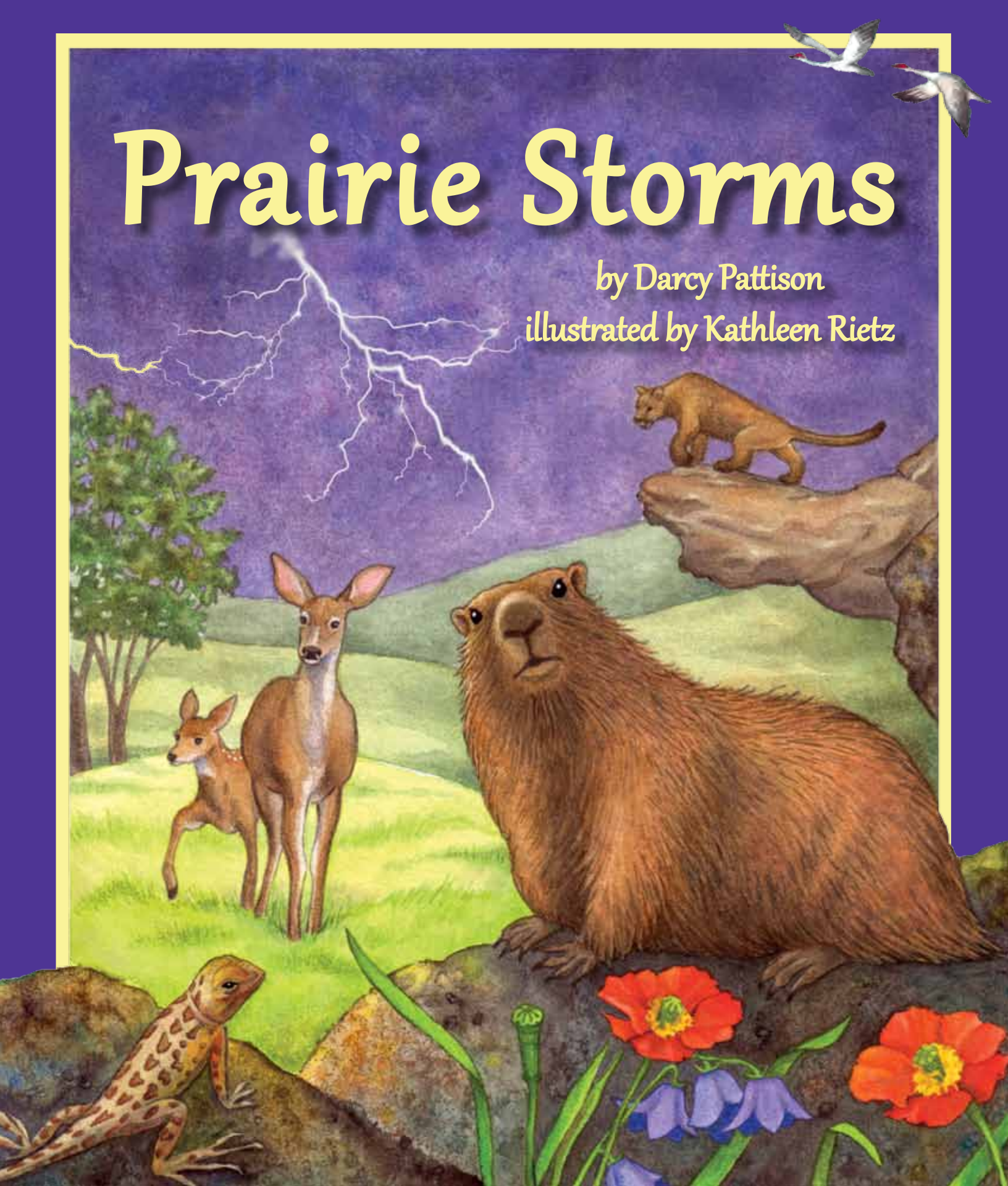


# Prairie Storms

by Darcy Pattison  
illustrated by Kathleen Rietz



front flap

# Prairie Storms

Cozy up for a rainy day to read and explore the prairie ecosystem through its ever-changing weather. Each month features a storm typical of that season and a prairie animal who must shelter, hide, escape, or endure those storms. Told in lyrical prose, this story is a celebration of the grasslands that dominate the center of American lands and the animals that live there.

