

## Exploring Prairies Girl Scout Junior Badge



### Do 6 activities to complete the Junior Badge

- 1) What kinds of plants and animals live in a prairie?** Find out what the plants provide that the animals need, what kinds of homes the animals have and what they eat. Create a poster or mural showing several kinds of prairie plants and animals.
- 2) Visit a prairie.** Although prairies are made up primarily of grasses and flowers, they have an amazing number of different types of grasses and flowers in them. A single prairie may contain over 100 types of plants! Learn to identify at least 5 different kinds of prairie plants,
- 3) Visit the same prairie at least 2 or 3 times over the course of a season** or in different seasons. Can you recognize the same plants as they change? Are different plants blooming each time? Learn how prairie plants are adapted to live in the hot dry summers and very cold winters of the midwestern United States. Draw a picture of a prairie plant and some of its special adaptations or features that help it survive.
- 4) Learn about how prairie restoration happens.** 99% of all the prairies that once covered the Midwest are now gone. Many people are working to restore or put back these prairies. How do you get a prairie to grow where it once did? How long does it take? Once a prairie is established how do humans and nature help to *manage* the prairie or *keep it looking like a prairie*. What would happen to the prairie if it were not managed?
- 5) Fire is very important to prairies.** How does fire affect a prairie? How does it occur naturally? How do people use fire to help prairies? What safety issues must be considered in prairie fires?

**6) Prairies played important roles in the lives of the pioneers who settled the Midwest in the 1800s.** Read a book about someone who lived on the prairie during this time. Compare their life to yours. What things did they have and do that were almost the same as you? What things were different? How did the prairie influence their lives?

7) Prairie pioneers had to make most of the things they needed to survive. **Make a prairie pioneer craft** such as something used in the home or a child's toy. Or cook something the prairie pioneers would have eaten. You can find pioneer crafts and recipes in books or on the Internet. See the "Exploring Prairies Junior Girl Scout Badge Booklet" for some ideas. Or write a story about what it would feel like to live on a prairie, from either an animal, pioneer, or Native American's perspective. Share your story with others.

**8) Help restore or manage a prairie** by helping collect, process or plant prairie seeds. Or help the animals living in the prairie by making or putting up bird, bat, or butterfly houses in a prairie. Or create your own prairie in your backyard, school yard or somewhere in your community. Contact your local Girl Scout Council or see the "Exploring Prairies Junior Girl Scout Badge Booklet" for more information on service projects.

**9) Talk to someone who works with prairies for a career.** Find out what they do. What kinds of tools they use and what kind of schooling and training they needed to perform their job. Ask them what they like best and least about their job and why they became a prairie naturalist or manager. Share your information with member of your Girl Scout troop or other girls your age. Would anyone you know like this type of career?

To order badges and patches from Badgerland Council Contact the Madison Girl Scout Center Trefoil Shop at 608.237.1173.



# Girl Scouts of Wisconsin – Badgerland Council Exploring Prairies Badge Booklet For Girl Scout Leaders

Information and activities to help Junior Girl Scouts earn the Exploring Prairies Badge

The following information and activities are designed to give troop leaders and other adults the information they need to help Junior Girl Scouts complete the requirements for Badgerland Council’s Exploring Prairies Badge. Each section corresponds to the badge requirement.

To visit a prairie or help with seed collecting and other service projects, contact the following organizations or call your local DNR for locations near you!

**Girl Scouts of Wisconsin – Badgerland Council** has prairies at Camp Stetler in Richland Center and Echo Valley Farm near Mt. Horeb.

**Dane County Parks** has prairie locations all over Dane County. Contact Wayne Pauly at 608-2243603.

**U.S. Fish and Wildlife** has prairies in Iowa County. Contact Kurt Waterstradt at 608-221-1206 ext.16 or [kurt\\_waterstradt@fws.gov](mailto:kurt_waterstradt@fws.gov).

**Governor Nelson State Park** is located in Waunakee. Contact the Park Superintendent at 608-831-3005.

**City of Middleton Parks Department** has many prairies. Contact Penni Klein, Public Lands Manager at 608-827-1044.

**The Nature Conservancy** has land all over our council, especially in the Baraboo area. Contact Katie King for the prairie closest to you. 608-251-8140.

**The Ice Age Trail** has prairie locations in several parts of Black Hawk Council. Contact Don Ferber at 608-222-9376 for specific locations.

