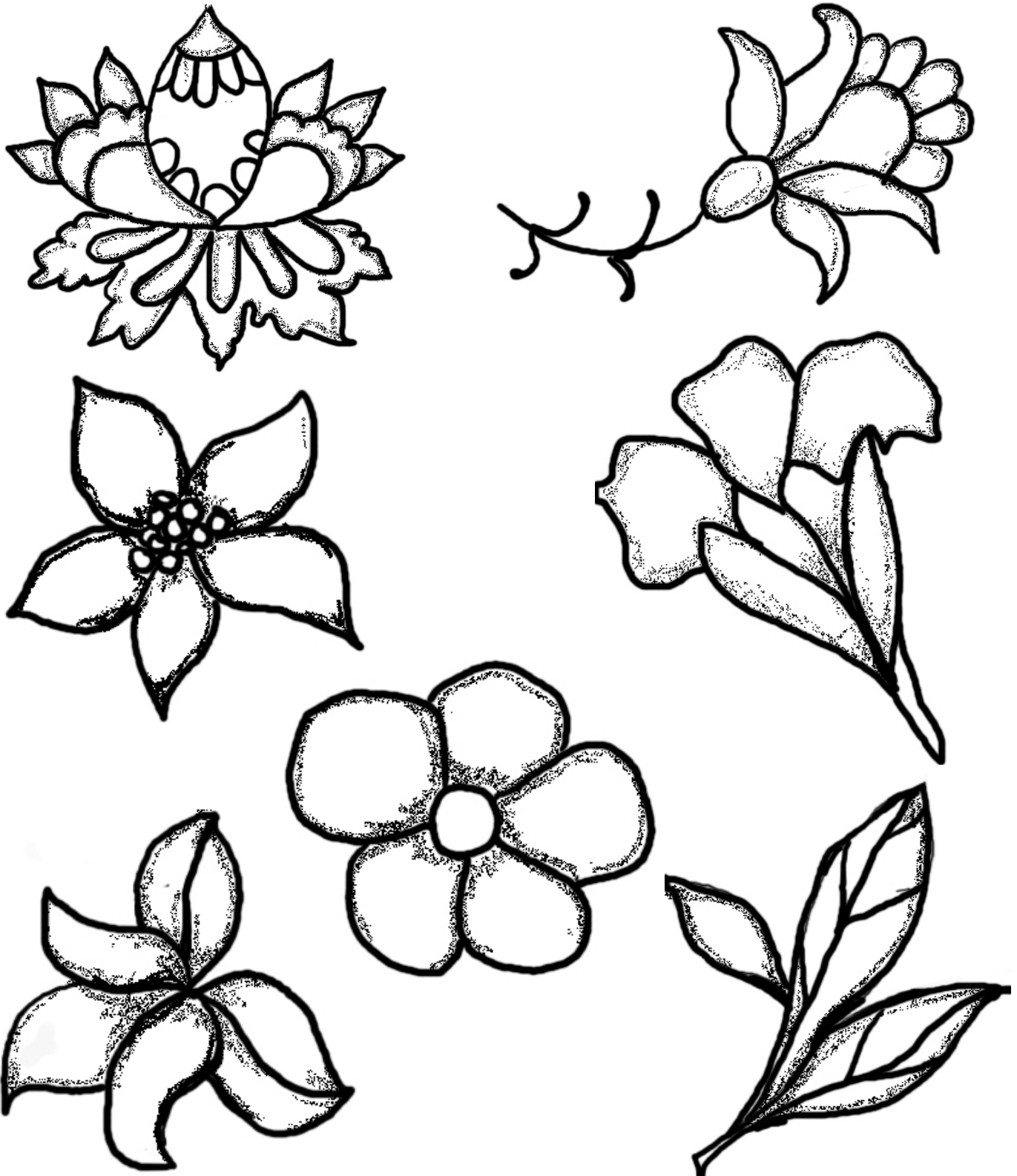


WESTWARD EXPANSION

"POSSIBLES" BAG FRONT and FRINGE PATTERN



WOODLAND INDIAN FLORAL MOTIFS





3-D Canvas Gold Miner Display



WESTWARD EXPANSION



Make an 3-D Canvas Gold Miner Display

During the gold rush, miners came from a variety of backgrounds and locations. The following activity uses altered art (or collage) techniques to capture some of the elements that represented a miner's experience. This activity is rather easy, though it takes a little time to arrange the elements to create a lasting 3-D display.

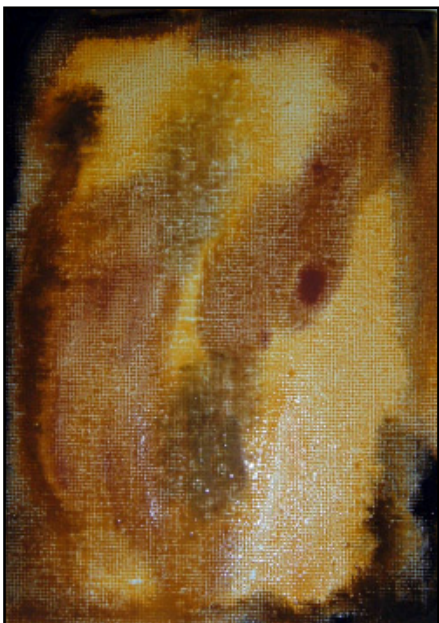
MATERIALS NEEDED

- Small canvas
- Old documents
- Acrylic paint (earth tones and gold)
- Small rocks
- Plastic frame
- Photocopier
- **Mini-iron (optional, but nice to have—
ADULT SUPERVISION REQUIRED)**
- Scissors

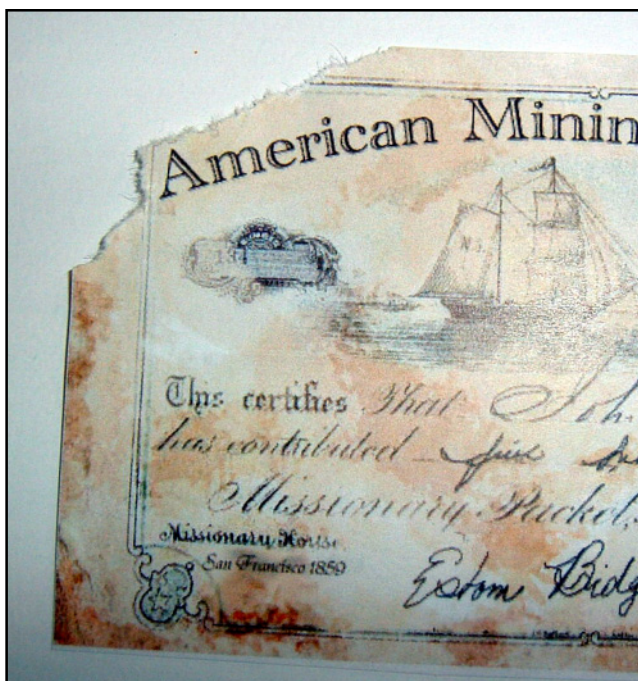
WESTWARD EXPANSION

1. PREPARE THE CANVAS AND PAPER LAYERS

- Paint the surface of the canvas with your choice of acrylic paints. We selected earth-tone colors for our canvas.
- With a clean, damp paper towel, gently dab off areas of the damp paint to create added texture and highlights.



- Tear off some of the edges around the different sheets of paper provided on page 31.

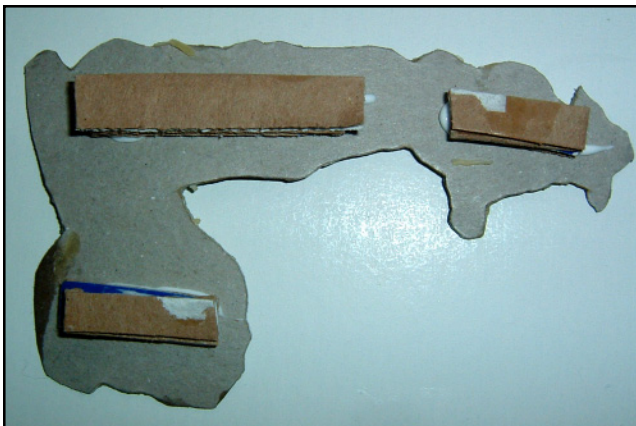


WESTWARD EXPANSION

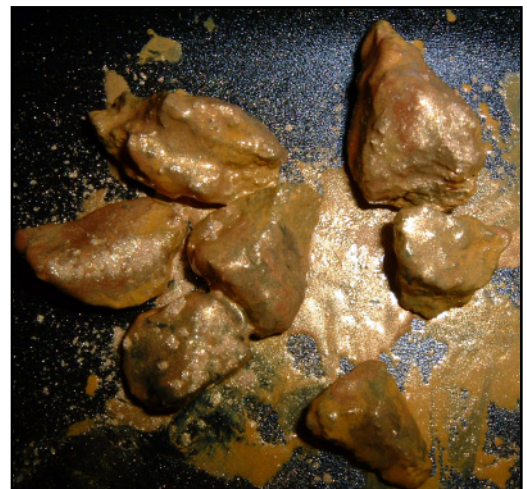


1. PREPARE THE CANVAS AND PAPER LAYERS (continued)

- Use a glue stick to attach one or more of the miner images on page 32 to a thin sheet of cardboard.
- Cut around the image.
- Glue pieces of cardboard together to create layers. Glue these to the back of the cut-out image.



- Paint several small rocks with gold acrylic paint. For an added touch, sprinkle the damp paint with gold powder pigment. Let dry.



WESTWARD EXPANSION



2. ARRANGE AND ATTACH THE LAYERS

- Position the different documents and cut-out figures on the canvas. When you are satisfied with the arrangement, use the glue stick to attach them.

- **WITH ADULT SUPERVISION,** use a mini-iron to help apply a layer

of beeswax to the surface of the first layer of images. The beeswax adds a nice gloss and a slight yellow tinge, which adds to the vintage look of the background.



- Glue the gold-painted rocks on the bottom corner of the canvas as illustrated.

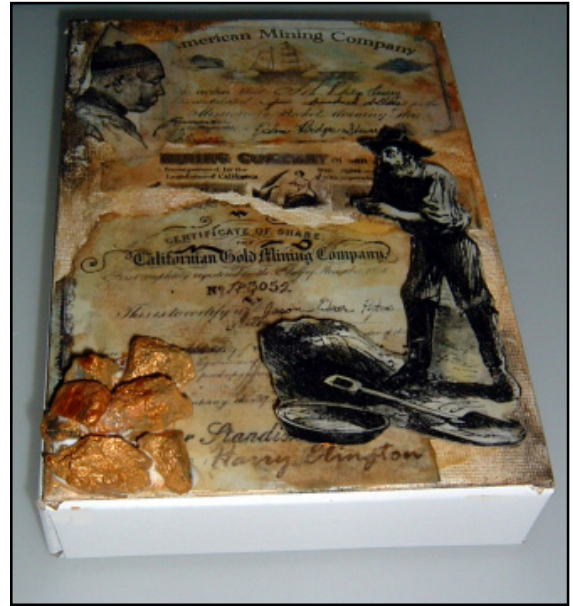
- Lay out each of the pieces for the frame as illustrated. Each layer will be positioned together in a sequence.



WESTWARD EXPANSION

2. ARRANGE AND ATTACH THE LAYERS (continued)

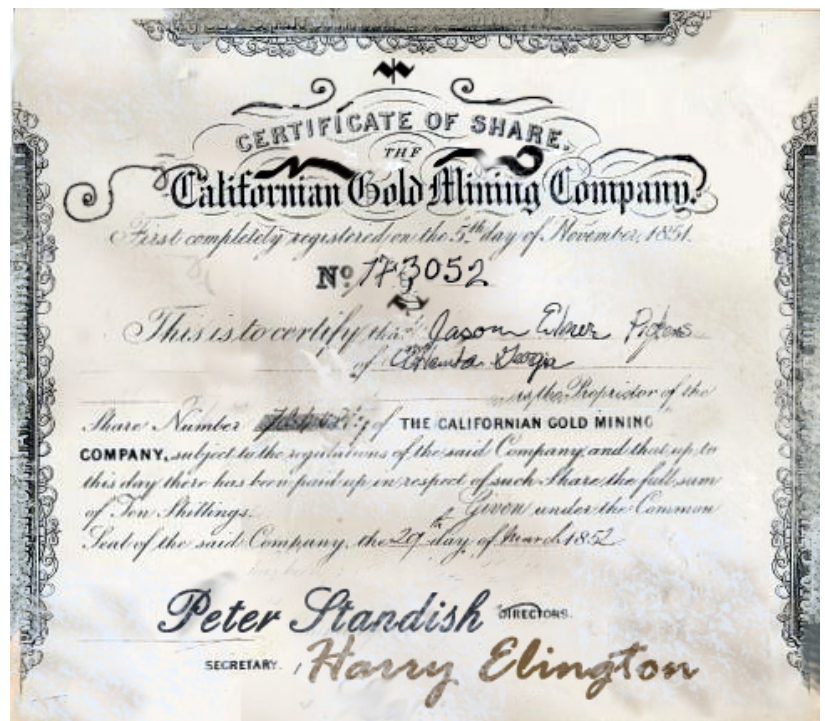
- Place the assembled canvas on top of the cardboard backing that came with the frame.
- Carefully slide the frame over the canvas and down over the cardboard backing approximately $\frac{1}{2}$ "– $\frac{3}{4}$ ", as illustrated.



