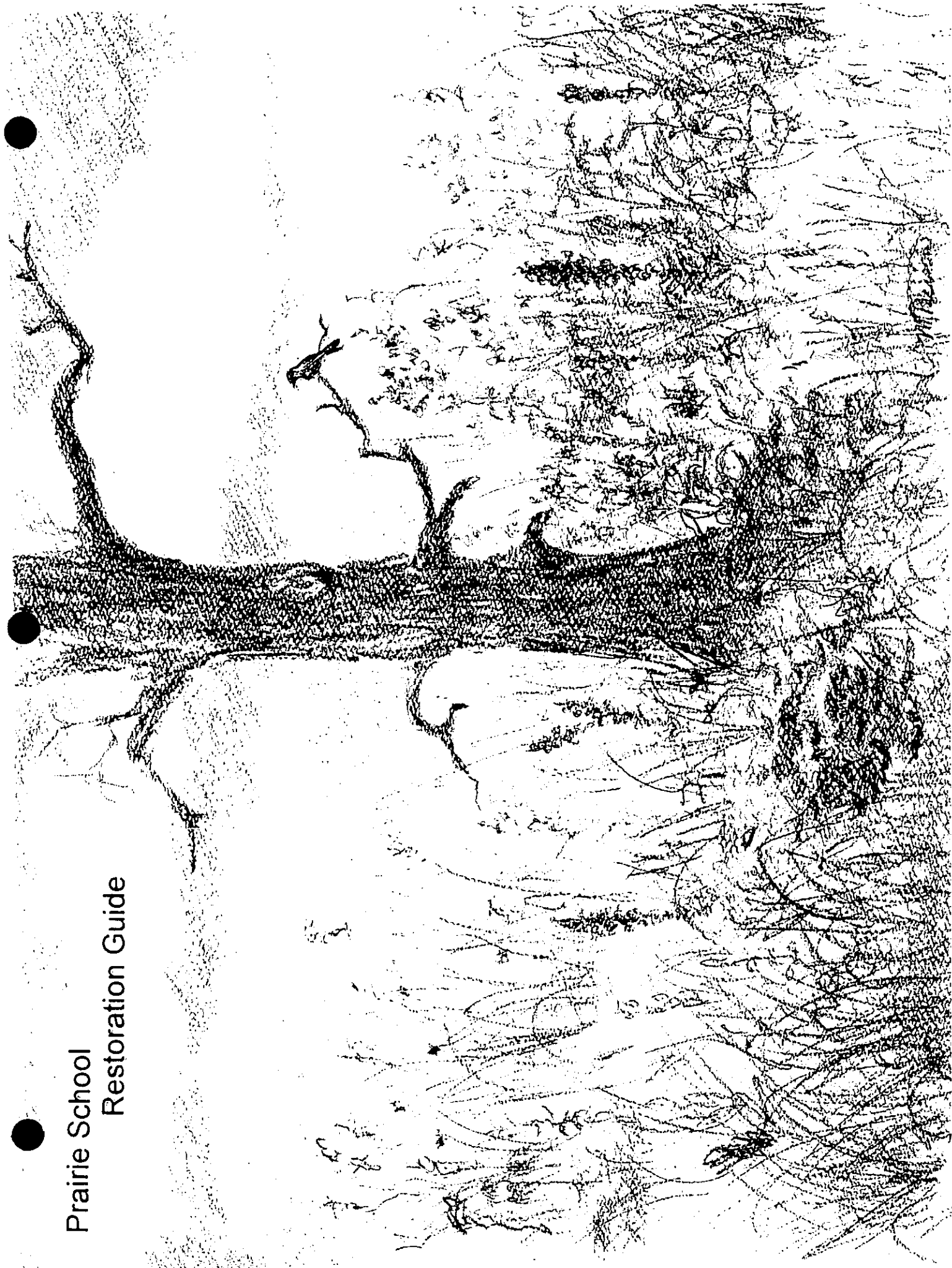


## **Project report for "Prairie School Teacher's Guide"**

July 14, 1998

Suzie Barber completed this project as a companion curriculum guide for her Prairie School Program. This program is a hands-on prairie reconstruction program for second through fifth grade students. Students and their teachers participate in seed collection, preparation, propagation and transplantation in order to reconstruct a prairie as part of an outdoor classroom and wildlife habitat area on school grounds. Suzie designed the curriculum materials, wrote the text, and arranged for artwork by Melissa Pierson. Melissa created the manual cover and the line drawings that are in the manual. Staff at the Forest Park Nature Center in Peoria reviewed the manual. Ten copies of the manual were produced, with a master copy kept in reserve for future program participants. These ten copies were distributed to program participants within a 25 mile radius of the city of Peoria. A copy of the manual is attached to this report.

Prairie School  
Restoration Guide



**Prairie School** is sponsored by **Heartland Stewards**, members of the Nature Conservancy's volunteer network and the **Peoria Park District**.

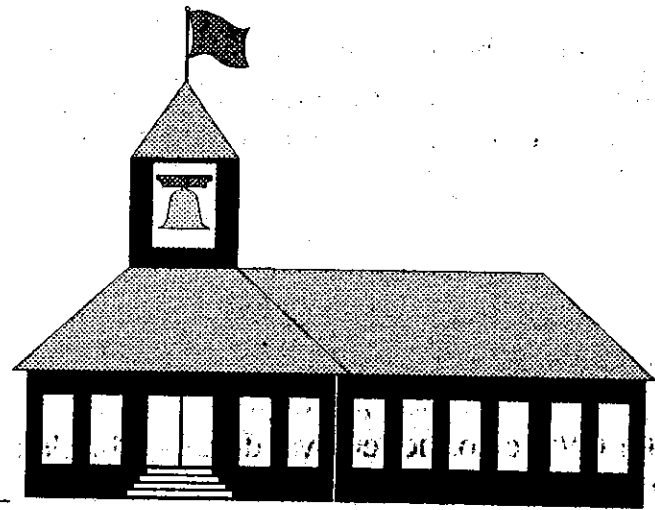
Through **Prairie School**, we hope to share knowledge of and appreciation for the prairie habitat.

Contact **Program Coordinator**, Suzie Barber by **October 1** to schedule your schools restoration project.

Write Suzie Barber RR1 Box 55 Wyoming, Il. 61491 or call at 249-3024 or contact Forest Park Nature Center at 686-3360.

# PRAIRIE SCHOOL

A hands-on restoration project  
for grades 2 through 5