Animals in the book include: prairie chickens, ground hogs, sandhill cranes, prairie dogs, red foxes, white-tailed deer, striped skunks, lesser earless lizards, burrowing owls, cougars, bald eagles, and bison.

It's so much more than a picture book . . . this book is specifically designed to be both a fun-to-read story and a launch pad for discussions and learning. Whether read at home or in a classroom, we encourage adults to do the activities with the young children in their lives. Free online resources and support at [www.ArbordalePublishing.com](http://www.ArbordalePublishing.com) include:

- For Creative Minds as seen in the book (in English & Spanish):
  - Grassland Habitat
  - Grasslands Around the World
  - Weather or Seasons?
  - Animals, Weather, & Seasonal Changes: True or False?
  - Humans, Weather, and Seasonal Changes
- Teaching Activities:
  - Reading Questions
  - Language Arts
  - Science
  - Math
  - Geography
  - Coloring Pages
- Interactive Quizzes: Reading Comprehension, For Creative Minds, and Math Word Problems
- English and Spanish Audiobooks
- Related Websites
- Aligned to State Standards (searchable database)
- Accelerated Reader and Reading Counts! Quizzes
- Lexile and Fountas & Pinnell Reading Levels

eBooks with Auto-Flip, Auto-Read, and selectable English and Spanish text and audio available for purchase online.

Thanks to Dr. Jeff Masters, Director of Meteorology at Weather Underground, Inc. for checking the accuracy of the weather information; and to staff at the Tall Grass Prairie National Preserve for checking the accuracy of the prairie information.

back flap



Award-winning author **Darcy Pattison's** novels and picture books have been recognized for excellence by starred reviews in *Kirkus* and *BCCB*, and have been on various state award reading lists. In addition to *Prairie Storms*, some of her many titles include *19 Girls and Me*, *Searching for Oliver K. Woodman*, and *The Journey of Oliver K. Woodman*. Darcy is the 2007 recipient of the Arkansas Governor's Arts Award, Individual Artist Award for her work in children's literature. As a writing teacher, Darcy is in demand nationwide to teach her Novel Revision Retreat. Darcy established the Arkansas chapter of SCBWI and served as Regional Advisor for six years. She lives in the Little Rock area.

A lifelong artist and lover of art, **Kathleen Rietz** was drawing and painting before she learned to write her name. Originally from Peoria, IL, Kathleen received her formal training from the American Academy of Art in Chicago, IL. For nearly two decades, she has worked as an illustrator, designer, and product developer. In addition to illustrating *Prairie Storms* and *Champ's Story: Dogs Get Cancer Too!* for Arbordale, Kathleen's other books include *Little Black Ant on Park Street*, *The ABC's of Yoga for Kids*, and *Prayers for Children*. She has taught art to children and adults at the Community School of the Arts at historic Wheaton College in Wheaton, IL, and through a local home school program in her community.