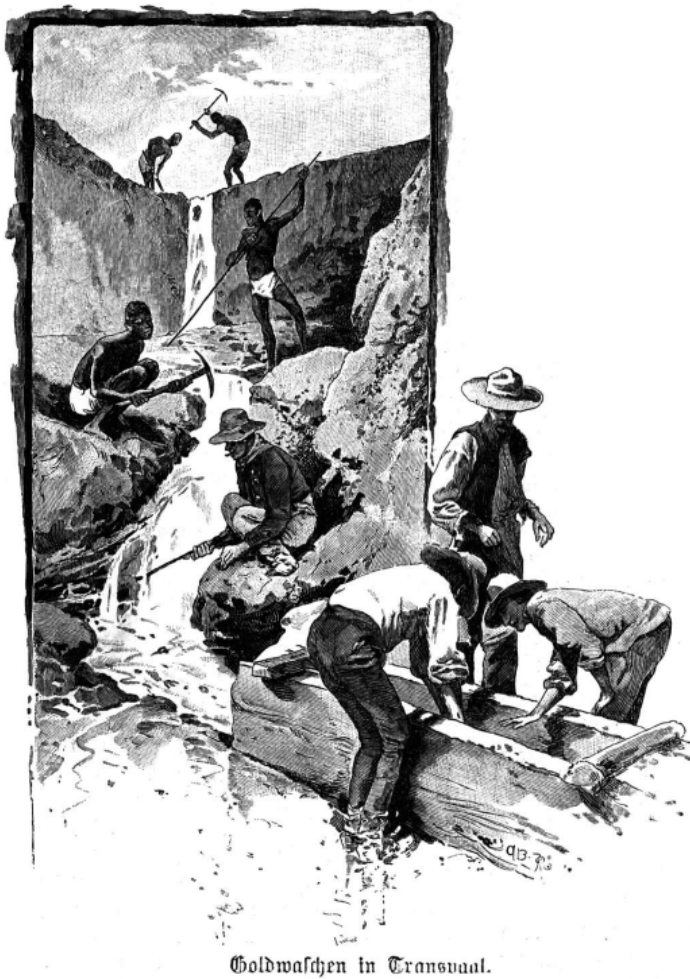
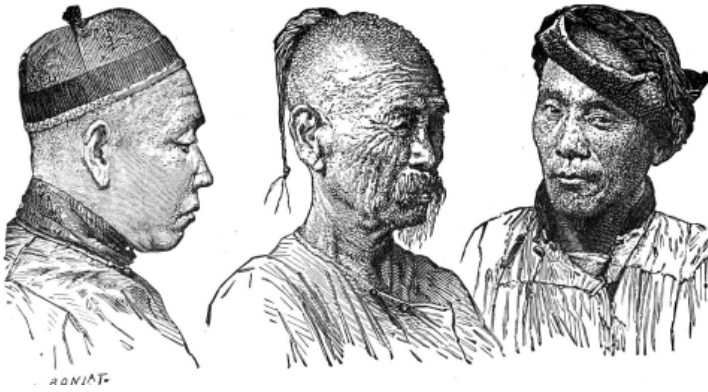
- Display as desired.



WESTWARD EXPANSION



WESTWARD EXPANSION





Railroad Mini-Scrapbook and Faux- Leather Trunk



WESTWARD EXPANSION

Make a Railroad Mini-Scrapbook and Faux-Leather Trunk



The purpose of this activity is to create an imaginary scrapbook that includes a variety of vintage railroad documents. By using a variety of distressing techniques (such as tearing, burning the edges, dripping candle wax, and applying instant coffee) the scrapbook will end up looking like something found after years of being stowed away in an old trunk.

The second part of the activity involves making a faux-leather trunk in which the mini-scrapbook can be placed. In addition to the mini-scrapbook, other items such as old keys, swatches of

fabric, old watch pieces, pictures of antique lanterns, signs, tools, uniforms, hats, keys, timepieces, books, pictures, and dining car items from the transcontinental railroad era can add authenticity to your trunk. Consider including a brief description of any additional items.

MATERIALS NEEDED

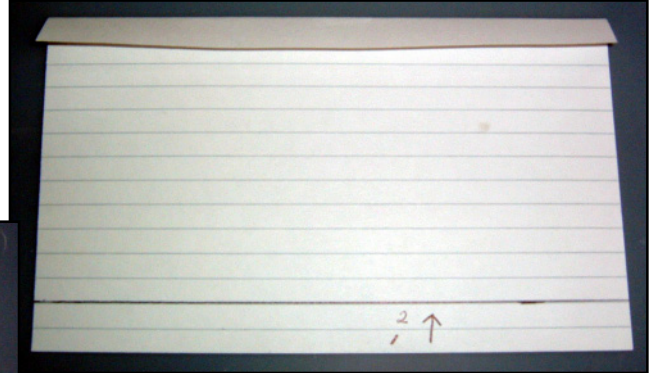
- Plaid FolkArt® acrylic paints (black, gold metallic, antique white, burnt umber)
- Paintbrush
- Paper towels
- Small (4" x 6") wood or papier-mache trunk (we found ours at a local craft store)
- Embossed wallpaper (ask your local home-improvement store for books of discontinued wallpaper)
- Scissors
- **X-Acto® knife (ADULT SUPERVISION REQUIRED)**
- **Hot glue gun and glue (ADULT SUPERVISION REQUIRED)**
- **Candle (ADULT SUPERVISION REQUIRED)**
- **Brown spray paint (ADULT SUPERVISION REQUIRED)**
- **Mini-iron (optional, but nice to have—ADULT SUPERVISION REQUIRED)**
- Beeswax
- Shoe polish (black or brown)
- Tacky glue
- 4" x 6" index cards
- Scrap paper, crayons, etc. (collage purposes)

WESTWARD EXPANSION

1. ASSEMBLE THE MINI-BOOK

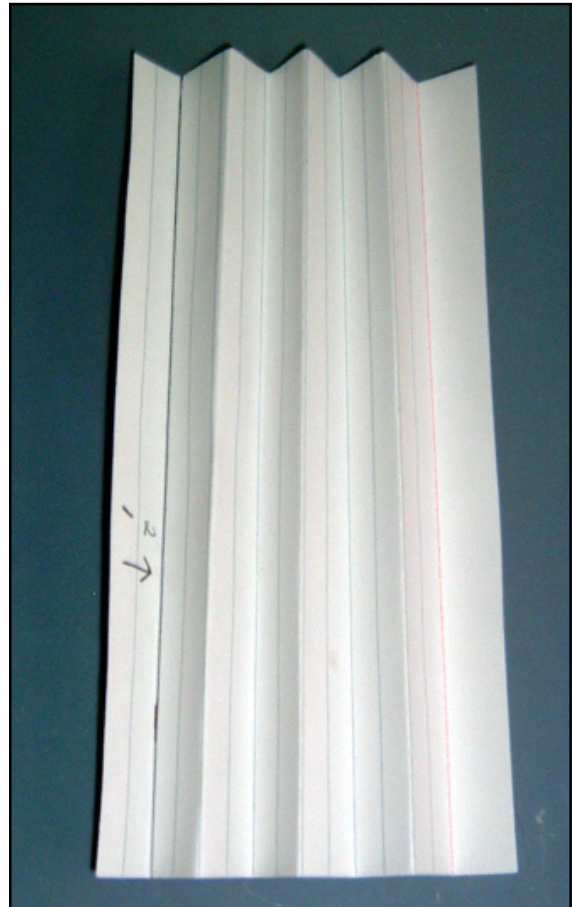
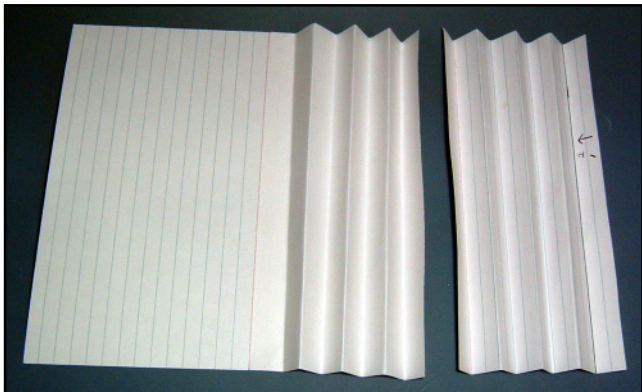
- The mini-book is made from standard 4" x 6" index cards. You will need four cards for the front and back covers and two cards for the accordion-folded center section.

- Fold in both ends of an index card by $\frac{1}{2}$ " (along the first blue line on the index card).



- Continue to fold the index card as you would a fan, but only along every two lines, or every $\frac{1}{2}$ ".

- Use a glue stick to attach one of the folded accordion fans to one of the index cards. This card will be used for the front or back of the mini-book.

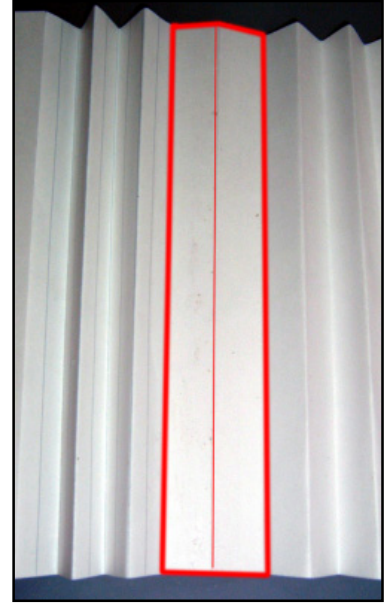


WESTWARD EXPANSION

1. ASSEMBLE THE MINI-BOOK (continued)

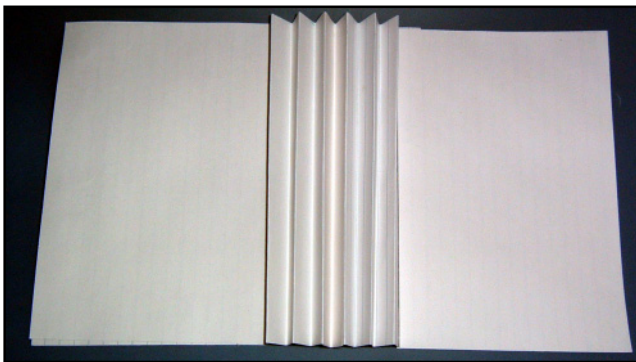
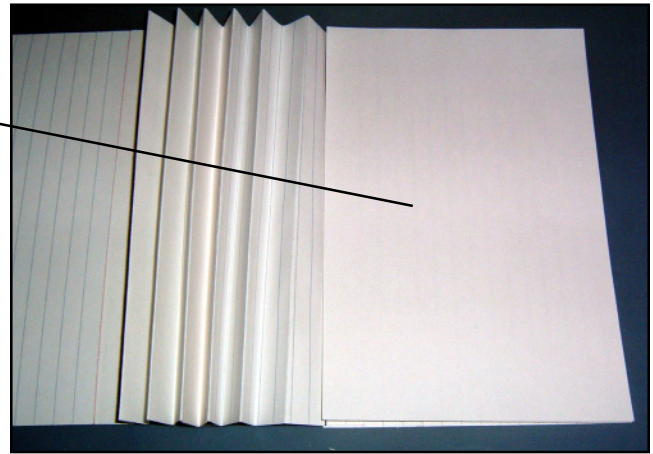


- To attach the two center accordion sections together, use a glue stick and then overlap $\frac{1}{2}$ " on each of the cards (as illustrated).



- Attach the other index card to the opposite side of the accordion-folded center section.

- Glue the remaining two index cards on top of the front and back index cards to sandwich the ends of the accordion centers in place.



- When assembled, the mini-book should look like the photo to the left.

- Carefully trim down the mini-book to a smaller size that will fit into the mini-trunk. We recommend that the mini-book measure $3\frac{1}{2}$ " x $5\frac{1}{2}$ ".

WESTWARD EXPANSION

2. DECORATE THE COVERS AND INTERIOR PAGES

- Pages 44–46 have numerous documents and ephemeral items which you can cut out, tear, antique, and glue in place on the front and back covers. You want the pages and book to look worn, as they really came from the era of the first transcontinental railroad.
- Other embellishment ideas:
 - Cutting out lettering from newspapers or magazines
 - Applying chalk or rubber-stamp ink to sections of the papers
 - Sprinkling instant coffee on dampened sheets to “age” the paper
 - Tearing the edges
 - Burning portions of the paper**(ADULT SUPERVISION REQUIRED)**
 - Drip candle wax onto the documents **(ADULT SUPERVISION REQUIRED)**
 - Gluing on other textured papers, vellum paper, charms, etc.



The next several pages show examples of the different techniques.



Book prior to assembly (decorated with different types of paper)



Book after having numerous techniques applied to the paper, including burning the edges, instant coffee, and wax drippings

WESTWARD EXPANSION

2. DECORATE THE COVERS AND INTERIOR PAGES (continued)



Back of one of the index cards with collage of black-and-white ephemeral items



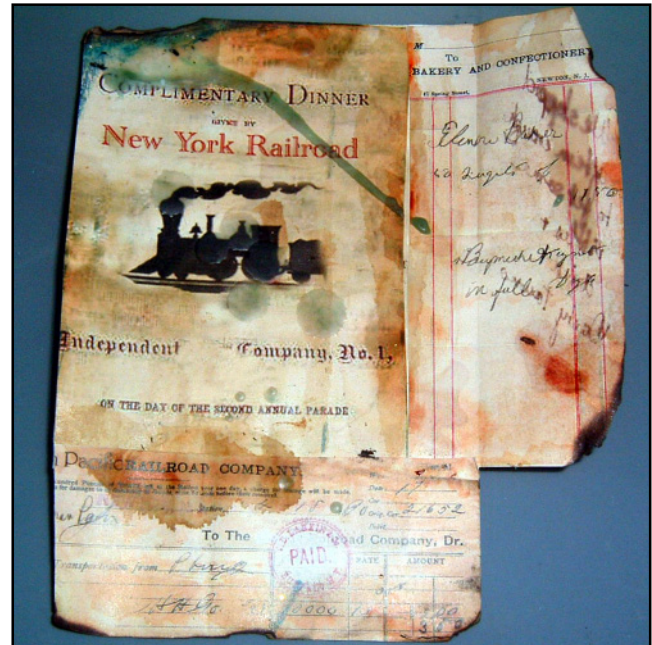
These three index cards have had items attached, been folded, and had their edges colored with earth-tone crayons. Notice how one of the documents has been folded and placed in a small translucent envelope.



WESTWARD EXPANSION

2. DECORATE THE COVERS AND INTERIOR PAGES (continued)

All of these documents and index cards have been aged by dripping candle wax on them, burning their edges, and tearing and folding numerous times.



The translucent envelope holds an item that can be removed. It has also been aged using a variety of techniques.

WESTWARD EXPANSION

3. ADDING THE PAGES TO THE SPINE

- Each embellished index card will be placed on one of the accordion folds located in the center.



The accordion book when laid flat.



Glue is applied to one accordion fold at a time. A single index card is then placed on top.



This is how the first card should look after being glued in place.



The second accordion fold is folded over and glue is applied along the length of the second index card.



This is the what the front of the mini-book will look like after all the index cards have been glued in place.

Back of one of the index cards



Front of one of the index cards

WESTWARD EXPANSION

4. MAKE THE FAUX-LEATHER TRUNK

HELPFUL HINT: This activity will be messy. Wear plastic gloves if you don't want your hands to get dirty and an apron to protect your clothes.

- Use a strong, tacky glue to attach decorative cutouts of embossed wallpaper to the top and sides of a 4" x 6" trunk, as shown.



- **WITH ADULT SUPERVISION and in a well-ventilated area,** spray-paint the interior and exterior of the box a dark brown. Let dry.



- To create a textured surface similar to real leather, use a clean paper towel to spread brown or black shoe polish over the surface, using a swirling technique. Make sure you accentuate the corners, where dirt and grime would have naturally built up over time on a real leather trunk.

WESTWARD EXPANSION

4. MAKE THE FAUX-LEATHER TRUNK (continued)

- Wipe off some of the excess polish. Don't remove it all, since it helps to create some of the texture.



- **WITH ADULT SUPERVISION,** use a mini-iron and drip some beeswax onto the surface of the trunk. Use the iron to help smooth out the wax. This is an optional step, but it does add more texture.



