Model Wigwam Lesson Plan:
Grade Levels: 5-8

Objective: After reading the materials in the web site on Illinois Indian homes, and completing this activity, the students will be able to explain what a wigwam is and of what materials and methods one was built.

Time Required: Allow several hours (perhaps a combination of social science classes and an art period, working with the art teacher)for each PAIR of students (it takes more than two hands to tie the reeds together.

Materials:
For each wigwam: soft, pliable sticks such as willow branches or #6 round basket reeding (two long strands; one package will make about 10 wigwams, or do basketry, too)). It is best to measure as you build rather than precut all.

7 about 15" long
2 about 17" long
1 about 24" long

1 rectangular sheet of 1/2 "x 12" x 36" styrofoam for a base (or 1/2" thick corrugated cardboard)
50 lengths of string about 6" long
pencil
marker
crumpled brown paper bags (with crayon texture drawn on to look like a woven mat) OR brown felt (9" x 12"). These are cut into 4" by 4" rectangles scissors 12" x 18" piece of grass paper (model train supply) or green paper lichens, wadded paper, string, thread ends, or other to make shrubs

Procedure: (see instruction sheet with illustrations)
Read (or have students read) and discuss the winter and summer villages and wigwam of the Web site with the students. Give students the instruction sheet with illustrations and go through it orally, answering student questions. Demonstrate major steps such as anchoring the sticks into the base, and weaving the paper strips into mats. Emphasize that after the basic building is constructed, the students may add to the model with landscaping, people, and material life objects, USING THE INFORMATION FROM THE NATIVE AMERICAN WEB SITE TEXT ON THESE TOPICS and the concept of scale. The instructions have the scale of 1 inch = 23 inches, so the model wigwam will be 12" long, 8" wide, and about 5" tall. Any figures, trees, etc. Should reflect that scale.

Assessment: Students may present their model orally to the class, explaining the structure, building, use, origin, etc. of the wigwam and project. Criteria will be proportional scale, history of the shelter, and fluency in answering questions about the form, materials, and use of wigwams.

Illinois Goals and Standards addressed:
Social Science
All Levels: Goal 18: Understand social systems, with an emphasis on the United States.

Standard A: Compare Characteristics of culture as reflected in language, literature, the arts, traditions, and institutions.

Mathematics: Estimation and Measurement
Goal 7: Estimate, make and use measurements of objects, quantities, and relationships and determine acceptable levels of accuracy.

Standard A: Measure...using appropriate units, instruments, and methods.
Middle/Junior High: 7.A.3b: Apply the concepts and attributes of length, ...perimeter, ...and angle measures in practical situations.
Early High: 7.A.4a: apply units and scales to describe and compare numerical data and physical objects. (Works with grades as low as 5th with help from teacher.)

Instruction Sheet for Model Wigwam

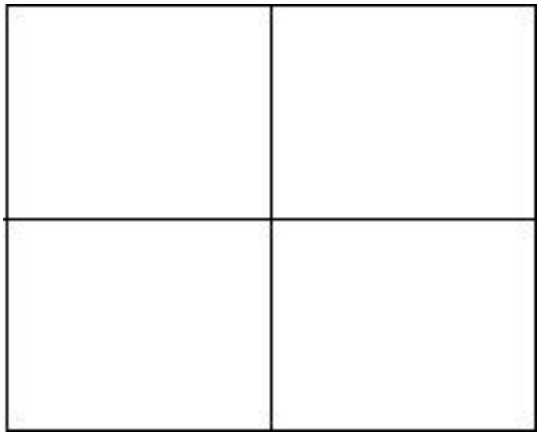
Step One: Gathering the Materials
You will need:

12" by 18" sheet of 1/2" thick styrofoam or cardboard
pair of scissors capable of cutting cardboard and reeding
pencil
marker
9" by 12" sheet of drawing paper (not easily torn)
12" ruler
compass or an 8" length of string to tie around your pencil
small bottle of wood glue
damp rag or paper towel
2 full length pieces of #6 round basket reeding (each length is over ten feet long) or lots of willow twigs
more than 12 inches long
sink or tub of water for soaking reeds (enough water to cover reeds)
tissue or length of toilet tissue to tear to use as post anchors
12" by 18" piece of green paper or grass paper
lichens or wadded material to use for shrubs

Step Two: Making the Base
Materials:

