

# Because of an Acorn

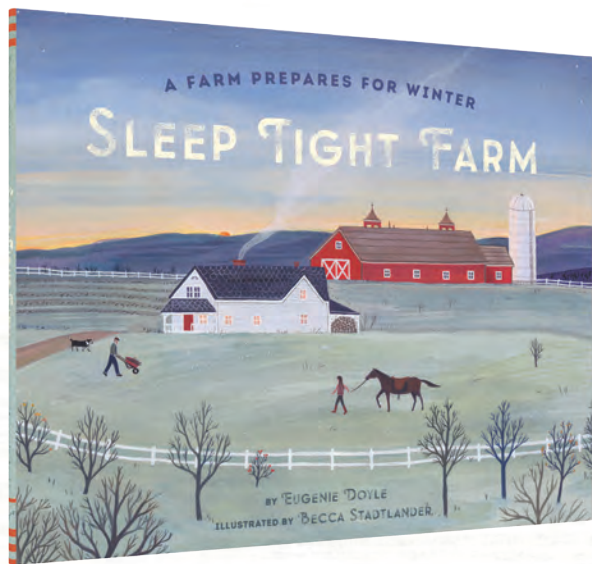
by Lola M. Schaefer and Adam Schaefer  
illustrated by Frann Preston-Gannon

978-1-4521-1242-8 • \$16.99 HC  
978-1-4521-5304-9 • \$10.99 E-book  
Ages 5 to 8 • F&P Text Level Gradient: E  
Lexile® Measure: BR

## A FARM PREPARES FOR WINTER SLEEP TIGHT FARM

By Eugenie Doyle  Illustrated by Becca Stadtlander

978-1-4521-2901-3 • \$16.99 HC  
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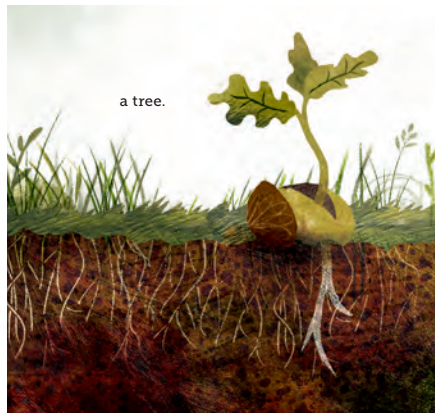
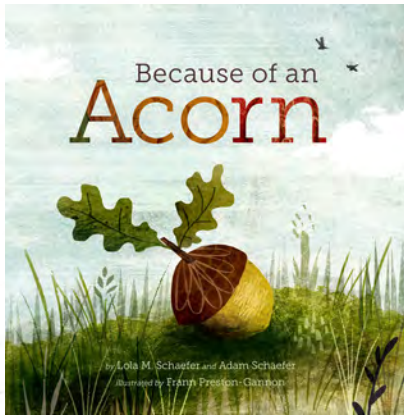


### Teaching Ecology and Biodiversity: A Curriculum Guide for *Because of an Acorn* and *Sleep Tight Farm*

Aligned with Common Core State Standards and Next Generation Science Standards

#### About this Guide

This guide contains reading strategies along with research, science, and writing projects to accompany the reading of two environmental picture books: *Because of an Acorn* by Lola M. Schaefer and Adam Schaefer, and *Sleep Tight Farm: A Farm Prepares for Winter* by Eugenie Doyle.



## About the Book

Because of an acorn, a tree grows, a bird nests, a seed becomes a flower. Enchanting die-cuts illustrate the vital connections between the layers of an ecosystem in this magical picture book. Wander down the forest path to learn how every tree, flower, plant, and animal connect to one another in spiraling circles of life. An acorn is just the beginning.