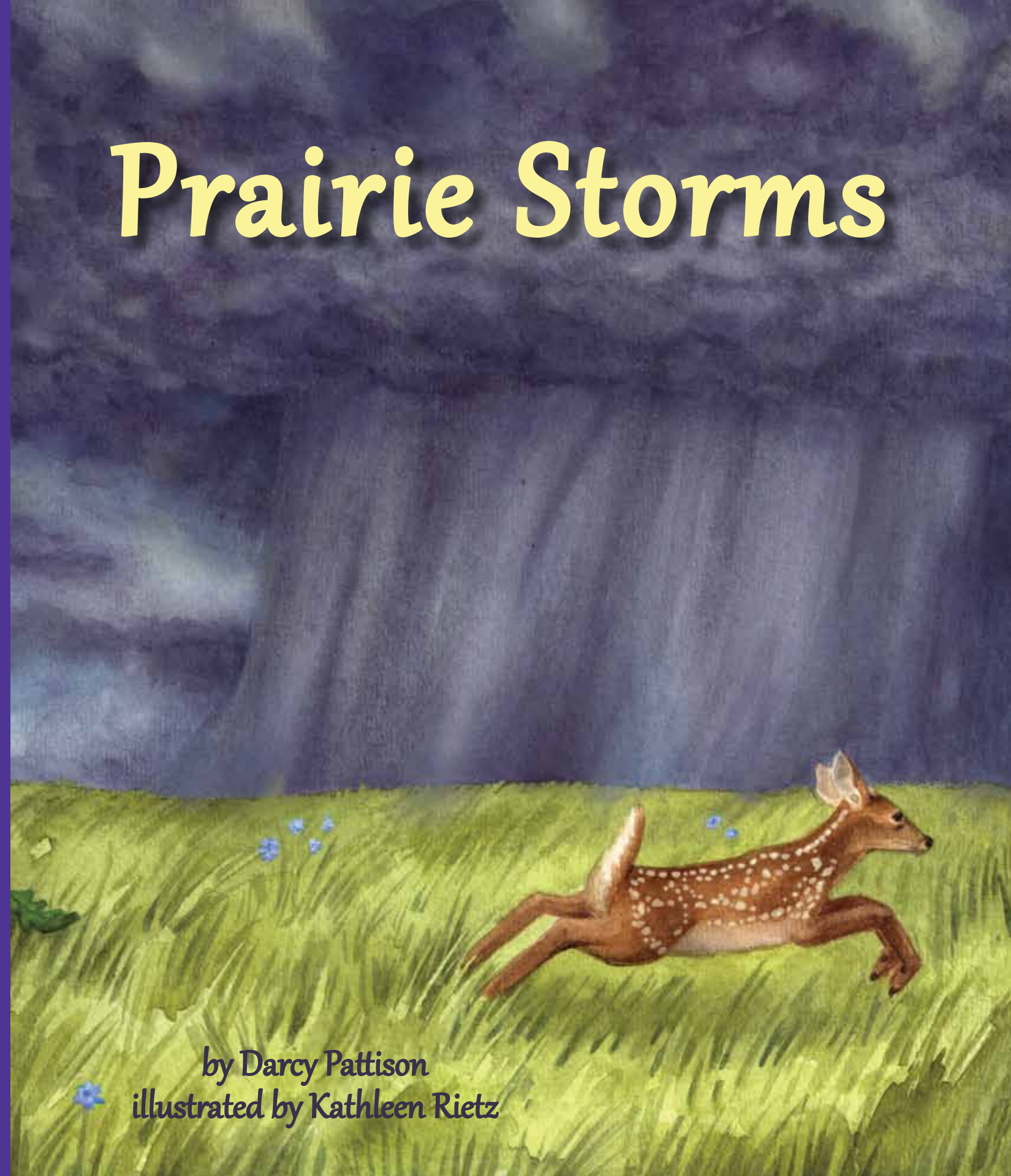


Darcy Pattison

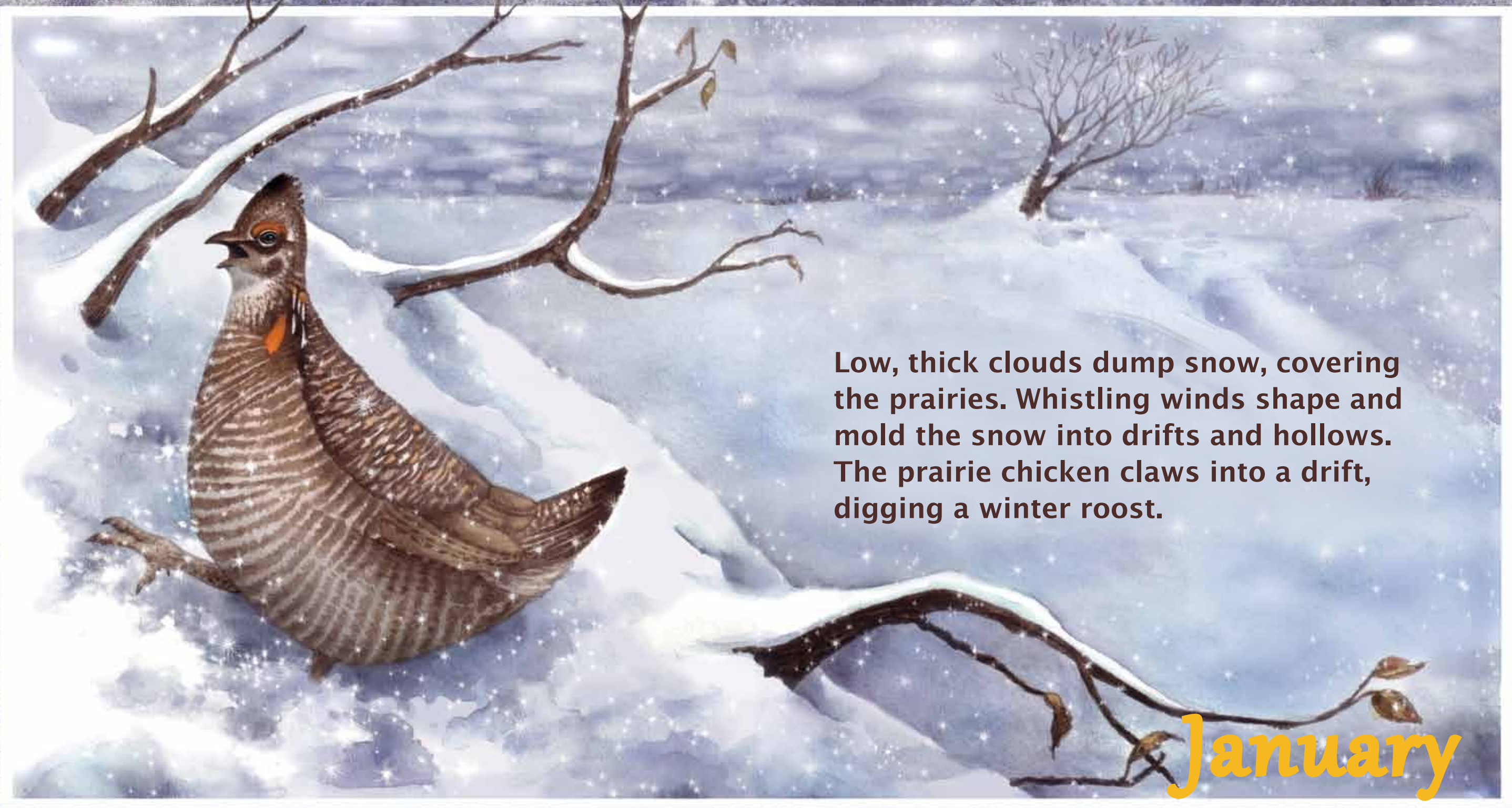


Kathleen Rietz

# Prairie Storms



by Darcy Pattison  
illustrated by Kathleen Rietz

A detailed illustration of a prairie chicken in a winter landscape. The bird is shown in profile, facing left, with its wings slightly spread. It has brown, vertically striped feathers and a distinctive orange patch around its eye. The ground is covered in deep, white snow, with some drifts and hollows. Bare, dark tree branches are scattered across the scene, some with a few yellow leaves. The sky is a pale, overcast blue, with numerous small white snowflakes falling. The entire scene is framed by a white border.

Low, thick clouds dump snow, covering the prairies. Whistling winds shape and mold the snow into drifts and hollows. The prairie chicken claws into a drift, digging a winter roost.