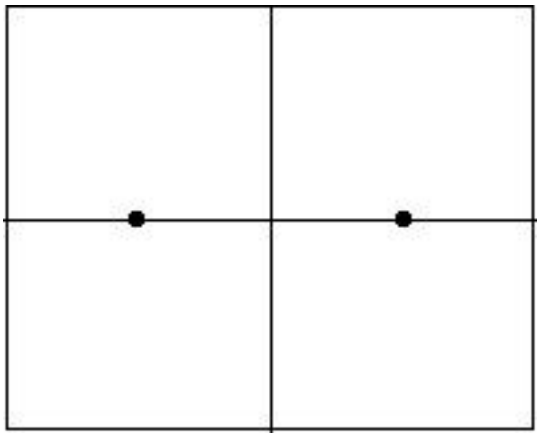
a 12" by 18" sheet of 1/2" thick styrofoam or cardboard
a pair of scissors capable of cutting cardboard and reeding
a pencil
a marker
a 9" by 12" sheet of drawing paper (not easily torn)
a 12" ruler

1. Measure and draw a line two inches in along one long side of the 9x12-inch paper.
Cut off the 1" section.

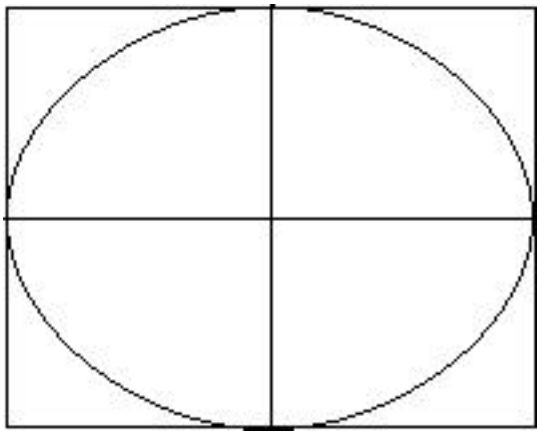


2. Find the center point of the remaining section by folding the paper in half lengthwise and width-wise. Open it up again. The center point is the spot where the lines cross.

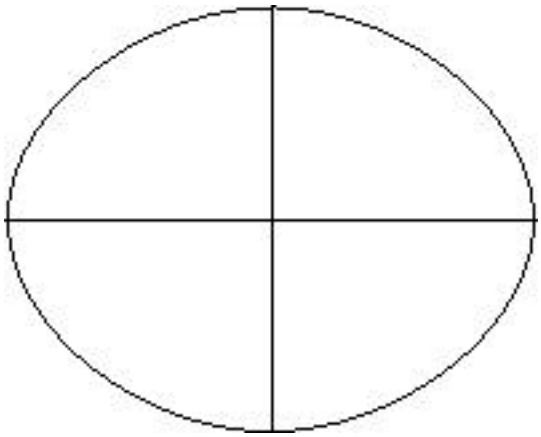
3. Measure 4" from each end of the paper and draw a dot on the center line at the 4-inch marks.



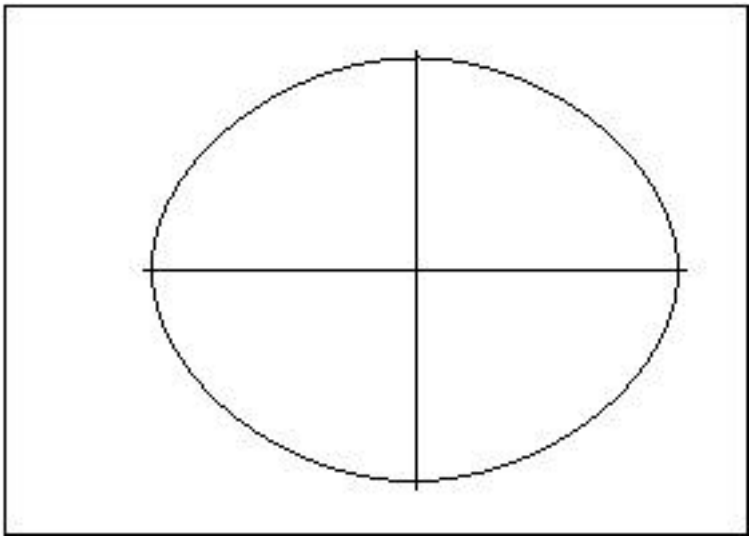
4. Adjust the compass for a 4" radius. Place the point of the compass on each dot in turn (and the pencil point at an edge of the paper, and draw a half-circle at each end of the paper. (If using a string, hold the pencil point at one end of the paper on the center line, hold the string down on the 4" point a finger, and draw a half-circle).



5. Cut out the oval with scissors. This is the floor plan of your wigwam. You will use it twice; once to transfer to your styrofoam, and later to transfer to your grass paper.



6. Place the oval in the center of your 12" by 18" styrofoam base. Trace around the edge with a heavy marker, preferably brown or green. Also punch your pencil through the point where the center lines cross and make a mark there. Remove the oval pattern and set aside for later.