## Reading the Book

### Picture Predictions and Ponderings

Reading the illustrations, particularly the die-cuts that offer a glimpse of the next page, enables readers to predict what might be featured next while participating in a discussion that will increase their language and visual literacy skills. Some questions that can be used to engage readers and enhance questioning might include:

*What do you see?*

*What do you think the next illustration might contain?*

*What colors are in the illustration? How do they make you feel?*

*What is your favorite illustration? Why?*

*What do you wonder when you look at the illustration?*

*What surprised you?*

*What questions bubble up for you as you ponder the connections between each page?*

Correlates with CCSS.ELA-Literacy.RL.K-2.1; RL.K-2.7

## Extension Activities

### Create a Science Notebook

Science notebooks provide students with the opportunity to record and reflect on inquiry-based observations, activities, investigations, and experiments. An ideal tool for students to demonstrate and communicate their understanding of science concepts through art, literacy, and mathematics, science notebooks are modeled after methods scientists use to record their observations, questions, ideas, and reflections through writing, drawing, charts, tables, models, and graphs. These notebooks serve as a record of the process of thinking not only in the moment, but also over a period of time (so be sure to have students date their entries).



# TEACHER GUIDE

Science notebooks work well at all grade levels and with all students—particularly English language learners as well as struggling readers and writers—because they can be differentiated according to the interests, abilities, and needs of individual students. Science notebooks also provide myriad opportunities for sharing, discussing, describing, and recording new ideas and findings.

Assist students as they begin writing their entries by providing prompts such as:

*I know . . .*  
*I wonder . . .*  
*I learned . . .*



Using this framework, have students conduct a science walk around the school grounds or their neighborhood and record or draw what they see as they observe a living organism such as a flower, insect, or bird. What do they know or wonder about this organism? After gathering information through observation or from the internet about their selected organism, students should record what they learned. Have them revisit *Because of an Acorn* and reflect on how every tree, plant, flower, or animal is connected to each other.

When students begin conducting explorations or experiments, additional writing frames to use include:

*I observed . . .*  
*I saw/smelled/felt/heard . . .*  
*My experiment/investigation was . . .*  
*I discovered that . . .*  
*I think . . . because . . .*

In addition, students can designate pages in their science notebook to list and define new vocabulary for current and future use.

**Correlates with CCSS.ELA-Literacy.W.K-3.2**

## **Speak for the Forests**

After reading *Because of an Acorn*, including the factual information at the end of the story, ask students to think about and discuss the importance of trees. Have them record their ideas in science notebooks or on charts that have been generated to assist in making connections between science, technology, engineering, and mathematics (STEM). Next, instruct students to create—either individually or in small groups—a public service announcement (PSA) that includes:

*Three reasons to save trees/forests*  
*Three ways students can help to conserve trees/forests*

After students have generated their reasons to save and ways to conserve trees, have them create a storyboard in their notebooks by making six squares—three on the top and three on the bottom. Next, direct students to draw or write their three reasons for saving trees in the top three squares and their three ways for helping to conserve trees and forests in the bottom three squares. Instruct students to look to their storyboards for visual inspiration to create text for their PSAs. Students should practice reciting their PSAs—as individuals or in small groups—and then use an iPad or other video recording device to record their PSAs. Finally, as a class, watch each announcement and discuss whether the PSA was convincing and/or provided ideas for saving and helping to conserve trees and forests.

**Correlates with CCSS.ELA-Literacy.RI.1-3.1**

## Biome in a Bag

A biome is made up of many ecosystems. Forests are considered biomes because they contain a large number of trees and also make up approximately 30% of the total land cover on earth. Have students create their own biomes either individually or in small groups in order to understand how the various components of a biome work together.