- Brush the surface with a combination of gold metallic and antique white acrylic paint. Use a clean, slightly damp towel to remove some of the acrylic paint.



WESTWARD EXPANSION

4. MAKE THE FAUX LEATHER TRUNK (continued)

- Continue to rub and buff the surface of the trunk. This will bring out the shine from the shoe polish and beeswax. If you wish, you can also use some sandpaper to roughen up the surface and edges even more.

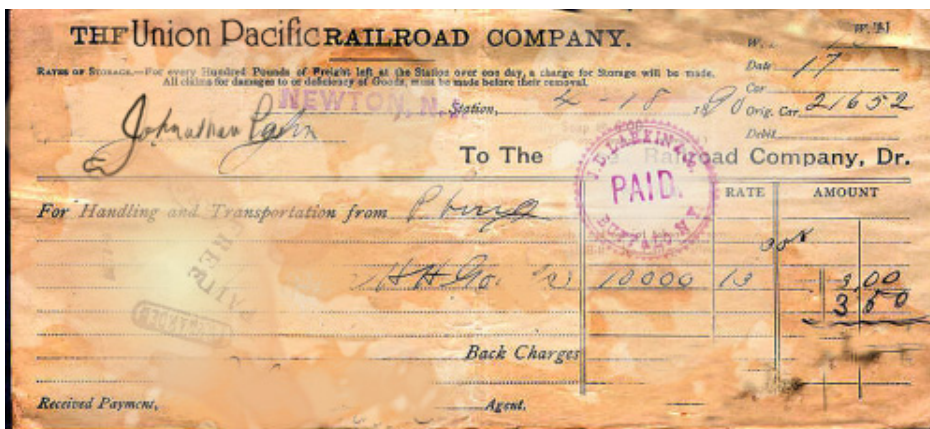
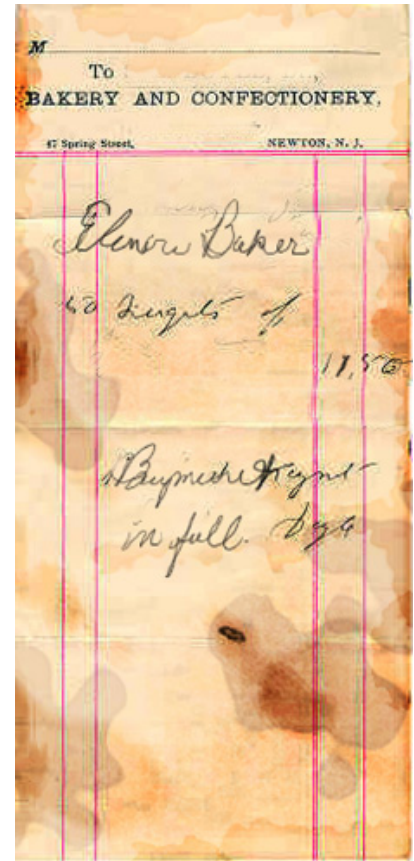
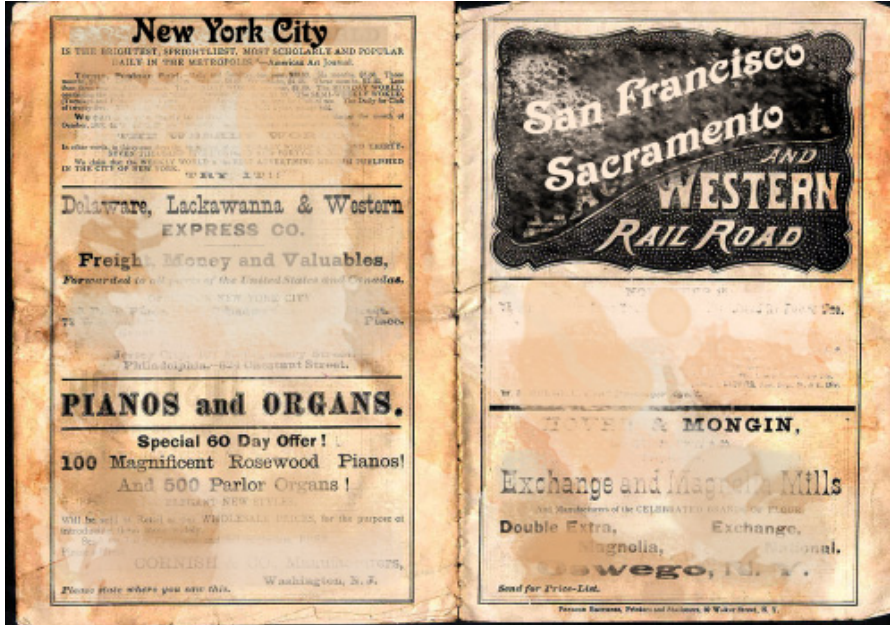


5. DISPLAY

- Place the previously made scrapbook inside the open trunk, as illustrated.



WESTWARD EXPANSION



WESTWARD EXPANSION

THROUGH TIME CARD				
West to California				
STATIONS.	Passenger Express.	Passenger Express.	Passenger Express.	Passenger Express.
Lv. Chicago	9.05 pm			
" Milwaukee	11.35 am			
" Fond du Lac	5.00 "			
" Oshkosh	5.40 "			
" Appleton	5.35 "			
Ar. Green Bay	5.40 am			
Lv. Green Bay	6.30 am		8.00 am	
" Duck Creek	6.47 "		8.55 "	
" Onoda	7.00 "		9.30 "	
" Seymour	7.17 "		10.30 "	
" Black Creek	7.54 "		11.30 am	
Ar. New London Junc.	8.15 "		12.00 pm	
Lv. New London	8.30 "		12.00 "	
" Northport	8.44 "		1.00 "	
" Royalton	8.54 "		1.30 "	
" Manawa	9.07 "		2.10 "	
" Opladenburg	9.25 "		2.40 "	
" Scandinavia	9.40 "		3.30 "	
" Amherst Jc.	10.07 "		4.25 "	
" Plover	10.37 "		5.15 "	
Ar. Stevens Point	11.11 "			
" Meshaun	10.49 "		6.40 "	
Ar. Grand Rapids	11.10 am		7.30 pm	
Lv. Grand Rapids	11.14 am	5.00 am		
Lv. Marquette	12.10 am			
" Ishpeming	1.15 pm			
" Menomonee	6.46 "	3.30 am		
" Oconto	7.38 "	4.25 "		
Ar. Green Bay	9.10 pm	5.45 am		
Ar. Merrillan	11.50 "	11.30 am		
Lv. Merrillan	2.15 "	12.17 pm		
" Alma Centre	2.35 "	12.50 "		
" Bixton	2.47 "	1.40 "		
" Taylor	3.07 "	2.50 "		
" Blair	3.24 "	3.35 "		
" Wittshall	3.44 "	3.49 "		
" Independence	4.02 "	4.30 "		
" Arcadia	4.28 "	5.05 "		
" Dodge	5.00 "	6.20 "		
Lv. Marshand	5.23 pm	7.35 pm		
Lv. Bluff Siding	5.30 pm	7.15 pm		
Ar. Winona	5.50 pm	7.30 pm		
Lv. Marshand	5.30 pm			

CONNECTIONS.

With **Ch. & N.W. Railway**, for all points North and South. With **Milwaukee & Northern Railway**, for all points on that line.

With **Ch. & N.W. Railway**, for all points North and South. With **Milwaukee & Northern Railway**, for all points on that line.

AT AMHERST JUNCTION, STEVENS' POINT AND PLOVER

With **Wisconsin Central Railroad**.

At intervals throughout the

BABY WOMAN—Sophia Grant, an extraordinary Child, only two years old, who has been particularly noted for her perfect reason.

GENERAL GRANT, Jr. the famed Dwarf.

MONS. BILHIN, the French Giant, the Tallest Man alive.

MRS. BATTERSBY, Giantess, the Largest Woman alive.

MR. JOHN BATTERSBY, the Thinnest Man alive.

MISS BRIGGS, the Largest Girl of her age alive.

NEVER-LICABLE "SEA MONS"

This animal, the history of which is full of interest, was first seen in 1823, at the mouth of the Amazon, in the Gulf of Brazil. It has since been seen in various parts of the world, and has been the subject of much speculation. It is a creature of great size, and is said to be the most voracious of all animals. It is said to be the cause of much destruction to the fisheries of the Gulf of Brazil, and is said to be the cause of much trouble to the sailors of the Gulf of Brazil.

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There is no record of his species, and to some it is a greater wonder than natural.



MENAGERIE OF LIVING WILD ANIMALS

AUTOMATON LEOTARD—a fac-simile of the famed Gymnast, from the Polytechnic Institute, London, who gives all exercises from 11 A. M. to 12 M., 1 P. M. to 4 P. M., 5 P. M. to 8 P. M., 9 P. M. to 11 P. M.

COSMORAMAS on view from 10 A. M. to 12 M., 1 P. M. to 4 P. M., 5 P. M. to 8 P. M., 9 P. M. to 11 P. M.

LECTURE ROOM for the Exhibition of the Living Phenomena, with Explanatory Lectures, open at 11 A. M., 3 and 4 P. M., 8 P. M.

SLEEPING BEAUTY, sleeping in gentle slumber, has only to be touched to call forth exclamations of admiration, will be found in the Gallery Hall, in motion throughout the day.

THE DYING ZOUAVE—In this work of Art the blood may be seen gushing from the fatal wound in the chest, the eye rolls in agony, representing nature in the most vivid manner, as he lies in the arms of his comrades.

THE LORDS SUPPER—Representing Jesus and His Apostles, situated in the Hall of Customs.

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Conestoga Wagon



WESTWARD EXPANSION

Conestoga Wagon

Conestoga wagons transported both novice and well-seasoned settlers to the western frontier. Conestoga wagons were the minivans of the 1800s. They served as homes, means of transportation, and storage areas.

In this activity, you will create a model of a Conestoga wagon from recycled materials. With a few simple cuts and folds, and your handy glue gun, your wagon will quickly take shape.



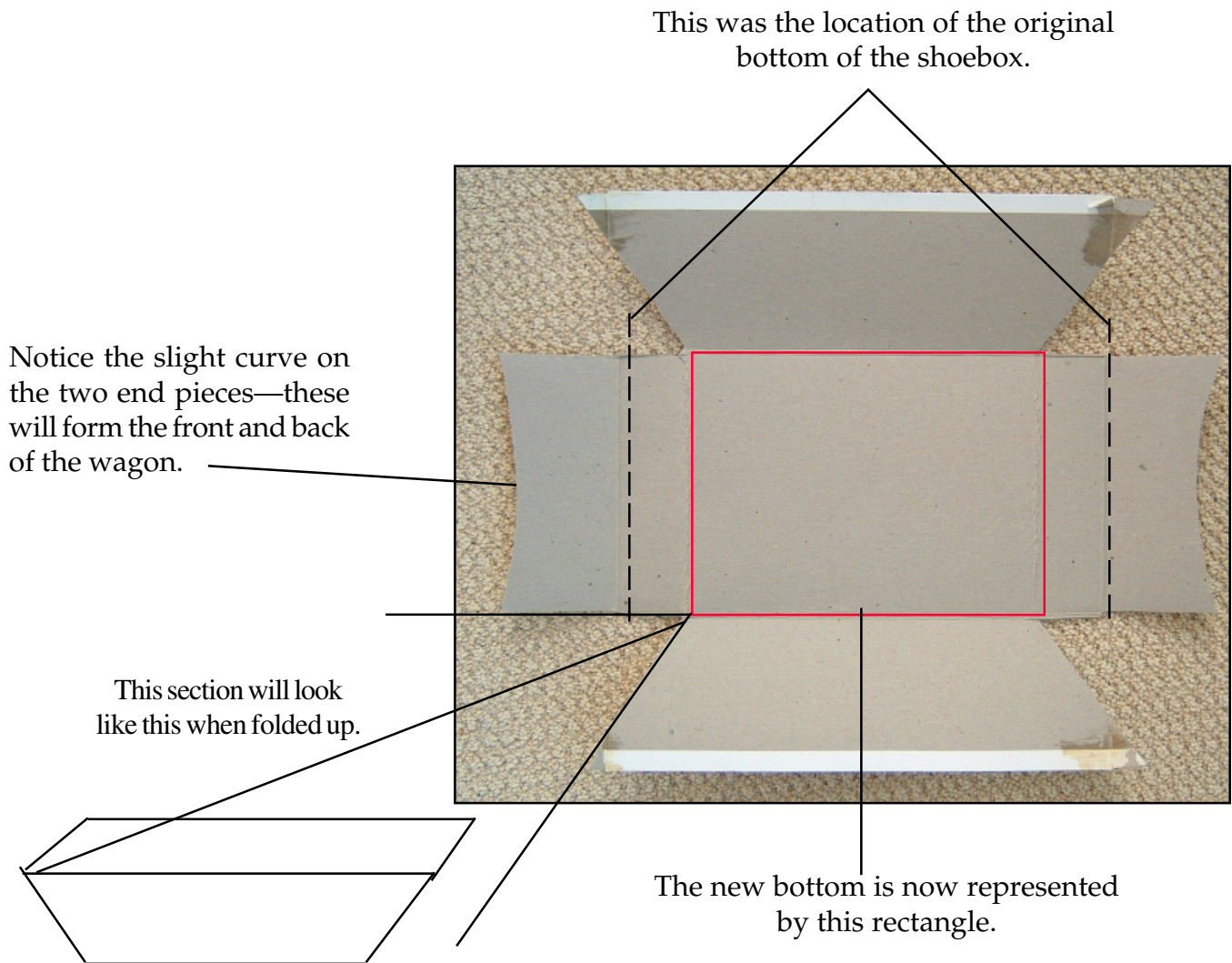
MATERIALS NEEDED

- Small shoebox (we used a woman's size 6)
- Fabric (muslin, linen, canvas)
- Skewers
- Wire cutter
- Ruler
- Strong, tacky glue
- **Hot glue gun and glue (ADULT SUPERVISION REQUIRED)**
- **X-Acto® knife (ADULT SUPERVISION REQUIRED)**
- Scissors
- Oatmeal container
- Corrugated cardboard sheet
- Plaid FolkArt® acrylic paint (dutch blue, rust red, cream, burnt umber, black)
- Spray paint (dark blue)
- 4 plastic lids—2 large and 2 medium
(use clean, empty lids from yogurt containers, small plastic containers, etc.)
- Paintbrush

WESTWARD EXPANSION

1. PREPARE THE WAGON PIECES

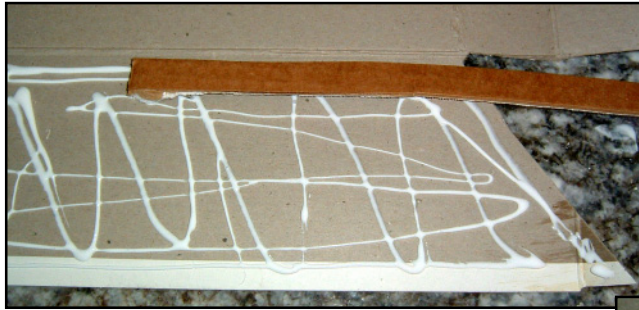
- Cut all four corners of a small shoe box so that it lays flat.
- Measure and then score approximately 1" in from each of the narrow ends.
- At the top of each of these end pieces, cut a slight curve.
- Cut the corners of the two longer sides at an angle. This will allow the corners to fold up to form the wagon.