ACTIVITY - mid to late October - Students will learn about the life cycle of the prairie habitat by collecting prairie seed. The program coordinator will arrange to collect from a designated area with landowner permission and will store the collected seed until the next activity. School is to provide transportation of students to the site.

TIME REQUIRED - 2 hours

MATERIAL REQUIRED AND COST - paper lunch bags - 1 pkg of 50 for \$1.00

ACTIVITY - mid December - Students will learn the treatment techniques used in prairie restorations and how these treatments mimic natural processes by stratifying and scarifying the seed they collected. The program coordinator will provide sand for this activity and store the seed until the next activity.

TIME REQUIRED - 2 hours

MATERIAL REQUIRED AND COST - plastic resealable sandwich bags - 1 box of 25 for \$1.50

ACTIVITY - mid February - Students will begin the prairie growing process by putting the seeds in plastic containers under grow lights. As the seeds germinate and the seedlings grow, students will observe in the classroom the growth and changes in the different species from seeds to secondary leaf development.

TIME REQUIRED - 2 hours

MATERIAL REQUIRED AND COST - plant growing stand, fixtures, and light bulbs - 2 tier to hold 4 trays \$150.00; Redi-EARTH - 1 bag for \$13.00; plastic trays (flats) - 1 tray will hold 30 plants for 0.95; chlorine removal drops - 1 bottle for \$3.00; clear plastic containers with lids such as salad containers (can be collected at no cost); sweatshirt material to line the trays (can be

collected at no cost); 1 plastic milk jug to water trays (can be collected at no cost)

NOTE - Teacher to arrange to water trays as needed; approx. 2 to 3 times a week.

ACTIVITY - mid March - Students will learn about the importance of the underground portion of the prairie (the root system) as they transplant the seedlings into individual cups.