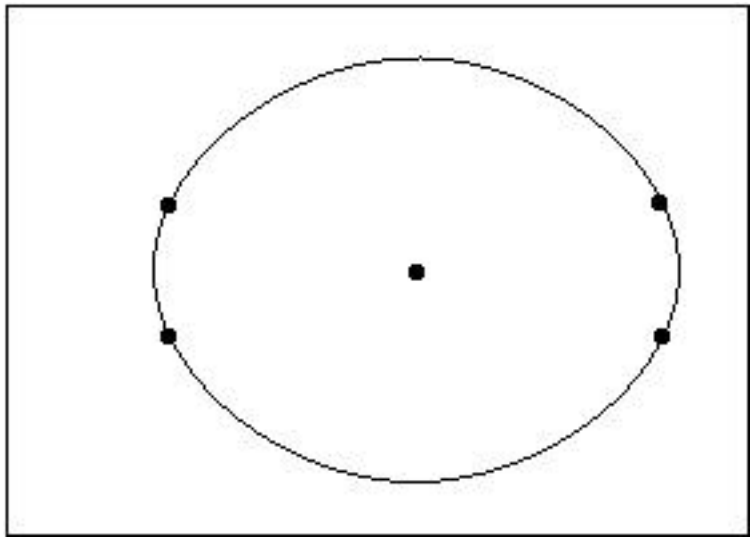


Step Three: Building your Wigwam
Marking your wall posts.

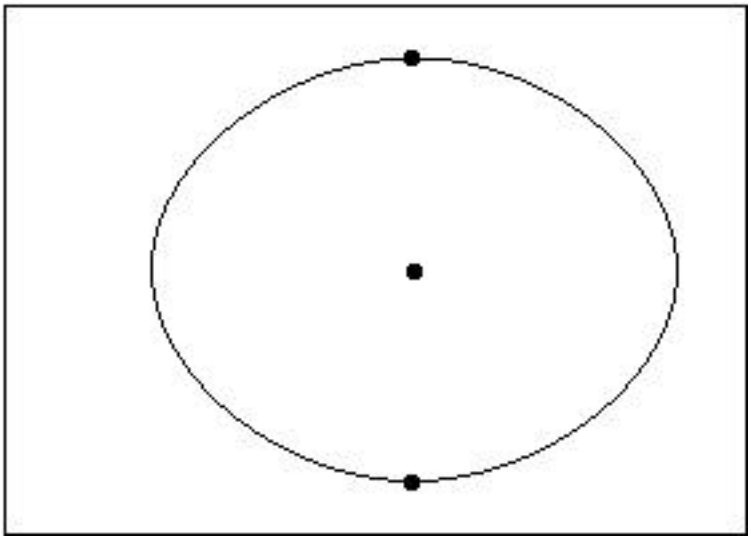
1. Put your two lengths of reeding to soak and soften in a tub or sink of water (enough to cover the reeds). It will need at least 15 minutes to soak. If, during construction, the reeds get dry, resoak them.

2. You will measure and draw dots for each of the 14 posts that will form the walls and ceiling of your wigwam. Use the center dot you marked on the styrofoam to line up your dots. If you need to draw center lines each way, do so.

Mark the doorway posts at each end by measuring and making a dot 3/4 of an inch from each side of the center line (the doorways will be 1 1/2 inch wide).

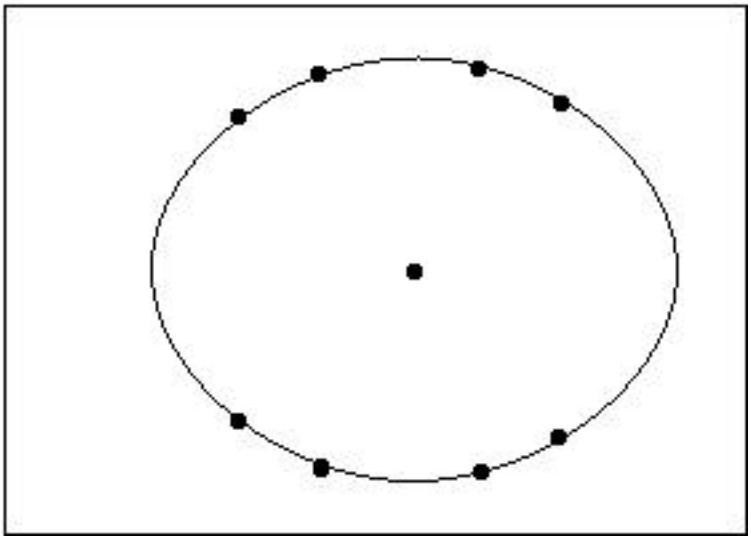


On each long side of the wigwam floor, measure and mark a dot for the side center post



One each side, between each center post and each end post, measure and mark two more posts (total eight) at two-inch intervals.