WESTWARD EXPANSION

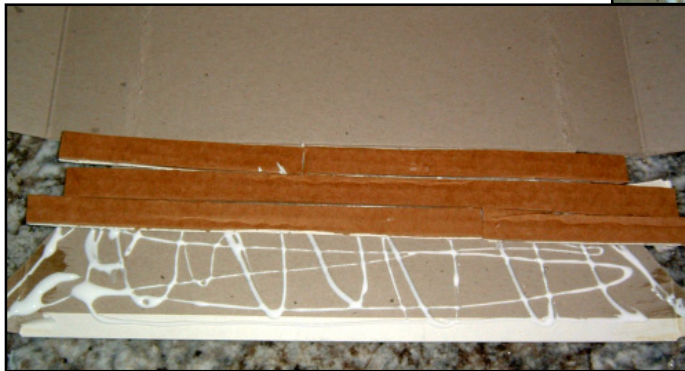
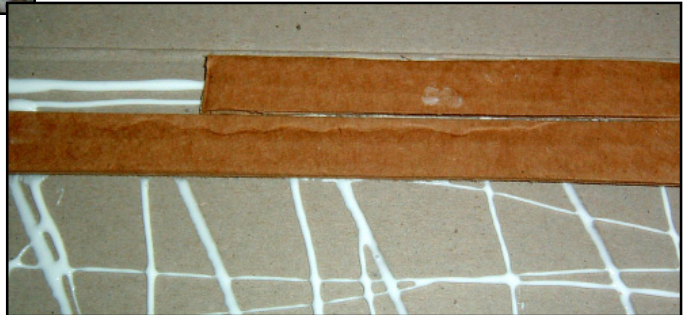
1. PREPARE THE WAGON PIECES (continued)

- Cut strips of corrugated cardboard into $\frac{1}{4}$ "– $\frac{1}{2}$ " lengths.

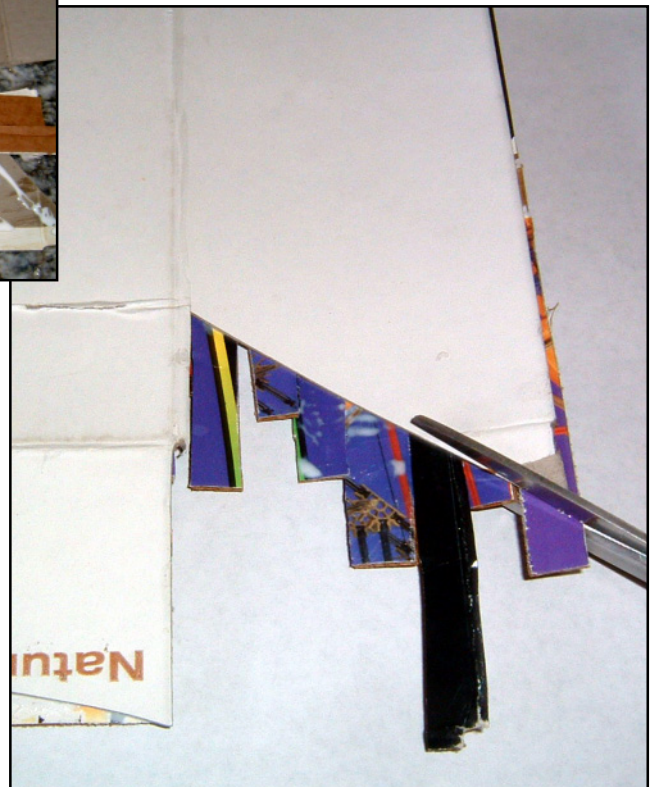


- Place glue on each of the four sides and apply the cardboard strips. Vary the length and arrangement of each of the strips so that they look like wood planking.

- It is essential you use a very strong, tacky glue for this process—standard all-purpose glue will not hold the cardboard as well.



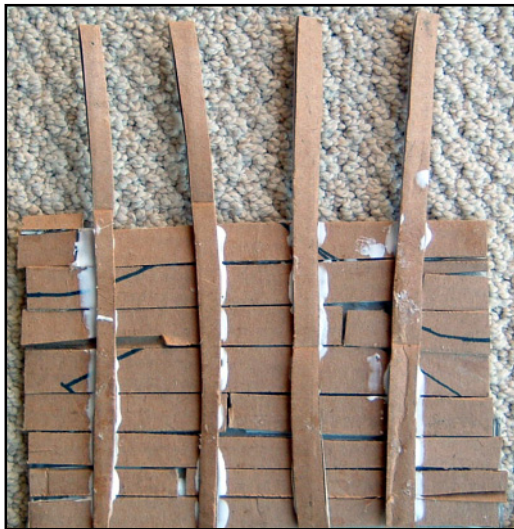
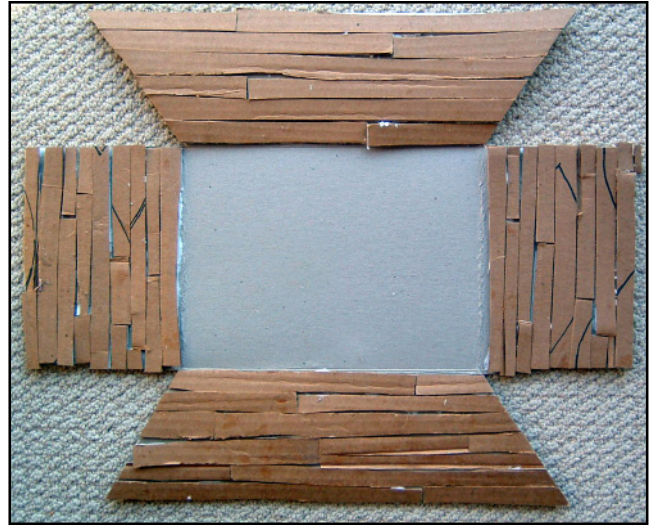
- After the strips have dried, use scissors to trim off the excess cardboard ends.



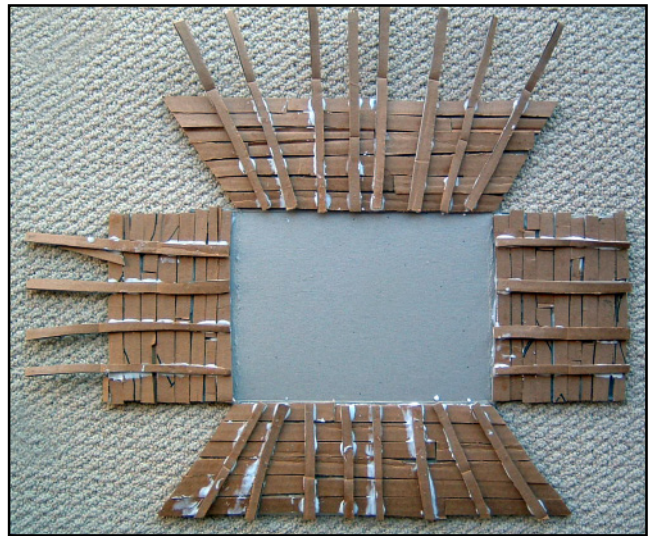
WESTWARD EXPANSION

1. PREPARE THE WAGON PIECES (continued)

- The first layer of cardboard “planking” should look something like the illustration to the right.
- Next, apply the second layer of planking (the vertical strips). These strips will also hold the arched bands that support the canopy.



- Notice how the strips in the center are more straight and the ones toward the ends angle out slightly.

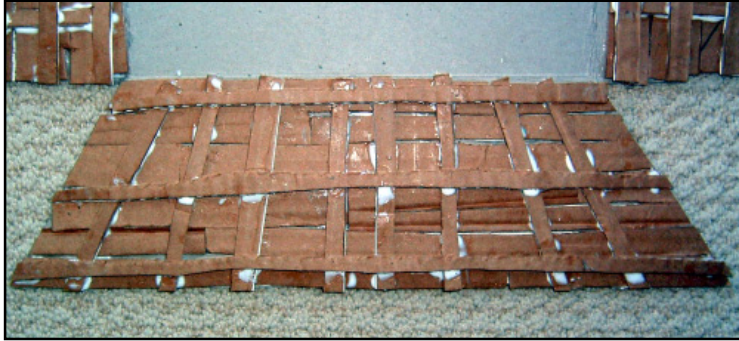


- Trim off the ends of the strips.

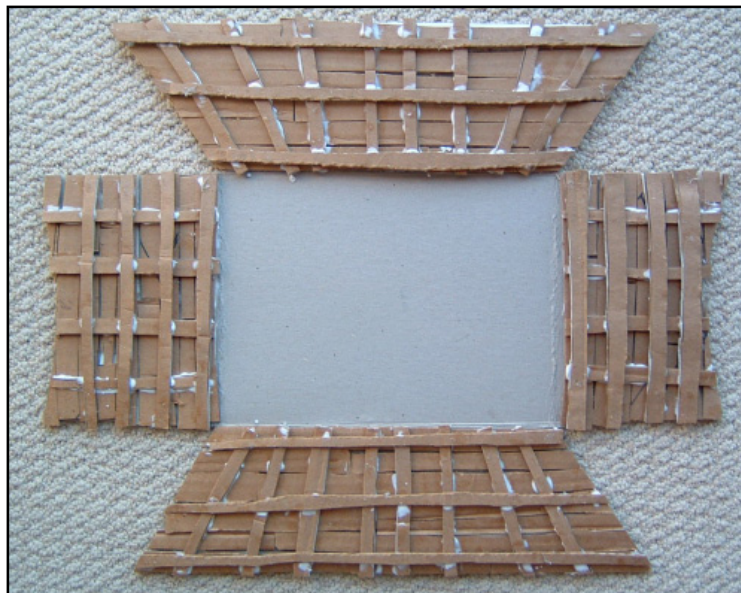
WESTWARD EXPANSION

1. PREPARE THE WAGON PIECES (continued)

- The third layer of cardboard planking will go horizontally. Place four pieces along the two shorter sides and three strips along the longer sides.



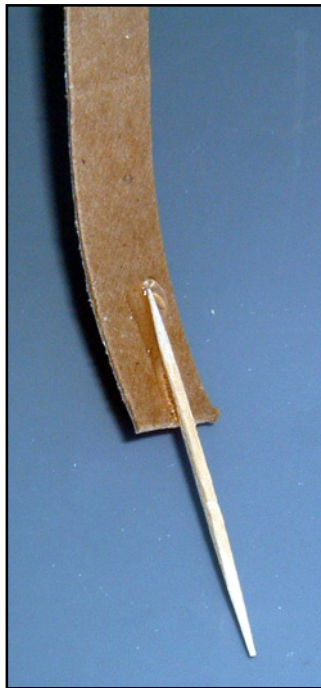
- The photograph below shows how the completed base of the wagon should appear after all the cardboard planking has been glued in place.



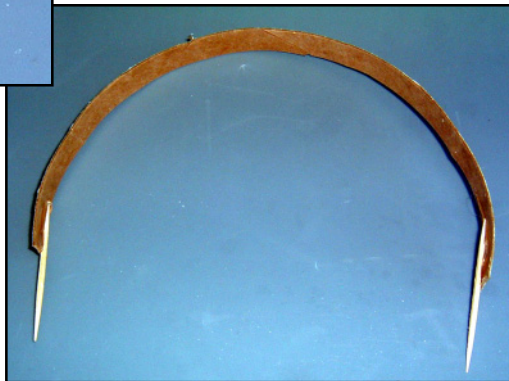
WESTWARD EXPANSION

1. PREPARE THE WAGON PIECES (continued)

- Cut down the length of an empty oatmeal container and remove the bottom. The curvature of the cardboard container will help form both the rim on the wagon's wheels and the frame for the canopy.
- Cut ½" strips from around the width of the oatmeal box.



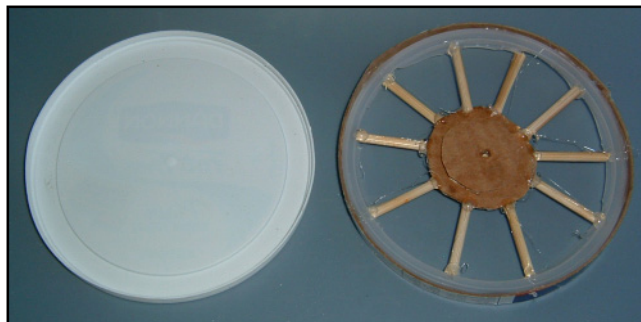
- **WITH ADULT SUPERVISION,** use a hot glue gun to attach toothpicks to the bottom edge of each strip as illustrated.



- You will need eight of these strips to form the canopy frame of the wagon.

WESTWARD EXPANSION

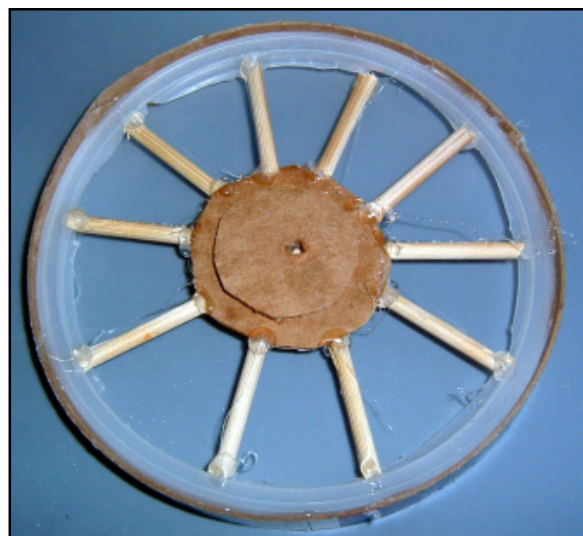
1. PREPARE THE WAGON PIECES (continued)



- To make the wheels, cut out the inside of four plastic lids. Two of the lids should be slightly larger and will be used for the two back wheels of the wagon.

- Cut out four cardboard circles 1½" in diameter and four smaller ones 1" in diameter. Glue the two circles together. These will form the center section of the wheel

- **WITH ADULT SUPERVISION**, use wire cutters to snip off the skewers and create ten small wooden spokes for each wheel.



- **WITH ADULT SUPERVISION**, use hot glue to attach each of the wooden spokes to the cardboard center and the rim of the plastic container top.