TIME REQUIRED - 3 hours

MATERIAL REQUIRED AND COST - 5oz plastic kitchen cups - 1 pkg of 100 for \$1.50; Redi-EARTH (purchased earlier)

ACTIVITY - early to mid May - Students will transplant the prairie plants into the school yard prairie. The program coordinator will bring a shovel.

TIME REQUIRED - 3 hours

MATERIAL REQUIRED AND COST - none

ACTIVITY - mid to late May - Students and parents will be invited to return the extra prairie plants to a planting in a nearby public park as part of the Backyard Habitat Program.

TIME REQUIRED - 2 hours

MATERIAL REQUIRED AND COST - none

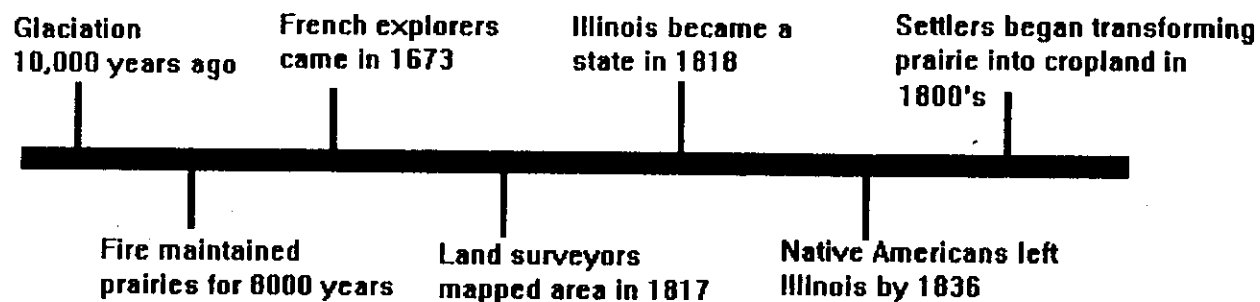
All costs are approximate based on 1995 prices

# **PRAIRIE SCHOOL RESTORATION GUIDE**

**Written by: Suzie Barber**  
**Artwork by: Melissa Pierson**

*This teacher's guide was made  
possible through donations from  
the Illinois Wildlife Preservation Fund.*

# THE PRAIRIE'S HISTORY IS OUR HISTORY



Illinois Natural Areas Inventory in 1978  
found only 1/100 of 1% of original prairie left



The Nature Conservancy's Volunteer Stewardship Network  
established to preserve and restore the natural lands of Illinois  
in 1977 and 1989

**Glaciers** receded from this area over 12,000 years ago shaping the landscape. An assemblage of plants, the tallgrass prairie, evolved and adapted to this harsh climate about 8000 years ago. The prairie consisted of thousands of different species of plants that provided a diverse habitat for wildlife.

**Fire** maintained the prairies that colonized this area. Set by Native Americans or started by lightning, the fires burned annually through large areas stopped only by rivers, marshes, and streams.

**French explorers** Joliet and Marquette traveled down the Illinois river in 1673 and 1674 sending back news of this new land. Joliet said the Illinois valley was "the most beautiful and most suitable for settlement, a settler would not spend there ten years in cutting down and burning trees; on the very day of his arrival he could put his plow into the ground."

**Land surveyors** marked and mapped every square mile of this prairie land starting in 1817 to prepare it for settlement. The surveyors established a grid of lines called sections. The state was divided into townships located from a principle meridian line and a base line running horizontally and vertically through the state. Each township consisted of 36 sections. Each section is a mile square or 640 acres. The surveyors kept notes of the size, species, and distance of the witness trees they marked as well as the general topography and character of the soil and water. They took distance measurements in chains and links. One chain equals 66 feet and each chain consists of 100 links. The townships and section lines established 180 years ago are still used today and some of the witness trees can still be located along these lines. The federal land survey notes for the state of Illinois are housed at the State Archives in Springfield.

**Illinois** became the "Prairie State" in 1818.

**Native Americans** departed Illinois about 1836. For thousands of years Native Americans lived on the prairies, savannas, and woodlands of Illinois. They survived by gathering nuts, hunting buffalo, elk, and other game, and raising crops to feed themselves.