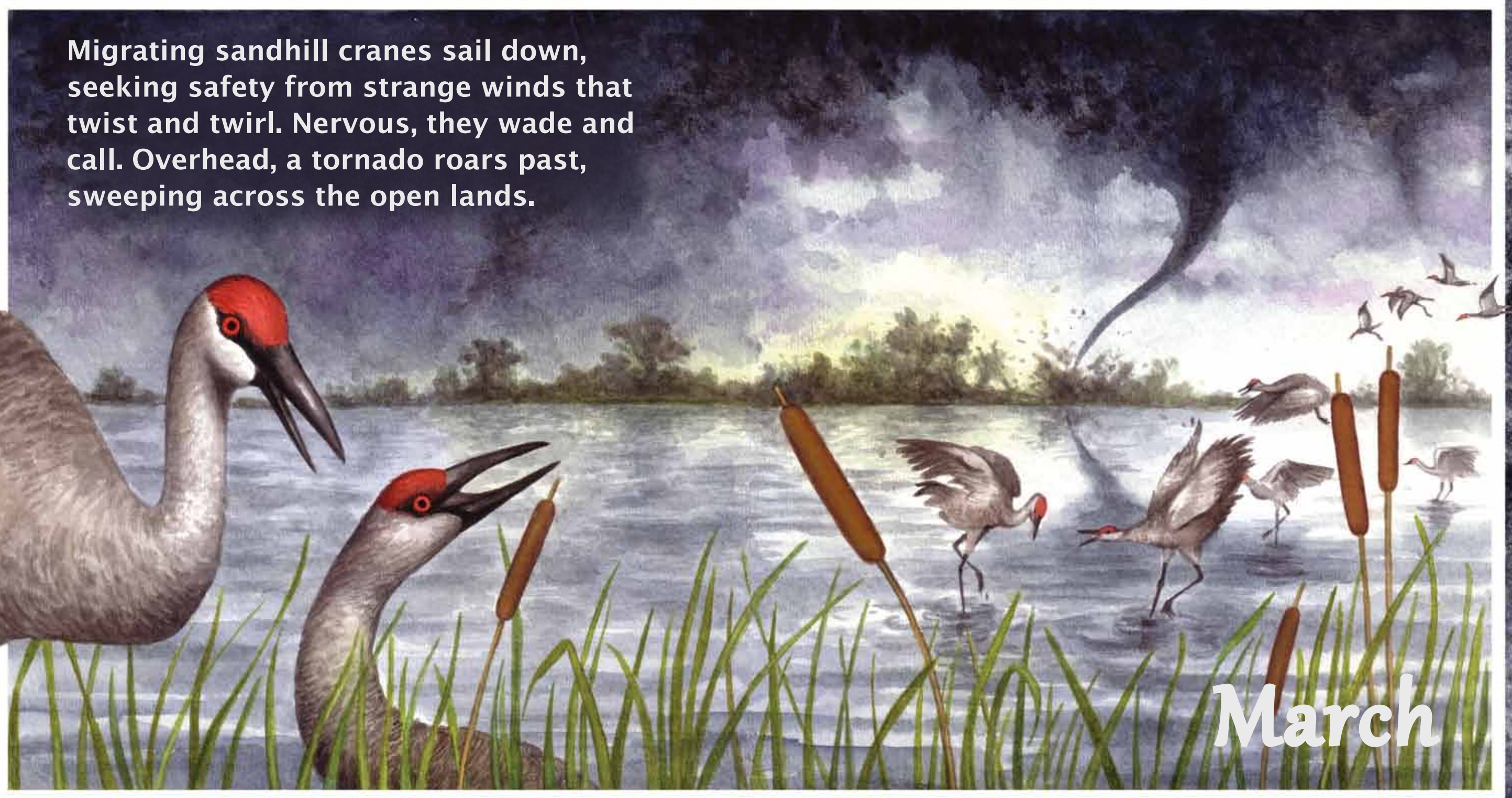
January

# February

The hibernating ground hog stirs, awakes. It unplugs the door to its den and peers out. Soft billows of fog blot out the sun.



Migrating sandhill cranes sail down,  
seeking safety from strange winds that  
twist and twirl. Nervous, they wade and  
call. Overhead, a tornado roars past,  
sweeping across the open lands.



March

# For Creative Minds

The For Creative Minds educational section may be photocopied or printed from our website by the owner of this book for educational, non-commercial uses. Cross-curricular teaching activities, interactive quizzes, and more are available online. Go to [www.ArbordalePublishing.com](http://www.ArbordalePublishing.com) and click on the book's cover to explore all the links.

## Grassland Habitat

Prairies, seas of grass, or grasslands are huge areas of flat land covered with grass. Some grasslands have tall grass, some short, and some have mixed grasses.

Fire is an important process in grassland habitats. As plant matter is burned off above ground, ash provides nutrients to the soil and nitrogen is released below ground. As a result, new plant shoots that emerge after the burn are more nutritious for wildlife and livestock. Fire also prevents trees and shrubs from taking over the grassland. Lightning can cause wildfires, especially if weather conditions are dry and windy.

Grasslands receive an average of 10 to 40 inches (about 25 to 100 cm) of precipitation each year. Less rain would turn the grassland to desert and more rain would allow more trees to grow into forests.



At one time, grasslands covered almost all of central North America. As the U.S. expanded its boundaries westward, the grasslands were developed into cities and farmland to support our ever-growing nation.

Between 30 and 60 million bison once roamed the grasslands, but were overhunted to near extinction. Most wild bison are now only found in parks or on refuges.

Burrowing owls dig holes or re-use prairie dog burrows for their nests.

Grassland plants and animals depend on each other.

Grasses and flowers rely on the wind and animals to help spread seeds to grow.