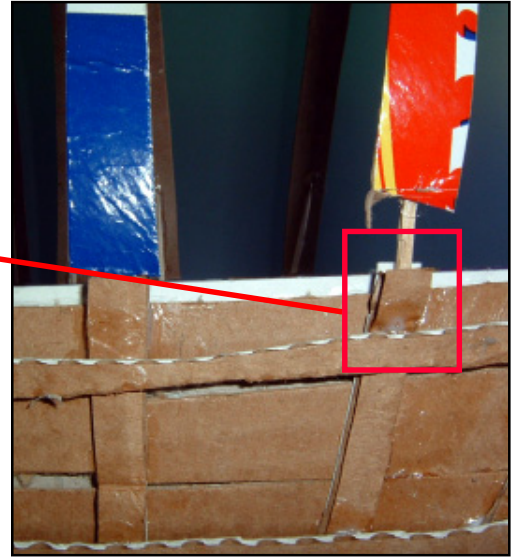
- **WITH ADULT SUPERVISION**, use hot glue to attach strips cut from the oatmeal container around the outside of each of the plastic lids.



WESTWARD EXPANSION

2. TRIAL ASSEMBLY

- To get an idea of how the canopy should look upon completion, arrange the eight top frame pieces along the length of the wagon base.
- The toothpick ends of each piece can be gently pushed into the vertical cardboard planking along each of the sides.
- The center pieces should be slightly lower than the outer end pieces. If necessary, cut down and re-glue some of the center pieces of the canopy frame so that it has a slight curvature.
- The two outer end pieces will also be angled outward.



From the side, the frame for the canopy should look something like this. Note that the center frame pieces are lower and vertical and that the end frame pieces angle outward and are longer.

WESTWARD EXPANSION

3. PAINT THE WAGON

- **WITH ADULT SUPERVISION and in a well-ventilated area**, spray-paint the wagon and canopy frame blue and the wheels rust-red. Let dry.

- If desired, paint the surface of the container with crackle medium and let dry.

- With a slightly damp paint brush, paint over the surface of the wagon with a rustic/dutch blue acrylic paint. Let dry. Don't let the paint get too wet or it will make cardboard soggy.

- Run a dry brush lightly over the surface of the wagon (as illustrated) in order to highlight the texture and planking.



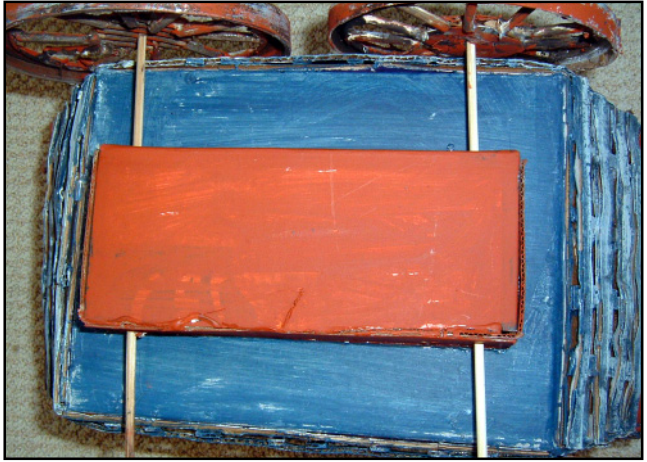
- Water down some burnt-umber paint and add a bit of shadow and highlight to the corners of each of the sections on the outside of the wagon. Repeat this process with a small amount of black acrylic paint.



WESTWARD EXPANSION

4. ADD THE WHEELS

- **WITH ADULT SUPERVISION,** use hot glue to attach a smaller box to the bottom of the wagon.
- Carefully make two sets of holes (for the front and back axles) large enough for a skewer to slide through.
- Slide each of the two back wheels and then the two smaller wheels in place on either side of each skewer.



- **WITH ADULT SUPERVISION,** use hot glue to attach four soda-bottle caps in place on top of the skewer and center cardboard circles as illustrated. Paint these red.



WESTWARD EXPANSION

5. MAKE AND SEW THE CANOPY

- The canopy is a simple rectangle with stitched undersides. Select a piece of fabric that is at least 3" larger on all sides than the canopy frame. The size of the fabric will depend on the size of your shoebox wagon and the canopy frame loops.



- On the two shorter ends, use a gathering stitch (as illustrated).
- To fit the canopy on top of the frame, simply drape it over the top and then gently pull the gathering stitches together so it fits

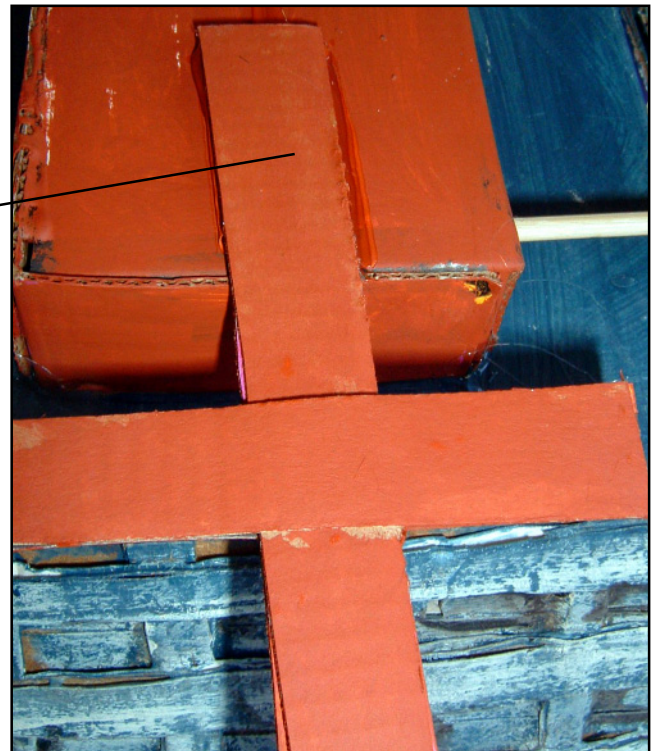
around the top of the two end frames.



WESTWARD EXPANSION

6. ADD THE WAGON HANDLE

- Cut three strips of cardboard approximately 1" wide: two 12" long and one 14" long.
- Cut the 14" strip into four pieces: two of the pieces 3" long and two pieces 4" long.
- **WITH ADULT SUPERVISION**, glue the two 3" pieces and two 4" pieces along on the 12" strip as illustrated.
- Paint the assembled handle red and let dry.
- **WITH ADULT SUPERVISION**, use hot glue to attach the handle to the bottom of the wagon as illustrated.



WESTWARD EXPANSION

7. THE COMPLETED WAGON

- This picture shows the completed wagon. Your wagon may look a bit different depending on the size of the shoebox, the type of fabric you used for the canopy, and the colors you chose to paint it.
- For added interest, place small objects in the wagon that settlers might have carried with them on the journey west.





Faux-Leather Pony Express Display



WESTWARD EXPANSION

Make a Faux-Leather Pony Express Display

Although it operated for just under two years, the Pony Express captured the hearts and spirits of Americans in the mid-1800s.

In this activity, you will create a faux-leather background to which you will apply vintage documents and items from the Pony Express era. It will be up to you how to arrange and layer the documents. We encourage you to add brief written descriptions with facts or interesting information about the Pony Express alongside the images.



MATERIALS NEEDED

- Photocopier
- Brown paper bags
- Assortment of miscellaneous papers
- Dimensional dots (optional)
- Water
- Scissors
- All-purpose glue
- Heavy-duty mounting background
- **Candle (ADULT SUPERVISION REQUIRED)**

WESTWARD EXPANSION

1. PREPARE THE FAUX-LEATHER BACKGROUND



- Tear up, then crumple and dampen sections of a brown paper bag.
- With a wide paintbrush, apply a lightly watered mixture of all-purpose glue to another brown paper bag that has been laid out flat. This will form the background layer.



- Apply the torn, crumpled, and dampened pieces of brown paper bag to the background layer. Create a sheet of layered pieces that covers most of the background layer.

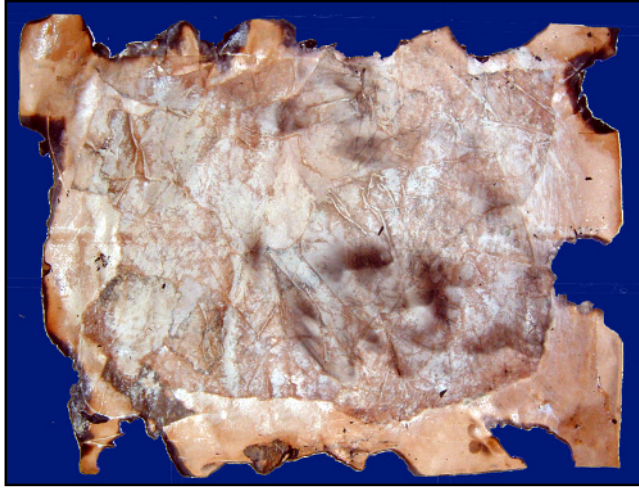
- Let dry.



- Make a trial run of where you want to place the different items on the faux-leather background. (See pages 66–67.)
- On a separate sheet of paper, make a rough drawing showing where you want to place the different items.
- Remove the items.

WESTWARD EXPANSION

1. PREPARE THE FAUX-LEATHER BACKGROUND (continued)



- **WITH ADULT SUPERVISION**, go outside and carefully burn the edges of the faux leather paper. Make sure you have water nearby in case you need to control the flame.

BE VERY CAREFUL.

- Mount the paper onto another background that will highlight the faux-leather paper. We selected dark blue heavy-duty paper for our background.

2. MOUNT THE ITEMS

- Cut out, tear, and **WITH ADULT SUPERVISION**, burn the edges of some of the different items you plan to display.
- Attach these items to other layers of decorative or colored heavy-duty paper.



- For added dimension, position “glue dots” on the back of some of the items.



WESTWARD EXPANSION

3. ATTACH ITEMS TO THE FAUX-LEATHER BACKGROUND

- **WITH ADULT SUPERVISION**, use hot glue to attach the different items. Consult your drawing to determine where each item should go.
- Create either handwritten or typed descriptions of the different items on other pieces of cardstock-weight paper and glue them in the open sections of the faux-leather background (as illustrated).



WESTWARD EXPANSION

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WESTWARD EXPANSION

EXPRESS



PONY





Sailor's Valentine



WESTWARD EXPANSION

Make a Sailor's Valentine

As sailors traversed the seas in search of wealth, their sweethearts and wives often waited for months for word of how their loved ones were faring. Sailors' valentines were sold between 1830 and 1880 to sailors who made ports of call in Barbados. These exquisite works of art were octagonal boxes of cedrella (Spanish cedar). The top of each box was decorated with exotic seashells arranged in a striking mosaic pattern. On occasion, affectionate words were incorporated into the designs.

In this activity, you will re-create this amazing art form using small shells readily available at most craft, fabric, and hobby stores. The shells can be layered, formed into small flowers, or used to spell out words.



MATERIALS NEEDED

- Small papier-mache or wooden craft box
(We found our small box in a local craft store)
- Plaid FolkArt® Acrylic paint
- Crackle medium (optional, but nice)
- Assortment of small shells
- All-purpose tacky glue
- Paintbrush

WESTWARD EXPANSION

1. PAINT AND ANTIQUE THE BOX



- Many craft, fabric, and hobby stores offer inexpensive papier-mache or small wooden boxes for sale. Although sailors' valentines were normally presented on an eight-sided frame or box, we were able to find a six-sided box that met our needs for this project.
- Select the background colors you wish to use for your box and paint both the inside and outside (we chose black). Let dry.

- Paint the surface with crackle medium and let dry.



- Follow the manufacturer's directions to apply the next coat of paint to the surface of the box. We painted a light cream with a touch of green as our second coat. Usually you want to apply the paint with a damp (not wet) brush and paint in one direction. Let this second coat dry.

2. ARRANGE THE SHELLS



- Traditionally, sailors' valentines were made using exotic shells from around the world. You can purchase small bags of shells at most craft, fabric, and hobby stores.

- Before gluing, lay out some possible arrangements you might like on the top of the box.

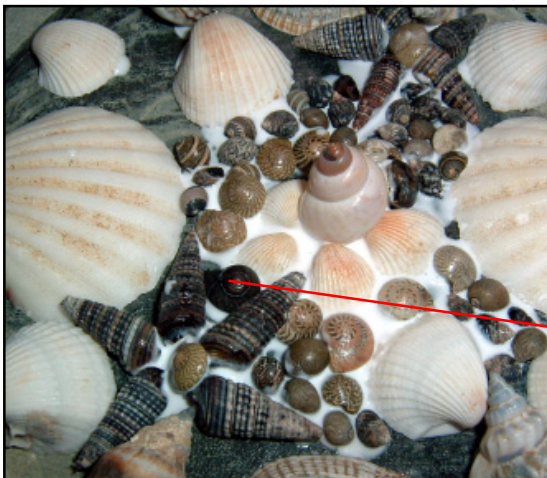
- Arrange outstanding or larger shells in prime locations. You will highlight these shells with the smaller "filler shells."

- When you are content with the general layout, make a rough sketch of the design and remove the shells.

3. MAKE THE PERMANENT DISPLAY

- To add the shells to the top of the box, follow these basic suggestions:

- It is essential that you use a very tacky glue to hold the shells in place.



- Work in small sections at a time.
- Use tweezers to help place smaller shells in place.
- Position shells in layers.
- Use smaller shells as "fillers" in between the larger shells.

WESTWARD EXPANSION

3. MAKE THE PERMANENT DISPLAY (continued)

- Try gluing larger shells around a smaller one to create miniature shell “flowers.”



WESTWARD EXPANSION



Sod-House Model



WESTWARD EXPANSION

Make a Sod-House Model

Early homesteaders had to construct their homes from readily available materials. Unfortunately for those who settled on the Great Plains, the land had few trees. Resourceful settlers therefore constructed their homes from packed earth or sod and built solid homes called “soddies.” Soddies provided a very basic form of shelter, but they lacked comfort. Vermin and animals could easily get in, and the houses could leak during rainstorms, resulting in muddy floors.

In this activity, you will make a simple model of a soddie using readily available materials. The roof is removable, which will allow you to add miniature furnishings and other details to embellish the interior.