**Settlers** who came to Illinois survived by farming thousands of acres of land with the invention of the steel plow. They built railroads to transport their crops of corn, wheat, hay, and other grains to the growing urban area. The settlers diminished the spread of prairie fires greatly by the late 1800's to protect crops, buildings, people, and livestock. The transformation of Illinois' prairies had begun.

**The Illinois Natural Areas Inventory** was completed in 1978. Once Illinois was covered with approximately 22 million acres of prairie. The inventory found that only 1/100 of 1%, about 2200 acres, of high quality original Illinois prairie survives today. Most of the prairie remnants are found in areas that were not suitable for development such as pioneer cemeteries, areas of poor soil, and railroad right of ways.

**The Nature Conservancy's Volunteer Stewardship Network** was established in Northern Illinois in 1977 and in Central Illinois in 1989. The volunteers are dedicated to conserving and restoring the natural lands of Illinois. Fire was reintroduced to natural areas to revive the prairies and control invading trees and shrubs. Volunteers also cut brush, monitor plants, butterflies, and birds, and educate the public about these natural areas through special programs, events, tours, and regional newsletters.

# Natural Communities in Central Illinois

(Many of the plants listed below are suitable for a schoolyard restoration project)

Prairie communities - dominated by grasses and forbs(flowers) Listed below are some of the common plants and animals found in this natural community.

*grasses* - big bluestem, little bluestem, side oats gramma, northern dropseed, indian grass, switch grass

*forbs* - pale purple coneflower, blazing star, lead plant, butterfly weed, stiff tickseed, purple and white prairie clover, wild bergamot, yellow coneflower, compass plant, prairie dock, rosinweed, golden alexander

*animals* - prairie kingsnake, prairie vole, thirteen-lined ground squirrel

Savanna Communities - consisted of widely scattered trees; mostly oak and hickory with an understory of shrubs, prairie grasses and forbs

*forbs* - pussy toes, wild quinine, starry campion, purple coneflower

*animals* - Eastern bluebird, red-headed woodpecker, indigo bunting, fox squirrel

Oak Hickory Woodland Communities - consists of groves of oak and hickory trees with an understory of shrubs, sedges, prairie and woodland forbs

*prairie and woodland forbs* - woodland sunflower, asters, tick trefoil, bird's foot violet, four leaved milkweed

*animals* - wood thrush, tiger salamander, chipmunk

Wetland Communities - a water community consisting of sedges, rushes, shrubs, and trees such as cottonwood and bur oak

*plants* - arrowhead, narrow leaved cattail, pickerel weed, pond weeds, skunk cabbage, marsh marigold

*animals* - muskrat, red-winged blackbird, bitterns, waterfowl, frogs

Many butterflies can be found in all these natural areas. Some of the common species are red admiral, tiger swallowtail, monarch, eastern tailed blue, great spangled fritillary, silver spotted skipper

All these natural communities have been shaped by fire, climate, topography, and the people who live there.

# Planting a Schoolyard Prairie

Why plant a prairie?

*prairie plants ...*

are erosion controllers

are low maintenance

are drought resistant

provide habitat for wildlife

are beautiful too!

# Establishing a schoolyard prairie

## *Determine the best spot for your restoration...*

map the site including buildings and future expansion plans, trees, natural remnants existing on the property, underground electrical, water, and gas lines, overhead power lines, play areas

how much direct sun will the area get

how wet or dry is the area

what plant species are suitable for your area

## *Prairie School Program...*

a hands-on restoration project for grades 2 through 5

activities include seed collecting, seed treatment, growing seedlings for transplant, planting your schoolyard prairie

See the Prairie School brochure included for more information.

## **Important:** *Teach and practice ethics in restoration.*

never collect plants unless it is certain that an area is going to be destroyed

get permission to collect seed from the landowner

it is against the law to collect from Dedicated Illinois Nature Preserves

do not take rare species from a site

take no more than 50% of the seed of the species present on a site

take only what is needed for your restoration project

# The Diverse Prairie - activities for your restoration program

*add a sign to your planting* - After your schoolyard prairie is planted students can participate in designing a sign. The sign could include artwork or poetry and information on why the planting was established.

