

Wagons Ho!

MATERIALS

FOR STUDENT:
(one per student unless otherwise noted)

- FloraCraft® Make It: Fun® Foam:
 - Blocks: Cut from large Foam Block to 3 1/2" x 7 1/2" x 1" thick and 1 1/2" x 2 1/2" x 1" thick (See "FOR TEACHER")
 - Ball, 3" diameter, two
- Cotton duck fabric, 10" x 12", cream color
- Chenille stems, 12" long, four brown
- Toothpicks, thirty-three
- Dowels:
 - 5/16" (or 1/4") diameter x 6" length, two
 - 1/8" diameter x 6" length
- Pencil
- Ruler
- Paintbrush, medium size
- Paint apron
- Thick white tacky glue
- Paper plates, two
- Small plastic cup (to hold toothpicks)
- Paper towel



FOR TEACHER:

- FloraCraft® Make It: Fun® Foam Block, 1" x 12" x 36" (can get thirteen wagons and approx. 40 seats and/or cargo boxes)
- FloraCraft® Design It:® Wire Cutter
- Sheet of white address labels
- Pencil
- Pencil sharpener
- Ruler
- Serrated knife
- Scissors
- Cutting mat or stack of newspapers
- Small saw
- Acrylic paint: Espresso (brown)
- Water bucket
- Paper towels
- Old newspapers or plastic tablecloth (optional)
- Plastic-lined garbage can
- Wet wipes
- Drying area
- Glue gun (for teacher only)

TEACHER PREPARATION

Note: Read through all the instructions first and check out the TIPS! Plan for two class sessions with drying time in between them. Have a glue gun plugged in and ready to use (ideally set on low temperature) but out of student reach. This can give you immediate adhesion when you're in a hurry to help students.) It is also recommended that you construct one first, before preparing the materials for any others, since knowing the process, first hand, might affect how you prepare.

[1] To cut the horizontal foam block, use a ruler and pencil to measure and mark twelve horizontal rectangles, 3 1/2" x 7 1/2" for the wagon bottoms ("beds"). There will be 1 1/2" left along the long edge to draw fourteen 1 1/2" x 2 1/2" rectangles for bench seats. Also, there will be 6" x 12" left that could be cut into another wagon bed and additional bench seats (or cargo boxes to put inside the wagons.)

On a cutting mat or stack of newspapers, use a serrated knife against the edge of a ruler to cut the foam block with several passes of the knife.

Also use a serrated knife to cut a foam ball in half. Sand the cut surfaces by rubbing the foam ball halves together, to smooth. Then, hold the foam ball half as you did when you cut it. Measure 3/4" in from the cut edge and cut again, parallel to the edge, creating a slice. (Discard the small piece that remains.) Repeat with the other ball half, making two wheels. Also, smooth by sanding – and slightly round the edges by pressing the foam down onto the table with even pressure as you rotate and smooth to compress it.

Repeat with a second ball, making four wheels. Then repeat for all students.

[2] Use the wire cutter to cut the points off both ends of thirty-two toothpicks per student, keeping the lengths as much the same as possible. (There should be one toothpick left that is not cut.)

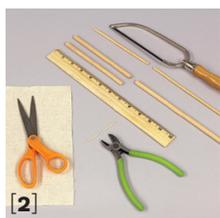
Use a small saw to cut two 5/16" diameter x 6" length dowels for the wagon wheel axels for each student. Also cut one 1/8" diameter x 6" length for the wagon tongue that will go in the front. Use a pencil sharpener to sharpen one end.

Cut the fabric into a very exact 10" x 12" piece for each student. (See "TIPS".)

[3] Cut apart sheet of labels. Prepare and set aside for each student a plate with: Fabric, three dowels, four chenille stems, one name label, tacky glue, and cup of cut toothpicks, plus one full size toothpick.

[4] Then, prepare for each student a second plate with: Large and small foam pieces (wagon bed and seat) and four ball slices (wheels), paper towel, pencil and brush.

Have the paint and bucket of water ready to use.