MATERIALS:

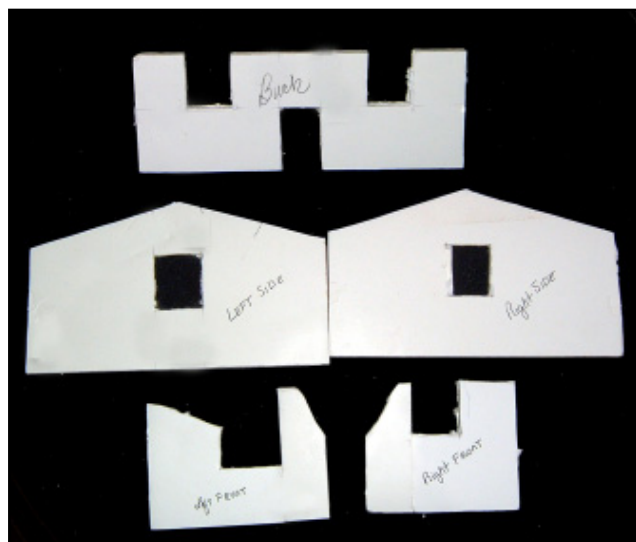
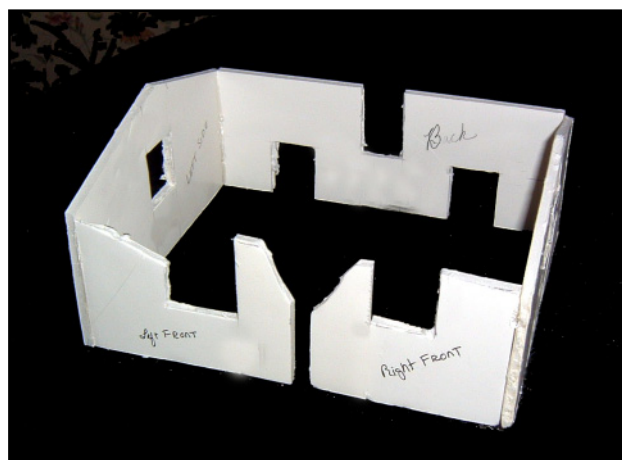
- Activa Celluclay® (instant papier-mache)
- Foamcore board
- Copy machine
- Ruler
- Ceiling tile (inexpensive; will be used as the base for the soddie)
- Plaid FolkArt® acrylic paints (in earth tones)
- Brown spray paint
- Paintbrush
- Small bits of rocks, sticks, shrubbery, etc.
- Scissors
- Straw
- **Hot glue gun and glue (ADULT SUPERVISION REQUIRED)**
- **X-Acto® knife (ADULT SUPERVISION REQUIRED)**
- Water
- Small spatula

WESTWARD EXPANSION

1. CONSTRUCT THE SODDIE STRUCTURE

- Make a copy of the soddie templates on pages 79–81.

• **WITH ADULT SUPERVISION,** use an X-Acto® knife to cut out each of the template pieces from a sheet of foamcore board.



- **WITH ADULT SUPERVISION,** use hot glue to assemble the four walls of the structure.

2. MAKE THE SOD

- In an old container, add 8–10 cups of the Celluclay instant pulp papier-mache. The Celluclay should not be packed, but broken apart and fluffy.



- Cut up 1–2 cups of straw into small pieces.



- Add approximately two cups of water to the Celluclay/straw mixture and mix together thoroughly until it has a clay-like consistency. If the mixture is too wet, add more Celluclay; if too dry, add a bit more water.

WESTWARD EXPANSION

3. APPLY THE “SOD”

- Place the assembled foamcore structure on its side (as illustrated) and begin applying and spreading the Celluclay/straw “sod” mixture.
- As you add the mixture to the inside walls, the structure will become heavy. Be careful when you apply the mixture that the sides of the house don’t come apart.
- After applying the mixture to the inside walls, place the structure onto a ceiling tile.
- **HELPFUL HINT:** Ceiling tiles are small, inexpensive squares that can be purchased at most hardware stores. You may use something else as a base if you like, but the plaster coating on the ceiling tile helps form a bond with the sod mixture—almost like a glue.
- Use a small spatula to help you spread the mixture onto the sides of the structure. If you wet your fingers a bit, this will also help you smooth out the surface.
- Create the appearance of bricks by randomly drawing horizontal and vertical lines on the walls surface. These don’t have to look perfect—you just want to give the “appearance” of sod bricks. Set the structure aside to dry.



WESTWARD EXPANSION

4. PAINT AND DECORATE THE INTERIOR

- **WITH ADULT SUPERVISION and in a well-ventilated area**, lightly spray-paint the surface brown. Let dry.

- Paint the outside and inside of the soddie with earth-tone colored acrylic paints. Use a slightly damp paintbrush to highlight the surface of the interior and exterior.

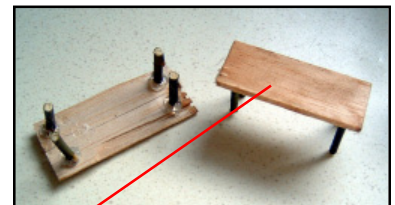
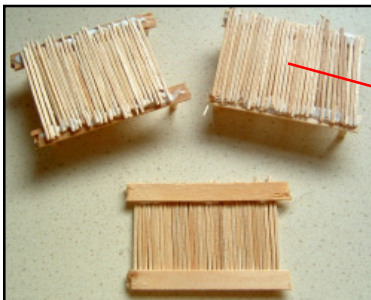


- Use a thin-tipped paint brush and a combination of black and burnt-umber acrylic paint to highlight the lines separating each of the blocks.

- Be careful not to make the paint too watery or the walls may become soggy.

- Place miniature furniture, linens, pots and pans, etc. inside the interior of the soddie.

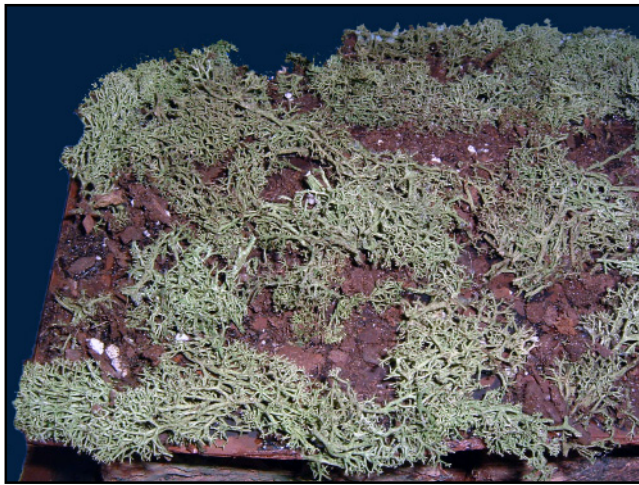
- **HELPFUL HINT:** Miniature dollhouse items can be purchased at many craft, fabric, and hobby stores. Small benches can be made by gluing toothpicks to popsicle sticks. Large oval beads can serve as barrels. Pieces of faux fur can serve as blankets.



WESTWARD EXPANSION

5. ASSEMBLE THE SOD ROOF

- Cut two roof sections from ¼" foamcore board.
- **WITH ADULT SUPERVISION**, use hot glue to attach the two ends together.
- **WITH ADULT SUPERVISION and in a well-ventilated area**, spray-paint the surface brown. Let dry.



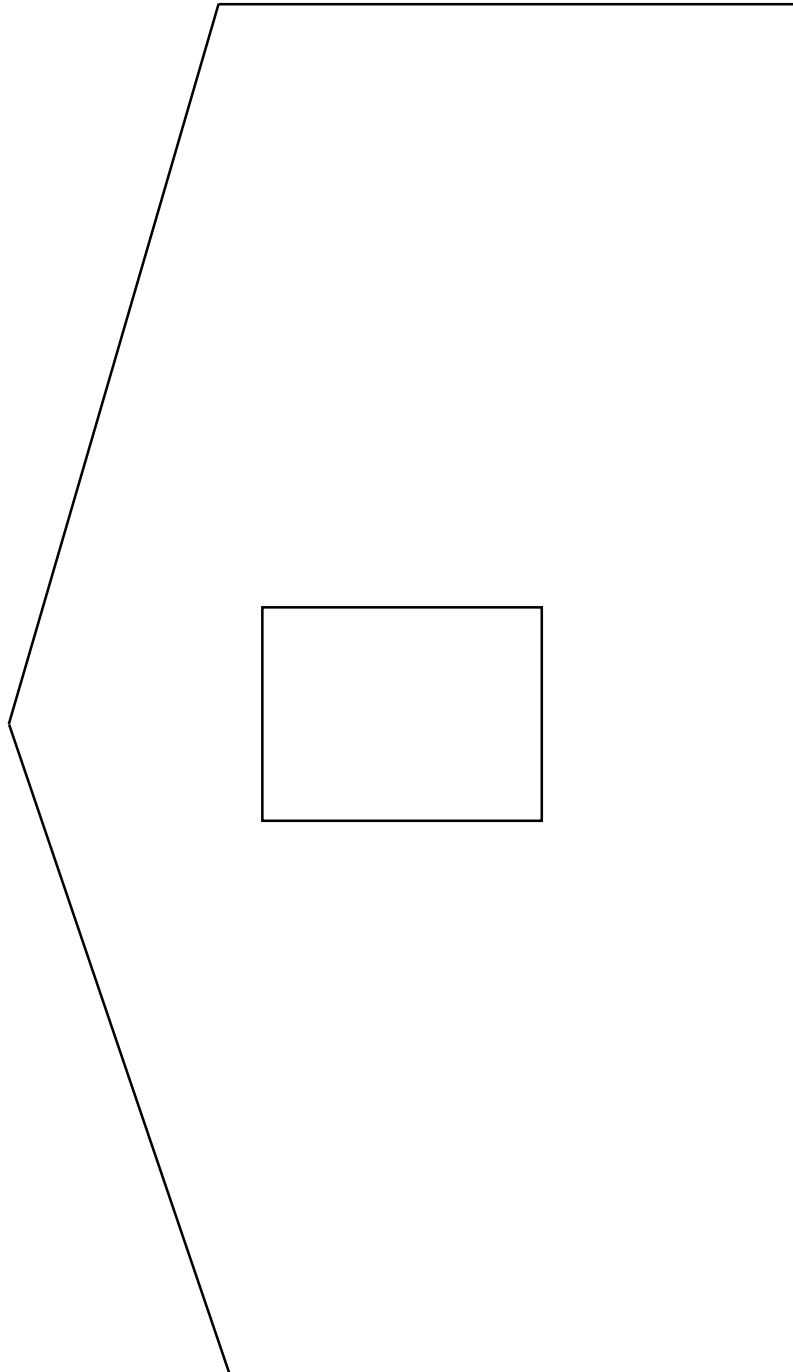
- Spread the surface of the roof with tacky glue and place bits of dried moss, dirt, and rock onto the surface.



WESTWARD EXPANSION

SODDIE SIDE

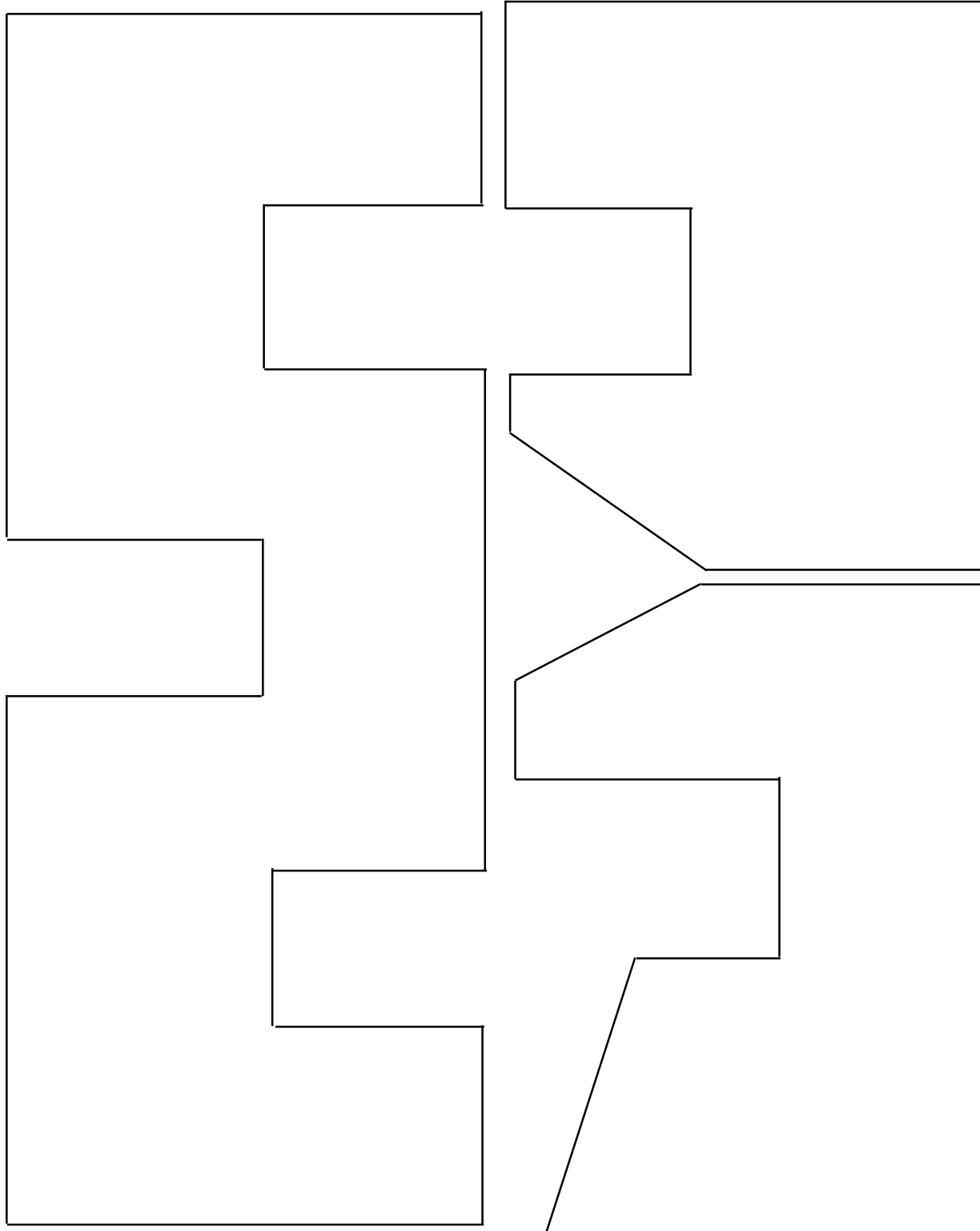
Cut two from ¼" foamcore board



WESTWARD EXPANSION

SODDIE FRONT AND BACK

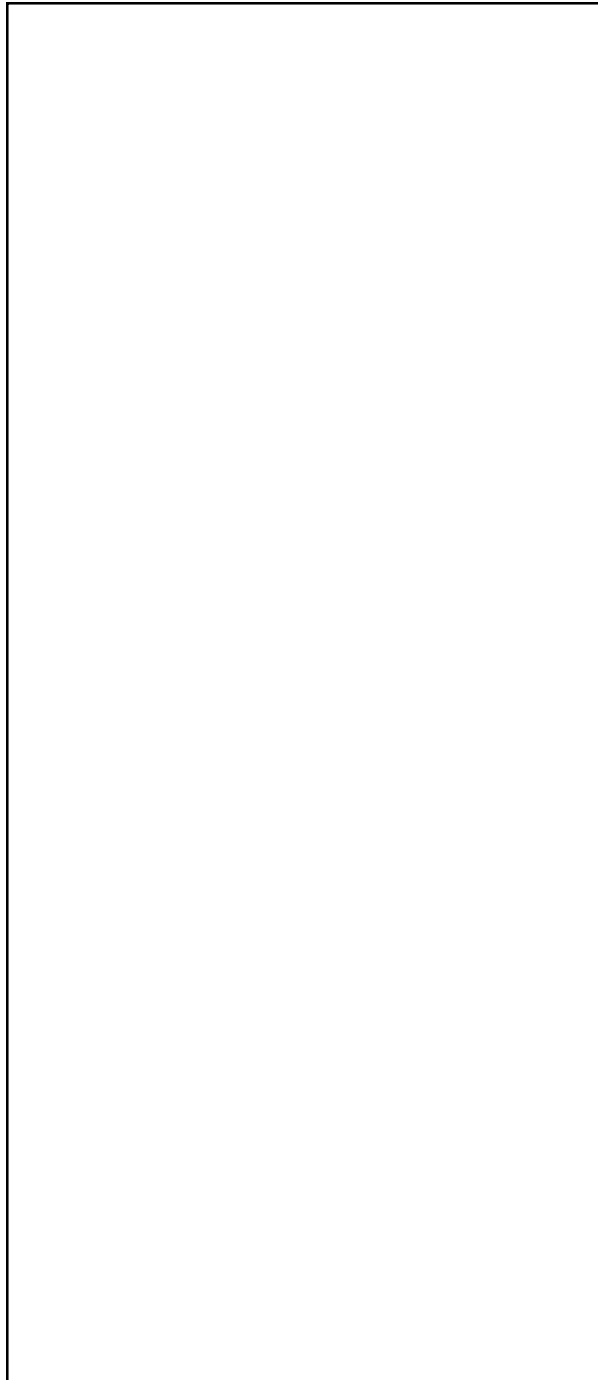
Cut one of each piece from $\frac{1}{4}$ " foamcore board