The grasses get their energy from the sun, water, and the fertile soil. Prairie chickens, groundhogs, deer, and bison all eat the grass. Eagles, foxes, cougars, and coyotes eat some of the plant-eating animals. When they die, their bodies decay and the nutrients return to the soil to help the plants grow.

For more detailed food web information and activities, go to the book's free online activities.

## Grasslands Around the World



We call them prairies in North America, but grasslands are known by different names in other parts of the world. Using the map, see if you can answer these questions. Answers are upside down, below.

- 1 What are grasslands in South America called?
- 2 Savannas and veldts are names for grasslands on what continent?
- 3 On what continents are steppes?
- 4 What are grasslands called in Australia?

Answers: 1) pampas, 2) Africa, 3) Europe and Asia, 4) savanna

## Weather or Season?

Weather changes quickly. Sometimes it can be sunny and hot in the morning but thunderstorms might pop up in the afternoon. Weather is usually reported on an hourly (internet) or daily basis.

Seasons affect weather too. Not only does the temperature change from one season to another, but the type or frequency of precipitation changes too.

Match the description to the appropriate weather or season. Answers are upside down at the bottom of the page.



**1** Small, white crystal flakes of frozen precipitation. Each individual flake always has six sides. When on the ground, it can get very deep.



**2** A collection of tiny water droplets or ice crystals in the atmosphere. Normally white in color and different in sizes and shapes, they can turn dark right before a storm.

**3** A cloud at the ground.



**4** The season between summer and winter. Temperatures begin to cool, tree leaves change colors and fall to the ground, and the amount of daylight starts to get shorter.

**5** An arc of color (red, orange, yellow, green, blue, indigo, and violet) caused by the bending of the sunlight as it passes through rain.

**6** The coldest season of the year. Precipitation can be in any form from rain to snow, and daylight is shortest of the year.



**7** A fast spinning column of air that reaches from a cloud to the ground, usually during a thunderstorm. These very dangerous storms are sometimes called twisters.

**8** Small drops of liquid precipitation.

**9** Water that falls from clouds. Depending on the season and temperature, it can fall as rain, sleet, hail, or snow.

**10** A type of storm with thunder and lightning. There may or may not be rain, hail, or wind.

**11** An electrical explosion made by a thunderstorm. The explosion's sound is called thunder.

**12** The season between winter and summer. Temperature begins to warm, tree leaves grow green, flowers start to bloom, daylight gets longer.

**13** The hottest season of the year. Afternoon thunderstorms can pop up, there's more daylight than darkness each day.

**14** Frozen ice balls of precipitation from thunderstorms. Most are small but some can be as big as softballs!



Answers: 1) snow, 2) clouds, 3) fog, 4) autumn (fall), 5) rainbow, 6) winter

Answers: 7) tornado, 8) rain, 9) precipitation, 10) thunderstorm, 11) lightning, 12) spring, 13) summer, 14) hail

## Animals, Weather and Seasonal Changes: True or False?

Can you tell which statements are true and which are false? Answers are upside down, below.

- 1 Prairie chickens dig a roost in a snowdrift.
- 2 Groundhogs migrate to warmer climates in the winter and come back in the spring.
- 3 Sandhill cranes migrate.
- 4 Prairie dogs stay in their underground burrows, out of the rain.
- 5 Some animals run for cover from rain or hail. They may hide in their den or may huddle under trees or bushes.
- 6 Skunks stay in their burrows during the cold seasons. When it is hot, they only come out at night, when it is cooler.
- 7 Burrowing owls hibernate to avoid cold weather.
- 8 Some animals grow thicker fur to keep them warm in the winter.