**The UW-Madison Arboretum** is located in Madison. Call 608-263-7888 for more information or to set up a visit.

**1) What kinds of plants and animals live in a prairie? Find out what the plants provide that the animals need, what kinds of homes the animals have and what they eat. Create a poster or mural showing several kinds of prairie plants and animals.**

Some of the animals living in prairies include:

- |              |            |                  |                                 |
|--------------|------------|------------------|---------------------------------|
| crickets     | bees       | prairie chickens | moles                           |
| grasshoppers | spiders    | bluebirds        | shrews                          |
| butterflies  | many birds | meadow larks     | badgers                         |
| moths        | pheasants  | finches          | ground squirrels                |
| lady bugs    | sandpipers | snakes           | gophers                         |
| beetles      | plovers    | voles            | foxes                           |
| caterpillars | blackbirds | mice             | *prairie dogs – not found in WI |

Some of the animals that do not necessarily live (make their home) in prairies but spend much of their time in prairies especially to feed include:

foxes	rabbits	burrowing owl	red tailed hawk
coyotes	weasels	great horned owl	
deer	skunks	kestrels	

The main function of prairie plants is to provide food for animals. Many small mammals and birds eat the seeds from prairie plants. Larger mammals and some aquatic birds such as ducks may eat the grasses themselves. With only a few exceptions, only small animals actually make their homes in the prairie. Most burrow underground. Some birds make nests on the ground like ducks if the prairie is near water or pheasants and other upland game birds. Some foxes and coyotes make dens in prairies. If a forest or other more densely vegetated area is near the prairie, that area will serve as homes to most of the animals and the prairie will serve as the food source or “restaurant”.

For murals, encourage the girls to draw the animals in their homes. If they make a prairie “cross section” they can show under the ground with burrows and dens as well as animals above ground and in the air.

**2)** *Visit a prairie. Although prairies are made up primarily of grasses and flowers, they have an amazing number of different types of grasses and flowers in them. A single prairie may contain over 100 types of plants! Learn to identify at least 5 different kinds of prairie plants,*

See the first page for places that have prairies the girls can visit. The easiest way for them to learn the names of the plants is to visit a prairie with someone such as the site’s naturalist or caretaker who can name plants for the girls. If this is not possible, field guides are often available at local libraries or can be checked out at Black Hawk Council’s office. Try to find field guides specifically for prairie plants rather than just wildflowers. This will make it much easier for the girls to use them. Once they have identified some plants try one of these options to help them memorize their names.

### **Plant relays or other games**

Have the girls make up some games such as a relay. Have 2 teams line up at one end. Lay a group of plants the girls have identified at about 20 yards or so away. Make one set of plants for each group of girls. Call out the name of a plant then have the first girl in each team run down and grab that plant from her teams pile. The first girl to return wit the proper plant gets a point for her team. Or have the girls draw the name out of a hat and continue with new plants. The first team finished wins. Encourage the girls to make up their own rules. They might even make a matching game on paper or concentration cards with hand drawn pictures of the plants and their names on cards.

### **Mounted Plants**

Have the girls collect samples of the plants they are learning to identify. Have them press the plants flat between cardboard, placing heavy books on top of them for a day or two. Once the plants are somewhat dry and flattened, have the girls glue them to pieces of posterboard and write the plant names on the boards. The process of creating mounted pictures will help the girls remember the plant names and any identifiable characteristics of the plants.

**3)** *Visit the same prairie at least 2 or 3 times over the course of a season or in different seasons. Can you recognize the same plants as they change? Are different plants blooming each time? Learn how prairie plants are adapted to live in the hot dry summers and very cold winters of the mid-western United States. Draw a picture of a prairie plant and some of its special adaptations or features that help it survive.*

Again refer to the list on the first page of various contacts for prairies the girls can visit. It would be helpful to have the girls take photographs of the prairie each time they visit so they can compare it from the other time(s) they were there. They might also find it very helpful to write descriptions of what they see including the locations they stand to make observations and the colors of the flowers and plants they see.

Although there are no specific requirements the girls must complete to earn this badge, this requirement is a little easier if the girls have learned the names of some of the prairie plants so they can search for the plants they know, the second or third time they visit the same prairie. If they did not learn any plant names, they can look at photos they took to see if the plants have changed and/or they can read what they wrote about things they saw from the first visit. Most prairie flowers are varying shades of yellow and purple but their shapes are very diverse. Encourage them to pay attention to the flower shapes and colors in order to notice changes in types of blooming plants from one trip to the next.