WESTWARD EXPANSION

SODDIE ROOF

Cut two from ¼" foamcore board





Early American Weathervane



WESTWARD EXPANSION

Make a Working Model of an Early American Weathervane

Since ancient times, the rooster has been used as a design element in weathervanes. People in ninth-century Europe placed it on the roofs of churches to ward off evil and to proclaim good faith. When the first Europeans arrived in America, they also brought this tradition along with them, attaching weathervanes to the tops of barns, public buildings, churches, and houses. Local craftsmen, farmers, and carpenters experimented with old designs and also created new ones based on animals and items native to North America. Weathervanes inland took the form of cows, pigs, and horses, while on the coast fish, whales, and sailboats were used. In both inland and coastal areas, portrayals of Indians were also popular. By the mid-19th century, the eagle became a popular weathervane theme.

The following activity will allow you to re-create an early American weathervane using simple materials.



MATERIALS NEEDED

- Polymer clay
- **Oven (ADULT SUPERVISION REQUIRED)**
- Sheet of ½" styrofoam
- Miscellaneous wood pieces to form the base for the weathervane
- Small wood letters for N, S, E, and W
- Two skewers
- Seven pony beads that will fit on the skewers
- Plaid FolkArt® acrylic paint (copper, turquoise blue, sage green)
OR Sophisticated Finishes copper patina paint kit
(the paint actually has real copper which, when activated by the patina solution, turns the typical blue-green color)
- All-purpose sealer or gesso
- Paintbrush
- **Hand drill (ADULT SUPERVISION REQUIRED)**
- Small piece of slate, slate tile, or piece of wood
- Plastic straw
- Sandpaper
- **Hot glue gun and glue (ADULT SUPERVISION REQUIRED)**

WESTWARD EXPANSION

1. PREPARE THE CLAY AND TRANSFER THE DESIGNS

- Make a copy of the rooster and arrow patterns on pages 92–93.
- Transfer the design to a sheet of ½" styrofoam and cut out the basic rooster and arrow shapes.
- Insert the skewer into the arrow's head and tail.
- Use a rasp, sandpaper, or other tools to sculpt the rooster's feathers and to apply details to the arrow's head and tail.



- Paint all styrofoam surfaces and the skewer with an all-purpose sealer such as gesso or other paint that will adhere to styrofoam. Let dry.



WESTWARD EXPANSION

2. ADD THE COPPER PAINT

- Paint the entire surface of the rooster and arrow with copper acrylic paint or the copper patina finish. (Although the patina is more expensive, it will create a more authentic reproduction.)

SOMETHING TO TRY:

Pages 89–91 have instructions for creating a patina on copper.



- Use the patina solution that came with the copper patina kit, or lightly sponge the surface of the copper acrylic with a mixture of turquoise blue, gray, and light green in order to create a faux-patina finish.

3. ASSEMBLE THE WEATHERVANE

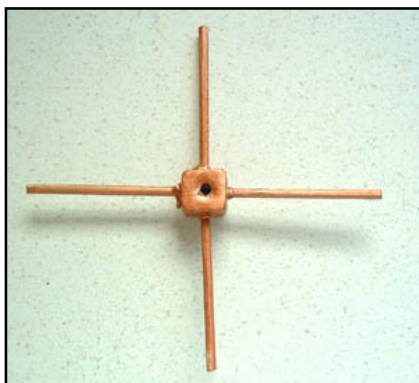
- Take off the arrowhead and carefully insert the skewer through the bottom part of the weathervane, where the rooster's feet are located. Place the arrowhead back on the skewer and secure both ends with hot glue.



WESTWARD EXPANSION

3. ASSEMBLE THE WEATHERVANE (continued)

- Cut a 1" piece of straw and insert it into the bottom of the rooster. Make sure no styrofoam blocks the interior of the straw.



- Form a small square from polymer clay and cut one skewer into four 3" pieces. Position the skewer pieces as illustrated and make a hole the size of the skewer to go through the center of the clay piece. Remove all the skewer pieces, and **WITH ADULT SUPERVISION**, bake the clay according to manufacturer's directions.

- After the clay has cooled, use hot glue to hold each skewer in place.

- Paint each letter with copper acrylic paint and add small amounts of turquoise blue paint to create a patina effect. Add a pony bead large enough to fit over the end of the skewer to each letter.



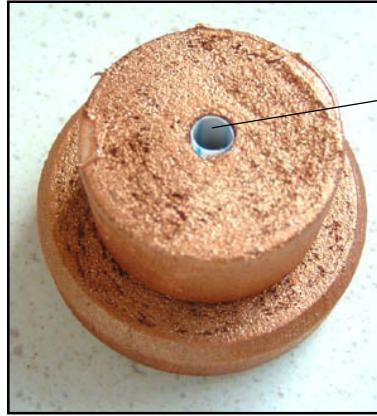
- **WITH ADULT SUPERVISION**, use hot glue to add each of the letters for N, S, E, and W to the ends of each of the skewers.



WESTWARD EXPANSION

3. ASSEMBLE THE WEATHERVANE (continued)

- To create the base of the weathervane, glue together the wood pieces that have holes drilled through the center. If the holes are too large to hold the skewer for the weathervane, cut a small piece of straw and insert it into the hole.



- Next, assemble the remaining wood pieces and the N, S, E, and W pieces as illustrated.

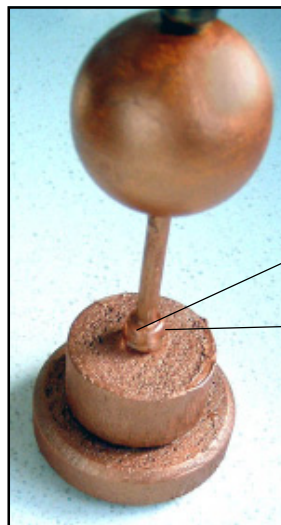
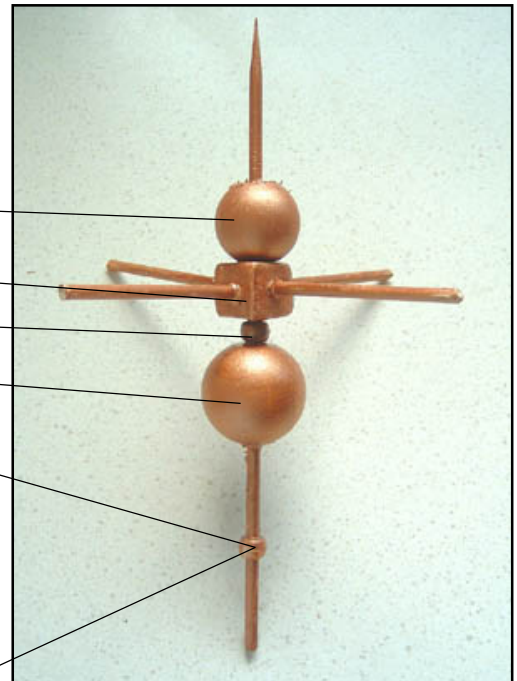
Medium-sized bead

Clay bead with N, S, E, and W dowels

Pony bead

Larger bead

Pony bead positioned so it rests on the top of the base



- Insert the skewer into the base.

WESTWARD EXPANSION

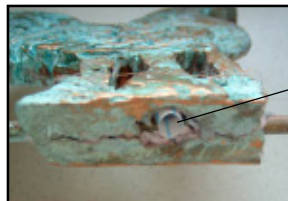
3. ASSEMBLE THE WEATHERVANE (continued)

- To make a platform for the weathervane, you can use slate or wood. Slate is very soft and can be easily broken into interesting shapes. **WITH ADULT SUPERVISION**, drill a small hole the size of the skewer into your selected base material.



- Position the assembled skewer over the hole and slide it inside. Use hot glue to secure the skewer to the slate or wood base.

- Place the third pony bead at the top of the skewer and place the weathervane on top. The weathervane should rotate freely, yet be secure enough that it won't come off the skewer. It may take a little effort to get this to work correctly. To help orient your weathervane, use a small compass and turn the N, S, E, and W section so the letter "N" faces north. Hold in place with a little bit of glue.



WESTWARD EXPANSION

Make a Copper Patina Solution

Patina is the product of a chemical reaction that occurs when copper is exposed to the atmosphere. The beautiful blue-green color associated with copper develops over many years, beginning with the surface turning a uniform brown over a period of weeks. As the process continues, the copper creates a protective coating (patina) to protect against corrosion. The amount and speed at which the patina forms depends on its exposure to salt, moisture, and airborne pollutants such as sulfur.

In drier climates, copper will form a brown to black patina, whereas the patina in coastal or moist climates will be more grayish- to bluish-green. In most cases, copper will achieve a consistent patina in ten to 30 years.

MATERIALS NEEDED

- Copper
- Dishwashing detergent
- Scouring pad
- White vinegar
- **Non-detergent ammonia (ADULT SUPERVISION REQUIRED)**
- Sea salt (non-iodized)
- Plastic bag
- Lemon juice
- Table salt
- Gloves
- Glass or plastic container
- Wax paper
- Labels
- Mask

SAFETY FIRST: Handle the ammonia with care. It has a strong odor and should not be breathed. You should wear a mask and gloves and label all containers with their contents, as well as keep them away from young children.

WESTWARD EXPANSION

COPPER PATINA FORMULA 1

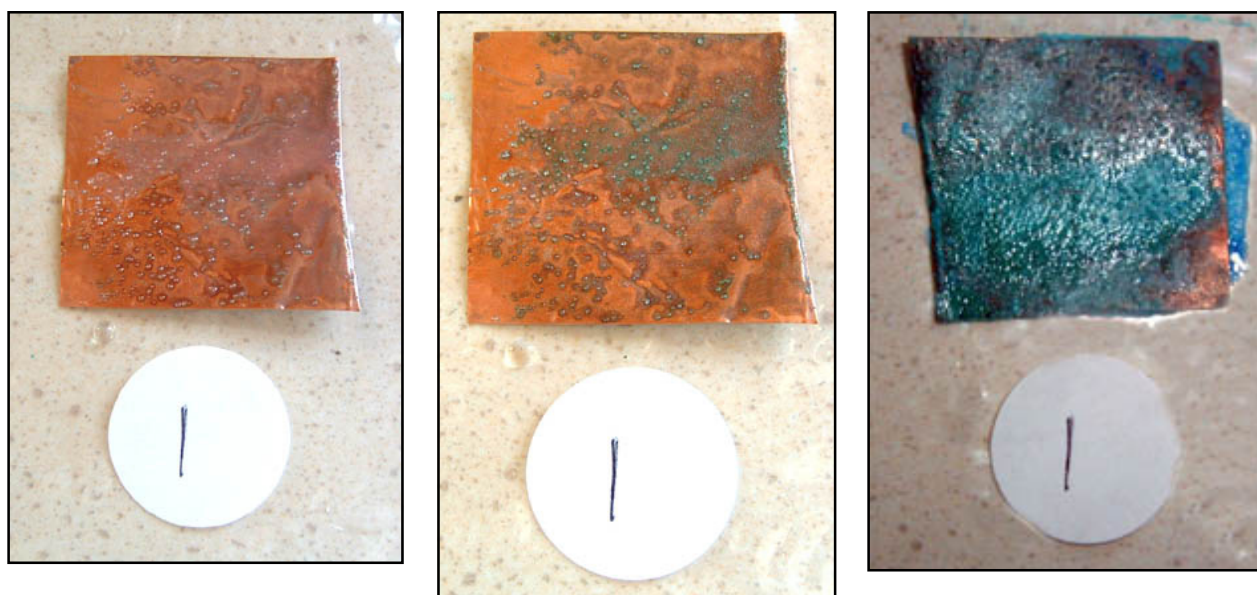
This patina will result in a greenish-gray appearance.

- ½ cup white vinegar
- **6 tablespoons non-detergent ammonia (ADULT SUPERVISION REQUIRED)**
- ¼ cup sea salt

DIRECTIONS:

1. Clean the copper to remove all oil and dirt. (Dishwashing detergent and a brillo pad work well.) Rinse well and dry.
- 2. WITH ADULT SUPERVISION** and while wearing gloves, mix up a batch of the patina solution in a plastic or glass container. Do not use metal—it will oxidize.
3. Brush the patina solution onto the object and place it inside a plastic bag to dry.
4. Continue to reapply the solution until a bright greenish-gray patina occurs.
5. Avoid rubbing the surface of the object in order to prevent the patina from coming off.

Shown below is the change that occurred during two applications of the solution over a period of approximately two hours.