*monitor butterflies* - Butterflies are a good indicator of the health of an area. Keep records from year to year of the different species and numbers seen near your schoolyard prairie.

*prairie pen pals* - Exchange information with other students who have also established a schoolyard prairie in Central Illinois. The Prairie School Coordinator can supply information to get started.

*walk a section line* - Many of the original section lines established by land surveyors in 1817 can be found today. Find a section line near your school and retrace the footsteps of the original surveyors using their notes found at the State Archives. A compass and a measuring tape is needed.

*adopt a natural area* - Under guidance of the steward and landowner students can participate in stewardship activities and learn first hand what a steward does and the importance of protecting these natural areas. Activities may include monitoring plants, trees, butterflies, brushcutting, or removal of invading species. The Prairie School Coordinator can help you get started.

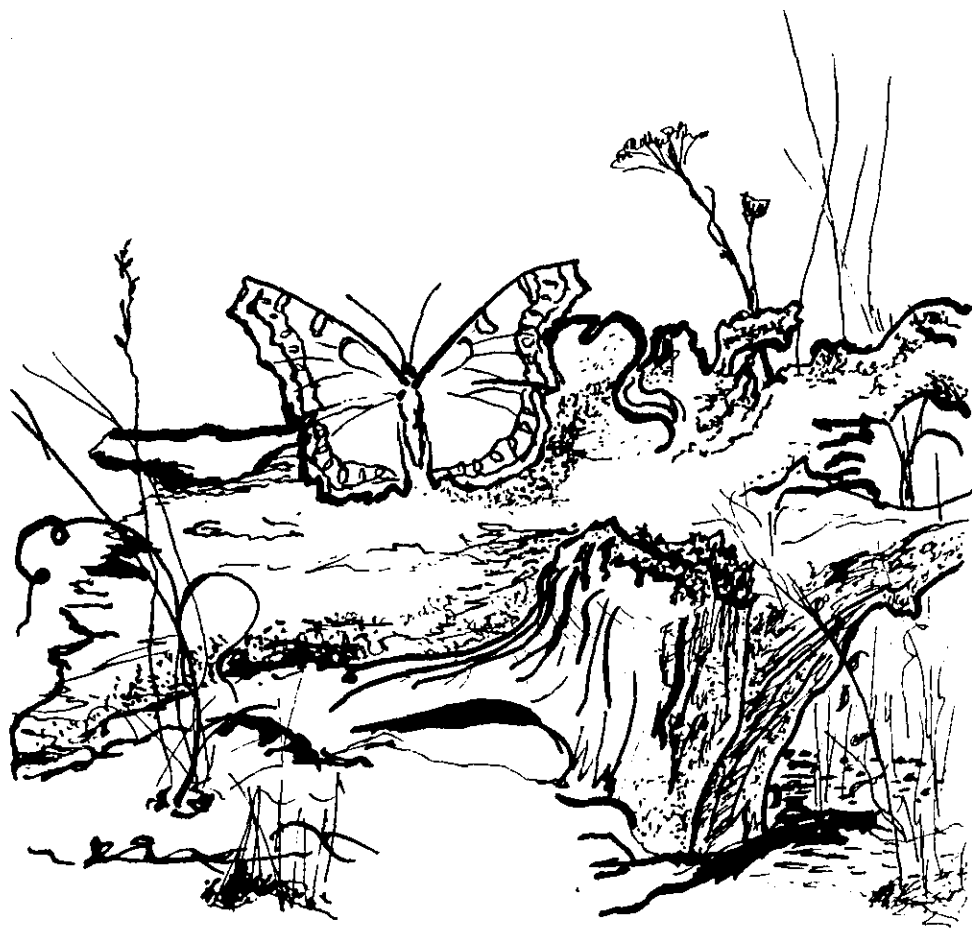
*make a prairie field guide* - Using the drawings provided, copies can be made for each student to make their own field guide for their schoolyard prairie. Blank pages can be placed in-between the drawings for students to add their own artwork, creative writing, or poetry.