### **Prairie Adaptations**

Prairie plants are perennial which means that the above-ground vegetation dies every fall but the roots remain alive under the ground. The plants are just in a kind of “dormancy or hibernation”. The roots of prairie plants go deep down into the soil, deeper than trees, weeds or most other kinds of plants. Encourage the girls to think about how these 2 facts help the plants survive hot dry summers and cold winters.

\*Prairies do not get a lot of shade so they get very dry in the summer when it doesn't rain a lot. Where would you find water during a drought? (Under ground - water flows through the soil and rock under ground in the “groundwater”. Prairie roots grow very deep so they can reach this water during dry seasons.)

\*Prairie plants often have thick, waxy stems and leaves and fleshy flowers. All of these characteristics help keep water from evaporating out of the plants. This protects them from hot dry weather too.

\*Most prairie plants are fairly tall but many have leaves only at the base of the plant. The tall grasses shade the leaves, helping them keep their moisture.

\*Some plants have lots of very tiny leaves. This also helps them hold their moisture because they are not big enough to be dried out by the sun. Plants that have really big leaves may only have a few or have waxy or hairy coatings to help retain their moisture.

\*Prairie plants die off in winter so that they do not have to protect themselves from the harsh cold. It takes far less energy to just grow a new plant each year than try to keep that plant alive in the cold winter.

\*Because prairie roots go deep into the soil, they stay below the frost line (part of the soil that freezes in the winter) so they will not die.

**4)** *Learn about how prairie restoration happens. 75% of all the prairies that once covered the Midwest are now gone. Many people are working to restore or put back these prairies. How do you get a prairie to grow where it once did? How long does it take? Once a prairie is established how do both humans and nature help to manage the prairie or keep it looking like a prairie. What would happen to the prairie if it were not managed?*

It's actually fairly simple. Clear the land of what is currently growing. Plant seeds (the easiest way to do this is to just scatter them on the ground. You don't have to bury them in the soil, they just need to touch it.) Then let the seeds grow. The biggest problem is weeds. It's kind of an odd concept because to an untrained eye, all prairie plants look like weeds. The big difference is weeds have shallow roots and prairie plants have deep roots. You can't see that from above ground so you need to know your plant ID. You can pull the weeds which can be very labor intensive or you can use chemicals to remove the weeds or you can mow the plants. Because the prairie plants are perennials (come back each year without needing new seeds) they will continue to grow while the weeds will die out because mowing prevents them from spreading their seeds.

**5)** *Fire is very important to prairies. How does fire affect a prairie? How does it occur naturally? How do people use fire to help prairies? What safety issues must be considered in prairie fires?*

Fire is the one tool that is responsible for maintaining prairies. Without fire, prairies become forests or weed patches. Prairie plant roots are very deep. Trees and weeds have very shallow roots that are just below the earth's surface. When fire comes through a prairie, it burns everything above ground. Most trees die because they cannot survive if their tops are burned. The tops of prairie plants are only alive in the spring and summer. Then they die so fire does not hurt the already dead tops. The fire creates enough heat that everything a few inches below ground is also killed. So if the trees don't die when their tops are burned, they definitely die when their roots are burned. Weeds also die because their roots are burned as well. Prairie plants survive because their roots are deeper underground so they are protected. The ash created from burning the tops of the plants creates nutrients for the soil, helping the new prairie growth in the spring. So fire acts as nature's weed killer.

It occurs naturally mostly through lightening strikes. In the 1800s it was common for hundreds or even thousands of acres of prairie to burn at one time. Once people settled the prairies more densely, they suppressed prairie fires to keep them from burning up homes and property. (People also didn't realize fire was good for the prairie so they stopped it thinking they were helping the prairie.)

People now purposely set prairie fires, carefully managing the fire with tools to keep it from spreading beyond the part they want burned. Obviously, if it gets away, fire may destroy property and lives so it must be used extremely carefully.

**6)** *Prairies played important roles in the lives of the pioneers who settled the Midwest in the 1800s. Read a book about someone who lived on the prairie during this time. Compare their life to yours. What things did they have and do that were almost the same as you? What things were different? How did the prairie influence their lives?*

The following is a list of some possible books that the girls can read.