COPPER PATINA FORMULA 2

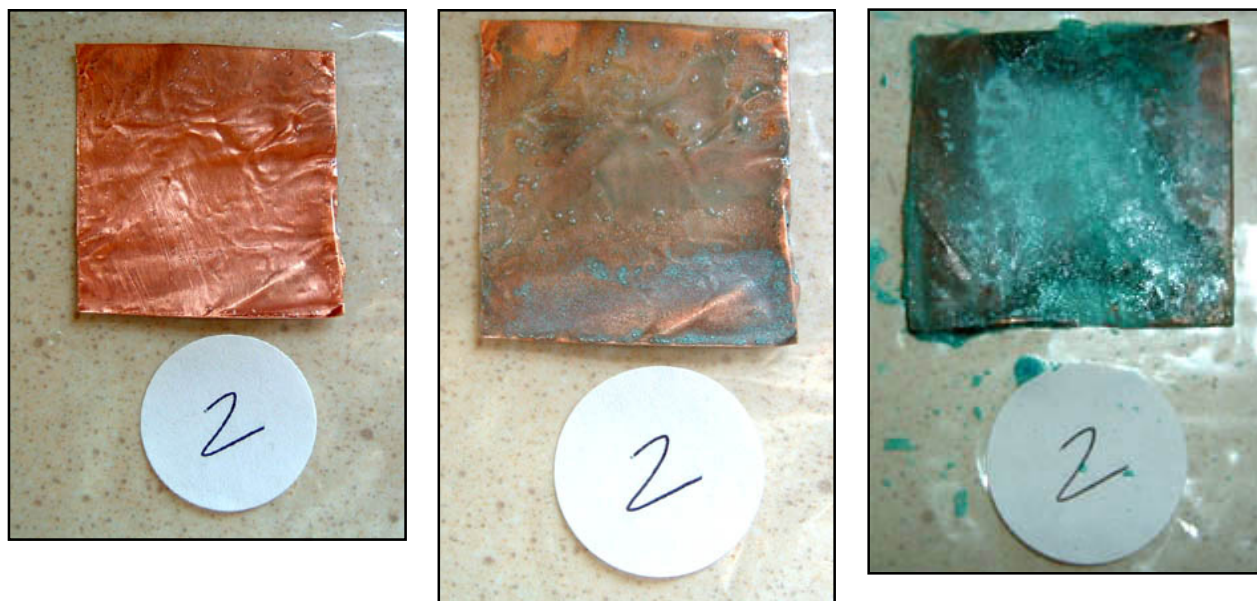
This patina will result in a greenish appearance.

- $\frac{1}{4}$ cup lemon juice
- $\frac{1}{4}$ cup sea salt
- $\frac{1}{4}$ cup non-detergent ammonia
(ADULT SUPERVISION REQUIRED)
- $\frac{1}{4}$ cup vinegar

DIRECTIONS:

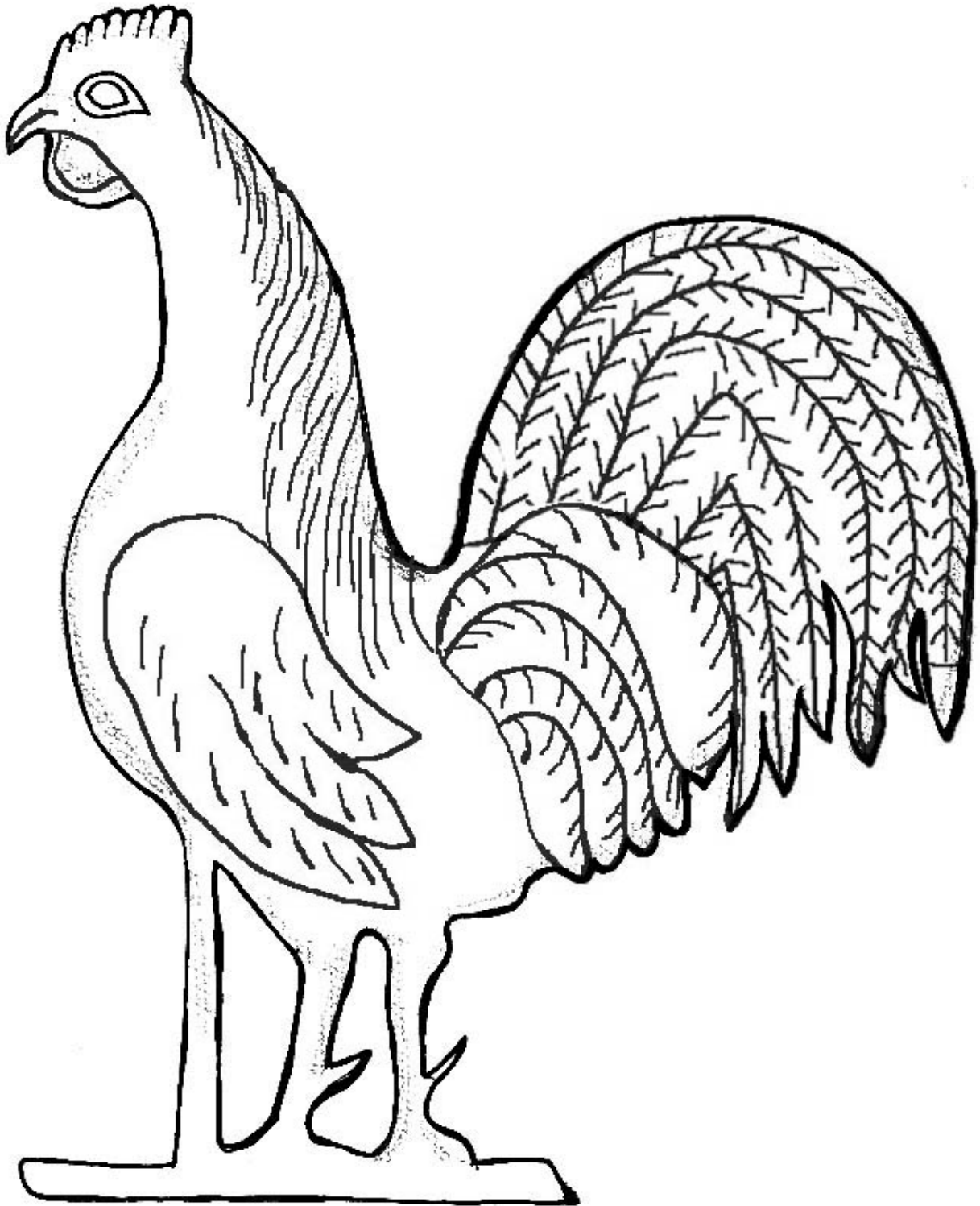
1. Clean the copper item to remove all oil and dirt. (Dishwashing detergent and a brillo pad work well.) Rinse well and dry.
2. **WITH ADULT SUPERVISION** and while wearing gloves, mix up a batch of the patina solution in a plastic or glass container. Do not use metal—it will oxidize.
3. Brush the patina solution onto the object and place it inside a plastic bag to dry.
4. Continue to reapply the solution until a bright greenish-gray patina occurs.
5. Avoid rubbing the surface of the object in order to prevent the patina from coming off.

Shown below is the change that occurred during two applications of the solution over a period of approximately two hours.



WESTWARD EXPANSION

ROOSTER TEMPLATE

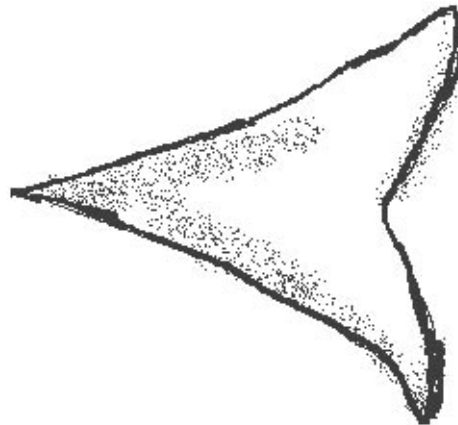
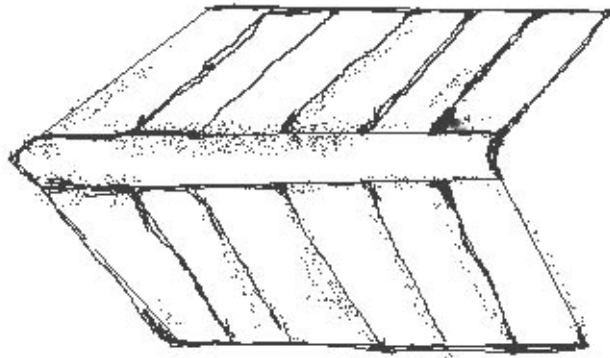


WESTWARD EXPANSION

DIRECTION AND ARROW TEMPLATES

HELPFUL HINT: If you are unable to find letters (for directional indicators on the weathervane), make a copy of the letters below and cut them out from a sheet of thin cardboard. Paint and decorate as previously instructed.

N S E W



EXTENSION ACTIVITIES FOR GRAPHICS

1. DESCRIPTIVE VOCABULARY

Trace only the image's outline, leaving the inside space empty. Write words inside the empty space about the culture or time period being studied.

2. STAMPS

Make stamps out of craft foam using smaller copies of the motif. (Craft foam is a thin, dense, easily cut and glued foam available at most craft or fabric stores.) Glue the selected shapes onto pieces of foamcore board or wood. Use as you would any type of rubber stamp.

3. RUBBINGS

Make a photocopy of the design. Glue it onto a sheet of tag board or posterboard. Cut out the shape and glue it onto another sheet of the same material. Use dimensional paint to outline the edges of the designs and let dry. Place a piece of paper over the slightly raised design and make a rubbing of the design.

4. COLLAGE

Enlarge the design (if necessary) and use a variety of collage materials to decorate the interior of each design. Use decoupage medium to layer different papers, threads, and lightweight fabric over the design. Embellish with dimensional paint.

5. STENCILS

Copy the designs onto cardstock. Use an X-Acto[®] knife to carefully cut out the interior of each design. (Don't try to cut out the details on the inside of each motif—just the outline of the design). Use stencil paint to transfer the shape onto other surfaces. Embellish with dimensional paint if desired.

6. "STAINED GLASS" PICTURES

Make a transparency of the design. Outline the design with Plaid Gallery Glass[®] leading and let dry. Fill the spaces inside the leading using Plaid Gallery Glass[®] Window Color. Tape the finished design onto a window for a "stained glass" effect.

WESTWARD EXPANSION

7. TOOLING FOIL

There are a variety of different colored “tooling foils” available at craft and fabric stores. The foil is thicker than aluminium foil but easy to “tool” with simple tools such as a pencil or pen. Make a copy of the design. Tape the design onto the foil. Trace over the design to transfer it onto the metal surface. For a unique look, use Plaid Gallery Glass® Window Color on the metal to give it an enameled appearance. Mount as desired.

8. FABRIC DESIGNS

Transfer the designs onto muslin fabric using either fabric transfer paper, pens, or a technique of your choice. Use embroidery thread, yarn, fabric paint, and/or iron-on fabrics to decorate the motifs.

9. SANDPAPER DESIGNS

Make a copy of the design. Place a piece of carbon paper underneath the copy and place onto a sheet of sandpaper. Trace over the design to transfer it onto the sandpaper. Use chalk, colored pencils, or some other medium to decorate the motifs.

10. HANDMADE PAPER

There are many different books available on how to make handmade paper. It is an easy and fun activity that only requires basic supplies and offers a wonderful textured finish when completed. Use handmade papers as a background surface or collage materials for the designs.

11. BOTANICAL COLLAGES

Make a copy onto a heavier cardstock paper. Select a variety of grains such as rice, beans, pasta, etc. to glue on the inside of each shape.

12. HIGHLIGHTING WITH METALLIC PAINT

Plaid also offers a product called Tip-Pen Essentials®. This is a craft tip set (for use with Plaid FolkArt® acrylic paints), which allows for fine lines, beads and lettering. This set is easy and fun to use. After the design has been decorated as desired, consider using acrylic paints with the Tip-Pens to add details.

13. "PLASTER CARVINGS" AND CLAY TILES

This activity requires more supervision, but can offer two activities in one.

- a. Use a small cardboard box measuring approximately 8½" x 11". Line the interior with aluminum foil. Mix a sufficient quantity of plaster of Paris and pour into the interior of the box. Allow to harden and dry. Remove the dried plaster from the box.
- b. Place a copy of the design onto the surface of the plaster and trace over the design until it is transferred onto the plaster below. Remove the copy and use linoleum tools to carefully go over the design to further accentuate the motifs.
- c. To make the tiles, use polymer clay that has been rolled to an even thickness and is the size of one plaster form. Place the clay on top of the side of the plaster that has the design and press the clay evenly and firmly onto the carved design. Remove the clay and bake as recommended on the package.
- d. Decorate the tile as desired using Plaid FolkArt® acrylic paints.

14. PIERCE-PATTERN PAPER

Piercing the motif with a needle will add interesting dimension and texture to the design. Use heavy cardstock paper for this project. Tape or glue a copy of the selected motif onto one side of the cardstock. Place the paper onto a piece of cardboard. Use a darning needle or nail or experiment with different piercing tools (such as tacks, needles, toothpicks, etc.) that create different sizes of holes. Vary the pattern of the holes being made by changing the direction: go in circles, on the diagonal, vertically, or horizontally. Create shapes such as stars, circles, etc. within the shapes.

15. HEAT-TRANSFER-TO-WOOD TRIVET

Make a reduced-size photocopy of a selected design the size of the trivet you wish to make. Place the reduced design so it faces downward onto a smooth piece of wood that fits the size of the paper. Use a very hot iron to "transfer" the copy onto the wood. Use acrylic paints to decorate the transfer. Use clear acrylic sealer to protect the design.

16. COPY-MACHINE-TO-FABRIC TRANSFER

Create your own fabric transfer on a copy machine. This is very easy and effective. All you need is an iron, freezer paper, muslin, and tape. Place an 8½" x 11" piece of prewashed and ironed muslin onto a slightly larger piece of freezer paper (place the muslin on the "shiny" side of the freezer paper). Iron the freezer paper until it adheres completely to the muslin. Cut around the edge of the muslin so the freezer paper is the same size as the muslin. Tape the edges around all sides of the muslin and freezer paper. This will help prevent peeling while the design is being printed. Select a design and place it onto a copy machine, and hand-feed the muslin into a copy machine. The design, transfer onto the muslin. Use fabric, acrylic, and dimensional paints to decorate the design. After the paint has completely dried, remove the freezer paper and mount as desired.

17. COPY-MACHINE-TO-POLYMER-CLAY TRANSFER

This is a fun and easy way to make jewelry using polymer clay and a photocopy of a motif. Reduce a design to the size you desire or use one provided on the page. Roll out a piece of polymer clay approximately 1/8" thick and the size of the photocopy. Place the photocopy face down onto the polymer clay. Use a clean paintbrush to apply isopropyl alcohol (rubbing alcohol, available at any pharmacy) to the back side of the photocopy. Keep applying the alcohol until the paper is saturated. Let sit for at least five minutes to allow the alcohol time to dissolve the ink. Apply more alcohol and very gently begin rubbing away the back of the paper until the ink is transferred onto the clay. Bake the clay according to package directions and mount onto a piece of jewelry or use as part of a collage. **DON'T FORGET TO REVERSE THE COPY SO IT WON'T BE PRINTED BACKWARDS.**