You now have all your posts marked.



NOTE: Gluing the reeds into the base: It is important that each end of the reed stays in the base. To ensure this, poke each reed end into the base, remove it, put a drop or two of wood glue into the hole, pinch a little wad of toilet tissue, put a drop of glue on it, put a third drop of glue on the end of the reed. Then stuff the toilet tissue wad into the hole with the end of the reed. Pat down the extra tissue around the post to cement it in.

Cutting and installing the reed posts

Doorposts: Take one of the reeds out of the water and wipe the drips off with a towel. Measure 17" and cut with large scissors. Measure a second 17" length. Put the rest of the reed back into the water. These two reeds will reach from one doorway to another, the full length of the wigwam. Install each reed end as noted in the gluing directions. Both of theses reeds should be about the same height at the curved top.

Insert one end of one 17" reed into a dot at one end of the wigwam. Secure it. Bend the reed and insert the opposite end into the post dot at the other end. Repeat for second door post.

Three side center posts: The posts that go across from side to side will be placed over the lengthwise posts. The center post will be the longest of the three. Cut 2 lengths of reed 15" long, and one 15 1/2" long. (You may need to adjust them to fit by cutting). Install the center post first. Then install the posts to either side, adjusting the length so that the curved top of the crosswise posts rest directly on the lengthwise posts.

After the glue is dry, use the 6" long yarn pieces to tie around the intersections of the posts you installed so far. Wrap the yarn around the intersecting reed in both directions and tie a double knot. Two outer side posts: Measure and cut two reeds that are 14" long. Install them in the post marks next to the door posts. Adjust the sizes before gluing so that the curved top rests on the lengthwise reeds. After the glue dries, tie the reeds together at the intersections.

Two horizontal braces: The final three reeds will be placed around the wigwam. Measure and cut two lengths of reed 15" long (you will cut these to fit). Each one will stretch from one door frame, around a side of the wigwam, and attach to the other door frame. Try it first, cut to length so it does not block the doorway, then hold and tie it (at least four hands needed here) to each reed it intersects. Adjust so that the reed is level all the way around the side.

The last reed will circle the wigwam about halfway up. You need to add three extra inches for an overlap. Measure and cut a 30" length of reed. Arrange it around the middle of the wigwam so it rests on the other posts. Overlap the ends by three inches. Starting at the center (opposite the overlapped ends), tie each intersection with yarn. Adjust the height so it is level. Tie the overlapped ends together in several places.

Congratulations! You have finished the structure of your wigwam. Next you will cover it with a roof made of birchbark squares, woven cattails, or deer hides. Yours will be made of brown felt or crumpled paper bags.

Covering the Roof:

With 9 by 12 inch felt squares: cut each of three felt pieces into 4-inch squares:

Start at the bottom of each side of your wigwam. Apply spots of wood glue to the tied intersections, and dots on the reeds. Press the square onto the frame (you will need to hold, pinch, or weight them down until semi-dry). Overlap each piece of roofing to keep out the rain. Do not cover the doorways.

When the lower layer is dry, add the upper layer of felt squares in the same manner with glue. Overlap them over the lower row by about one inch, and over each other. Leave a hole in the top for smoke to exit. Weight down the squares until dry. You may have to come back and put drops of glue under edges that did not stick.

You did it! Your wigwam is finished! Now you can add landscaping, figures, and other fun things from your research about Illinois Indians.

Landscaping hints:

Grass: Cover your styrofoam with a layer of green paper or grass paper to make a clearing around the wigwam. The paper should measure 12" by 18", the same as the base. Place your oval wigwam pattern on the paper in the same position as your wigwam is on the base (measure the distance from one end and one side).

Trace around the pattern with a pencil or pen. Cut out the pattern. This time you will be keeping the part of the paper that is OUTSIDE of the pattern. To make the grass pattern fit around the finished wigwam, you will probably need to cut about 1/4" off along the inside edge.

Shrubs and trees:
Illinois Indians lived in the woodlands, so you may want to make your wigwam area more realistic by adding shrubs and trees. Remember you scale. Each inch represents about two feet. So a bush that is two inches high would be four feet tall in real life. You wigwam is about 5 or 6 inches (10 to 12 feet) in height. Landscaping can be made of lichens, excelsior,moss, wadded string, grass, raffia, or other material. Tree trunks can be formed from clay, papier mache, or cardboard. You can use toothpicks to prop up lichen as bushes. Glue your shrubbery to the ground.

Other Additions:
After you review information about the Illinois Indians online, you may want to add figures, fires, tools, and other objects to your model. Remember your scale when you add human figures (A five-foot tall Illinois Indian would be 2 1/2 inches tall) and objects (an arrow might be one-inch long).