Some good concepts to discuss similarities and differences are:

Ways families/children entertained themselves including toys

Amount of free time children had in their day  
Amount of “things” children had such as cloths, toys, etc.  
Comparing “a typical day”

Technology comparisons:

modern appliances verses 1800’s technology

How they heated/cooled their homes

Water supplies

Food storage

Travel – mode of transportation as well as how far most would travel

Appreciation for possessions and family

**7)** *Prairie pioneers had to make most of the things they needed to survive. Make a prairie pioneer craft such as something used in the home or a child’s toy. Or cook something the prairie pioneers would have eaten. You can find pioneer crafts and recipes in books or on the Internet. See the “Exploring Prairies Junior Girl Scout Badge Booklet” for some ideas. Or write a story about what it would feel like to live on a prairie, from either an animal, pioneer, or Native American’s perspective. Share your story with others.*

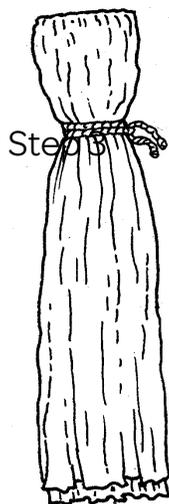
Visiting a library or searching the internet should produce several options for the girls. They can make simple toys that children played with such as buzz saws, barrel hoops and rag dolls. They can play common games that children played such as marbles or tangrams or make simple crafts such as dipped candles or woven baskets. Directions for a few of these ideas are listed below.

## Corn Husk or Rag Dolls

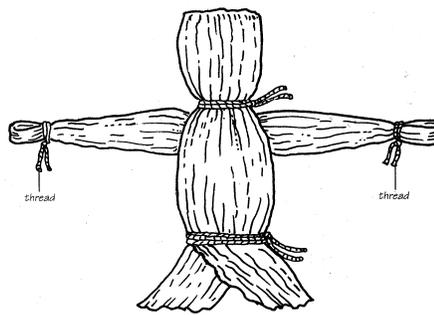
**STEP 1:** Trim A LITTLE of the pointed edges off the husks so they are more even.

**STEP 2:** Form the doll's head by taking a large piece of husk and folding it in half. Place a stone about 1 inch in diameter under the fold. Tie a piece of string around the husk just below the stone to create a head shape. The ends of the husk should extend several inches below the neck.

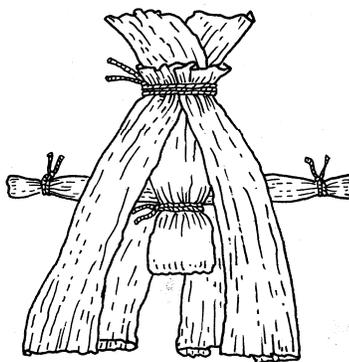
Step 2



Step 3



**STEP 3:** For the arms, cut a husk about 7 inches square and roll it up. Tie it at each end to form wrists. Slide the "arms" between the two husks, below the figure's head so they stick out evenly on both sides of the body. Tie another string below the arms to form the waist.



**STEP 4:** To form the skirt, place 3 or 4 husks around the doll's waist, but point them up, so they extend above the doll's head. Tie the husks around the waist, then fold them down over the tied string to create the skirt.



Dolls usually did not have faces. Many girls sewed bits of corn silk or yarn for hair and added a corn husk bonnet that also had to be sewn. Glue was not readily available in the 1800s but it certainly makes it easier for 21<sup>st</sup> century replicas. Rag dolls can be made using the same pattern. Fabric scraps can be obtained from someone who sews, or possibly donated by a fabric store. Hair can be added to the rag dolls using yarn. Clothing can also be added over the dolls body. Rag dolls were common among prairie children, especially since girls learned valuable sewing skills while making them.

### Dipped Candles

Candles were probably the most common source of artificial light on the prairie in the 1800s. They were made to be used rather than for decoration. Children often helped make the family's candles by hand-dipping them. Candles were often made of bee's wax or tallo (animal fat).

Using a double boiler, melt wax in a can or pot about 8 inches tall. Give each child a wick for their candle about 6-8 inches long. Once the wax is melted place the can on a table along side a can of very cold water. To make the candle, alternate dipping the wick in the wax, then the water. For the first several times, the wick will need to be straightened after it comes out of the water. Eventually, as wax builds up on the wick, the candle will stay straight. Keep dipping until the candle is about  $\frac{3}{4}$  inch thick or the width of your thumb. The candle would then be placed in a lantern, candle holder or atop an empty bottle.

Tips: There are a few key things to making the candle work.