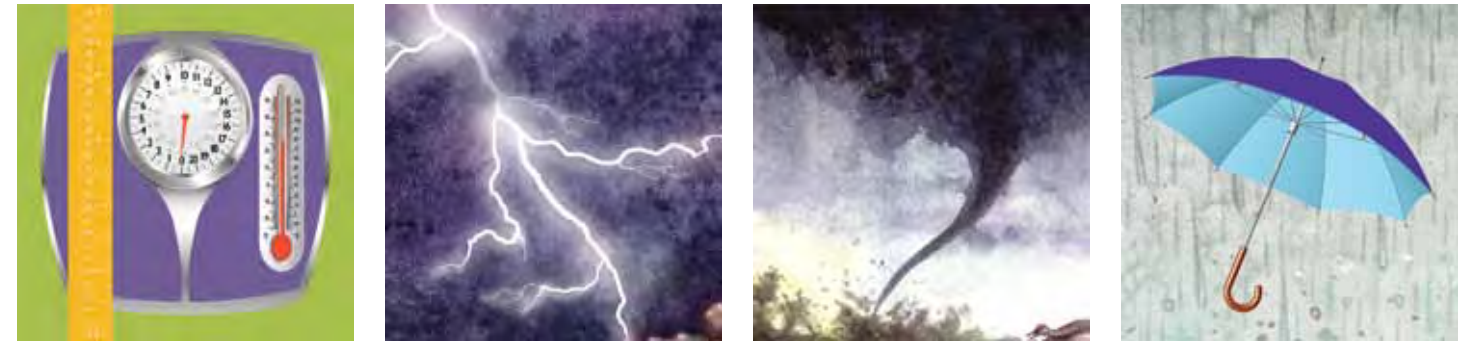


Answers: 1) True, 2) False—groundhogs hibernate for the winter, 3) True, 4) True, 5) True, 6) True, 7) False—burrowing owls migrate, 8) True

## Humans, Weather, and Seasonal Changes

Can you answer these questions? Answers are upside down, below.

- 1 A meteorologist studies and predicts the weather. True or False?
- 2 Which instrument is used to measure temperature: ruler, scale, or thermometer?
- 3 Humans wear warm clothes in the winter to stay warm. True or False?
- 4 Humans heat homes and buildings to stay warm in the summer. True or False?
- 5 What should you do if you hear thunder?
- 6 What should you do if you are under a tornado warning?
- 7 Which clouds might warn of rain: white fluffy clouds or dark clouds?
- 8 What weather event might start a fire on the prairie?
- 9 How can you stay dry when it rains?
- 10 What is a winter storm with wind speeds higher than 35 mph (56 km) and enough falling or blowing snow making it hard to see?



Answers: 1) True, 2) thermometer, 3) True, 4) False, humans heat buildings in the winter, not summer. 5) As soon as you hear thunder, you should get to safety—inside a house or car. If outside, stay away from single trees or metal objects and squat on the balls of your feet. Do not swim or take a bath. 6) If a tornado is near, you should go to a basement or an inside room/hall without windows. 7) dark clouds, 8) lightning, 9) use an umbrella or wear a raincoat, 10) blizzard



For Haileigh and Bruce—DP

For Vinnie, with gratitude—KR

Thanks to Dr. Jeff Masters, Director of Meteorology at Weather Underground, Inc. for checking the accuracy of the weather information; and to staff at the Tall Grass Prairie National Preserve for checking the accuracy of the prairie information.

Library of Congress Cataloging-in-Publication Data

Pattison, Darcy.

Prairie storms / by Darcy Pattison ; illustrated by Kathleen Rietz.

p. cm.

ISBN 978-1-60718-129-3 (hardcover) -- ISBN 978-1-60718-139-2 (softcover) -- ISBN 978-1-60718-149-1 (english ebook) -- ISBN 978-1-60718-159-0 (spanish ebook) 1. Prairie ecology--United States--Juvenile literature. 2. Prairie animals--United States--Juvenile literature. 3. Storms--United States--Juvenile literature. I. Rietz, Kathleen, ill. II. Title.

QH104.P38 2011

577.4'40973--dc23

2011016339

Also available as eBooks featuring auto-flip, auto-read, 3D-page-curling, and selectable English and Spanish text and audio

Interest level: 004-009

Grade level: P-4

Lexile Level: 860 Lexile Code: AD

Curriculum keywords: adaptations, food web, habitat, human interaction: seasons, life science: general, seasons, time: month, weather, weather/climate, weather/seasons, weather: severe

Text Copyright 2011 © by Darcy Pattison

Illustration Copyright 2011 © by Kathleen Rietz

The "For Creative Minds" educational section may be copied by the owner for personal use or by educators using copies in classroom settings

Arbordale Publishing  
formerly Sylvan Dell Publishing  
Mt. Pleasant, SC 29464  
[www.ArbordalePublishing.com](http://www.ArbordalePublishing.com)



If you enjoy this book,  
look for other Arbordale books that may also be of interest:



Includes 6 pages of  
learning activities.

Look for more free activities  
online at

[www.ArbordalePublishing.com](http://www.ArbordalePublishing.com)