SOCIAL STUDIES

GRADE LEVEL
FOURTH – FIFTH

COMPLETION TIME

- 40 minute session (2 hours minimum drying time)
- 50 minute session



OBJECTIVES

Students will:

- Learn about the range of reasons for the westward movement
- Compare what travel was like in the past, compared to today
- Create a 3-D model of a covered wagon, that can reinforce memory about the lesson of the time period

STANDARDS

Study events: Oregon-California Trail, Santa Fe Trail, and Pony Express

Skills:

- Frame historical questions
- Recognize historical perspectives
- Analyze multiple perspectives

LESSON

INTRODUCTION

- Discuss the reasons for the western expansion and encourage the students to think about what it would take for it to be worth it to them and their families to undertake such a trip. Have students read stories about the trips and find photos and/or drawings of covered wagons to use for reference. Briefly discuss the structure of a wagon and explain that these will be replicas that don't actually work the way real wagons do.



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INSTRUCTIONS

[1] Have the students put on their aprons and roll up their sleeves, explaining that this paint will not wash out of clothes. Distribute the paint plates. Ask them to use the pencil to put their names on their plates. Pour the brown paint onto their plates and have them paint all sides of the foam pieces.

When they are finished, collect the brushes and put them into the bucket of water (until after class when they can be washed out). Have the students move their plates to a drying area.

If possible, before the pieces are thoroughly dry, turn them over to release them from the paper plate. Then let them finish drying.



NEXT SESSION

[2] Distribute both paper plates to each student. To make an indentation for the axel on the wagon bed, demonstrate and have the students measure and mark 1 1/2" in from both ends of the wagon bed. Align and press two of the same-size dowels into those marks to indent the foam enough to give a good contact area for gluing - later. Have each student use a pencil to put their name on a label and attach it to the bottom, between the indentions.

Demonstrate and have the students set their wheels on the table with the smaller surface up. Show them how to push the point of their pencil into the center of one wheel, to start a hole. Remove the pencil and gently press one of the axel dowels through the wheel. Repeat for the second wheel. Repeat with the other dowel and those wheels. Then, remove them from the dowel axel and put them back on the table. Have the students glue the dowel axels on the wagon bed (with ends evenly extending beyond the edge of the foam) and let dry.

Have the students arrange eight half-toothpicks on one wheel for the spokes. After checking for even spacing and making sure they aren't covering up the center hole, they can push them into the foam

and then glue them in place with tacky glue. Repeat with the other three wheels. Set aside to dry. (Note: Students should still have one whole toothpick to use later.)



[3] Caution students to keep chenille stems straight and not bent out of shape. For the wagon "bows", demonstrate and have them tightly pinch, close to the end of a chenille stem, and insert the stem into one corner of the wagon bed (about 1/4" from each edge). Press it into the foam about 1/2". Then, they can insert the other end directly across, into the opposite corner. This is now the back of the wagon. Have the students use a ruler to measure 2" away and repeat with the next chenille stem bow. Have them repeat two more times, which will leave 1" at the front of the wagon bed.

Ask the students to gently drape their fabric over the bows, with the 10" long sides touching the edges of the bed, so that they can see how it fits. Ask them to use the pencil to lightly make a dot on one of the 12" sides and remove the fabric.

Referring to the TIP on pulling threads, you can show the students how to gather their fabric for the back of the covered wagon as follows. (Note: They will pull the thread to gather but won't be removing the thread as you did.) Demonstrate how to measure in 1 1/4" from the marked edge and mark again. At that mark, show them how to use their toothpick to locate and pull two adjacent threads, gathering the fabric enough to knot that end two or three times so that it won't go back through the fabric. Then follow along the gathers to locate the other ends of the threads and pull those to gather, gently sliding the fabric along threads until the gathered end measures 7" long. Have the students knot the very END of that thread but caution them not to knot close to the fabric or to cut the thread yet, in case they need to adjust the gathers. Give the

students the go-ahead to gather their fabric.