My ●  
Prairie School  
Field Guide

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mourning cloak.



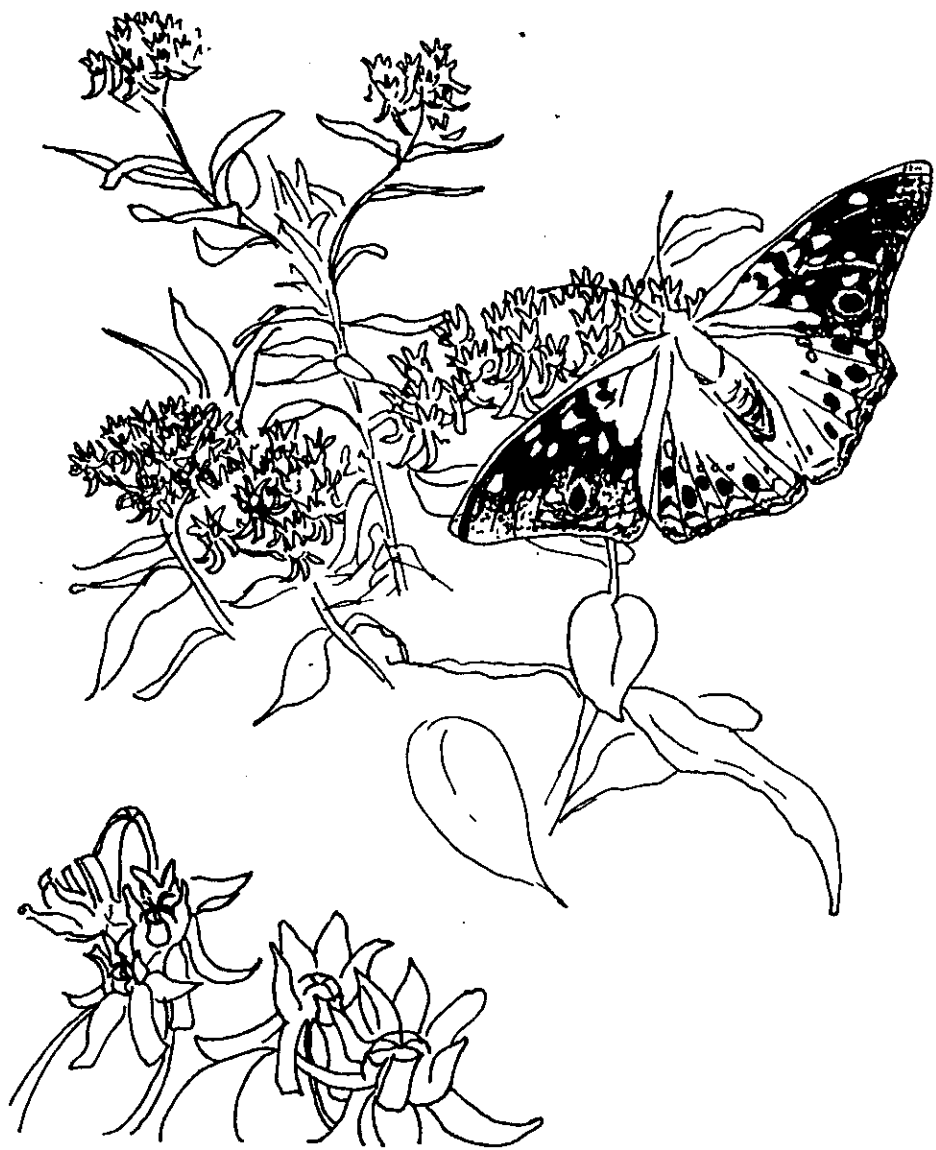
winter scene - red-tailed hawk in white oak tree



little bluestem, side oats gramma, Indian grass



indigo buntings, chinquapin oak,  
pale purple coneflower



hackberry butterfly on butterfly weed



silver spotted skipper on wild bergamot



walking stick on yellow coneflower



monarch on prairie milkweed



tiger swallowtail, prairie dock, compass plant,  
New England aster



prairie king snake

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