- 1) Take time to let the candle cool between dips in the wax. If you don't let it cool long enough, when it starts to get thick, the candle bends or the wax pulls right off the wick. If it bends, roll it on the table to straighten it out then let it sit in the cold water for a few minutes before resuming the process.
- 2) Make sure to wipe all the water off the candle before dunking it back in the wax pot. Water droplets cause bubbles.
- 3) The more times you dunk the candle, the thicker it gets. Contrary to popular belief, holding the candle in the wax container DOES NOT make it thicker. It only serves to melt the wax off the wick. Dip it quickly in the wax then slowly in the water, then allow a short time to cool before going back into the wax.
- 4) If the wax starts to get a "skin" on top or solidify on the edges of the container, heat it back up again before continuing the candle or it will collect to quickly and cause the candle to become lumpy. If this happens, again, roll the candle on the table to smooth out the lumps then let it sit in the cold water for a few minutes.
- 5) Periodically you will need to cut excess wax off the bottom of the candle to keep it from building up. Take a butter knife and slice the bottom  $\frac{1}{2}$  inch or so off the candle then pinch it or roll it on the table to make it "look nice" before continuing.
- 6) This actually works well with a group of 10 – 20 people. Place one can of wax and one bucket of ice water on a table. Have all participants make a single file line next to the can. Once they dip their wick, they walk around the table and go to the back of the line. By the time it is their turn to dip their wick again, their candle has cooled enough. Just keep walking in a circle and dipping until the candle is about  $\frac{3}{4}$  inch thick.

### Prairie Pioneer Foods

Here's some general information the girls may not realize about prairie pioneer food.

There were no large grocery stores in the 1800s. They didn't even have refrigerators. They did not have good ways of preserving food. What little food was sold at stores could be bought in the General Store. Most of the food was grown, raised or made at home and could only be kept for a small period of time before spoiling. Fruits and vegetables were grown in gardens and almost every family had one. Women canned them to preserve them so they could be eaten during the rest of the year. Whole pickles were commonly sold at the general store and were one of the favorite treats at fairs.

Since there were no plastic bags or Tupperware to keep the bread fresh, Women often made it every day. A favorite on fresh bread was homemade apple butter or Jam. Applebutter is easy to make. You may be able to find a recipe and make some.

Since there was no refrigeration, meat was hard to keep. The only way to have meat through out the year was to salt it heavily then smoke it. Wild game such as deer, bear, and rabbit were more commonly eaten than domestic cows. Jerked meat was common because it was easy to pack for a lunch or snack and wouldn't spoil quickly since it was dried and salted.

Dutch ovens were common for baking. They were often used over an open fire in a home fireplace. Fruit pies were common desserts along with Molasses, ginger, and oatmeal cookies. Chocolate chip cookies didn't come around until later! Dutch ovens are available for check out at the Black Hawk Council Office. Recipe books can be found in the council library or look for recipes on the internet or through your local library.

**8)** *Help restore or manage a prairie by helping collect, process or plant prairie seeds. Or help the animals living in the prairie by making or putting up bird, bat, or butterfly houses in a prairie. Or create your own prairie in your backyard, school yard or somewhere in your community. Contact your local Girl Scout Council or see the "Exploring Prairies Junior Girl Scout Badge Booklet" for more information on service projects.*

Contact any one of the organizations listed on the first page of this booklet to arrange a service project or to get advice on creating your own prairie. All listed are very excited to have Girl Scouts help with seed collecting and other projects.

**9)** *Talk to someone who works with prairies for a career. Find out what they do. What kinds of tools they use and what kind of schooling and training they needed to perform their job. Ask them what they like best and least about their job and why they became a prairie naturalist or manager. Share your information with member of your Girl Scout troop or other girls your age. Would anyone you know like this type of career?*

Contact anyone from the organizations listed on the first page of this booklet to arrange learn about careers in prairie management. Dane County Parks and the U.S. Fish and Wildlife Service will

probably have the most knowledgeable staff. Or try contacting private companies who do restoration work. A few are listed below:

**Wisconsin Prairie Enthusiasts**

John R. Mecikalski  
[johnm@ssec.wis](mailto:johnm@ssec.wis)  
(608)849-8358  
Dane County

Agrecol  
1984 Berlin Road  
Sun Prairie, WI 53590  
608-897-8547  
Contact: Steve Banovetz

Little Valley Farm  
Route 3, Box 544  
Snead Creek Road  
Spring Green, WI 53588  
608-935-3324

Contact: Barbara Glass

**Bluestem Farm**

S5920 Lehman Road  
Baraboo, WI 53913  
608-356-0179  
Contact: Martha Barrett

**Nature's Nursery**

6125 Mathewson Road  
Mazomanie, WI 53560  
608-795-4920  
Contact: Melody Moore 608-437-5245

**Prairie Ridge Nursery**

CRM Ecosystems, Inc  
RR 2, 9738 Overland Road  
Mt. Horeb, WI 53572  
Contact: Joyce Powers