[4] Demonstrate and have the students reposition the fabric onto the chenille stem bows, making sure that the gathered edge is at the back of the wagon bed. Have them align the fabric edges with the edges of the wagon bed on each side. Before gluing those sides, ask them to tuck in the end of the fabric next to the gathers so that only the gathers show. (Also tuck under the knotted strings so that they don't show.)

When that looks right, have them check the front to be sure that the fabric can overlap the front bow. Then they can apply tacky glue along the sides of the wagon bed and press the fabric into it. Also have them apply glue to the inside edge at the front and wrap around the front chenille stem bow about 1/2". Let it dry.

(Note: There may be a few ripples in the fabric, because the bows move, but for the most part the fabric should look like it fits. If not, adjust and use your glue gun to help hold where needed.)



[5] Have the students attach their wheels. On the front, have them position and glue the bench seat. Then they can insert the pointed end of the narrow dowel "tongue" into the bottom front.



REFERENCES

A Book For Black-Eyed Susan by Judy Young
If You Traveled West In A Covered Wagon by Ellen Levine
Bound For Oregon by Jean Van Leeuwen
Seaman's Journal: On The Trail With Lewis And Clark by Patricia Reeder Eubank



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INSTRUCTIONS

MODIFICATIONS

To simplify project:

- Have two students work together to make the project.
- Have the fabric already gathered so that students just have to fit it and glue the edges.

To expand project:

- Have the students research the parts of the covered wagon, print onto paper strips and glue to toothpicks to make flags that can be inserted into the wagon at the appropriate places.
- Have the students research what people took with them in their wagons, and make small replicas with more foam pieces, paper, and bits of fabric. Then, create a classroom wagon train with all the wagons, adding plastic horses, livestock and people.

For multiple ages:

- Younger and older students can work side-by-side, with the younger students painting and inserting pieces and the older students doing research, measuring and marking.
- Older students can add additional details to their wagons based on diagrams and information in their research.

ADDITIONAL IDEAS

- Have the students create a journal to go along with the wagon.
- Ask the students to take excerpts from Laura Ingalls Wilder's Little House series and read for the class.
- Study other types of wagons and interested students can re-design this wagon to look like another style.
- Have the students research about how people organized the wagon trains, with rules and requirements of the travelers.
- Create a jumbo wagon for the class, using a large foam block for the wagon bed, 5" foam balls for the wheels, dowels for the wheel spokes, jumbo chenille stems twisted together or wires for the bows, and a larger piece of fabric. (Spray paint the foam pieces brown in a well-ventilated, newspaper-covered area, inside a large box.)

TIPS

- For safety, cut off ends of toothpicks inside a large paper bag, to catch any flying pieces.
- Because the students will need to gather the wagon fabric, it should be cut very precisely. To do that, measure and lightly mark with pencil the fabric size: 10" x 12". Use the point of a toothpick (or find a straight pin) to pick and then pinch two adjacent threads at the pencil mark. Gently pull them, allowing the fabric to gather as you pull until the threads reach the other cut edge and they will pull free. The space where the threads were, is where you can cut, knowing that the cut is straight with the weave of the fabric. Repeat going in the opposite direction. (Note: If the edge is finished, you don't have to pull threads.)
- When painting, have the students pinch their foam shape on the front and back while they paint sides, fronts and backs. Tell them that when the painting gets close to their fingers, they should put the shape down onto their plate to finish painting. (Have them set the painted pieces against the outside rim of the plate to let air get underneath them to dry and minimize sticking.)
- When arranging the wheel spokes, suggest that the students think of the wheel as being a clock and that they place the spokes in "opposite" positions: 12:00 and 6:00; 9:00 and 3:00 and then in between each of those.
- Check the nozzles of the tacky glue bottles to be sure that they are clear. If not, bend open a paper clip. Remove the bottle cap and insert the paper clip wire into the nozzle (from the inside), forcing any dried glue out of the nozzle (not down into the glue bottle). Test it to be sure that it's clear.
- When using and storing tacky glue bottles, make sure that the caps are on and set them on their sides. This keeps glue in the nozzles so that there is minimal squeezing when using.



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