### Materials needed:

*One 2-liter soda bottle cut in half*  
*One gallon-size resealable bag*  
*Potting soil*  
*Pebbles*  
*Seeds*  
*Water*



### Instructions

1. *Place pebbles in the bottom half of the soda bottle until they measure approximately one-inch deep.*
2. *Pour potting soil over the pebbles so that it is double the amount of pebbles at the the bottom.*
3. *Make a trench down the center of the soil that is about a half-inch deep.*
4. *Sprinkle a few seeds in the trench.*
5. *Cover the seeds with soil.*
6. *Water the seeds just enough so that you see water collecting at the bottom with the pebbles.*
7. *Place the biome in the plastic bag and seal it.*

Students have now created an environment for growing plants. The seeds do not need to be watered again because the water will recycle itself. The roots of the plant absorb the water which then travels up the stem to the other parts of the plant. Some water will evaporate and form drops on the bag called condensation. Instruct students to place their biome bags in a sunny area so that within three or four days the plants will begin to grow. Everything the plant needs is contained within the bag—water and nutrients are in the soil, and air is in the bag. Have students record their observations and results in their science notebooks.

Next, using the pattern language of *Because of an Acorn*, direct students to write their own text to accompany the findings of their experiment. For example, "Because of the pebbles, soil. Because of the soil, seeds." In addition, students can use their drawings of the process to illustrate the text they have generated.

Correlates with Next Generation Science Standards 2-LS2: Ecosystems: Interactions, Energy and Dynamics; 2-LS2-1. Plan and conduct an investigation to determine if plants need sunlight and water to grow.

Correlates with CCSS.ELA-Literacy.W.1-2.7





## About the Book

Snug against the cold, the farm prepares for winter's rest and spring's new growth to come. In this enchanting book, Eugenie Doyle and Becca Stadtlander paint a warm picture of what winter means to the farm year and the family that shares its seasons.

## Reading the Book

### Word Walk

In *Sleep Tight Farm*, the family prepares for winter by saying "Good night" to the covered crops that are being shielded from the frost and to the bees that will enjoy protected hives thanks to the windbreak. Repetitive phrasing describing the results of the tasks completed by the farmer and his family accompanies each of these activities. Prior to reading the story, conduct a word walk and point out the italicized phrasing that begins, "Good night . . ." Read the phrase aloud and then have students repeat it. Provide information or clarification about terms like "stacked wood" or "hoophouse" along with other words that might need defining such as mizuna, tatsoi, or windbreak. As the story is read aloud, point to the phrase and have students engage in a call-and-response activity in which the phrase is read and then repeated by students. Familiarizing students with the phrase prior to reading aloud will offer the opportunity to demonstrate fluent reading.

Correlates with CCSS.ELA-Literacy.RL.K-2.4

## Extension Activities

### Spin a Story

Preparing for winter is the focus of *Sleep Tight Farm*, but what about the other seasons? Have students "Spin a Story" by cutting out two large circles; one will be used for the top and one for the bottom. Instruct students to cut out a notch at the top of one circle as shown in the diagram below and then write down the title of this story, *Four Seasons on a Farm*.



# TEACHER GUIDE

Next, have students divide the second circle into four sections for spring, summer, fall, and winter. Direct students to use what they learned from *Sleep Tight Farm*—as well as information they discover through research using books or the internet—to draw a farm scene that represents each one of the seasons, paying particular attention to the crops and animals featured in *Sleep Tight Farm*. Have students label different parts of their drawing. This strategy can be used to depict the changing seasons of other places or locations. For another variation of this strategy, instruct students to create a story for one season (for example, a story for spring called *Wake-Up Farm*).

Correlates with CCSS.ELA-Literacy.RL.1-2.3; W.K-3.7

## Fostering Feathered Friends

In *Sleep Tight Farm*, the farmer and his family cover up plants, install lights so the chickens will lay their eggs during the winter, and build a windbreak for the beehives to shelter them and keep them safe. But what about all the birds that don't migrate to warmer weather in the winter, such as mourning doves, blue jays, great horned owls, and downy woodpeckers? Have students work together in small groups to design a birdhouse with food that won't get eaten by other animals, or a birdbath that will either eliminate or reduce water freezing during the winter. Instruct students to use their science notebooks and to follow the five-step process from the Engineering is Elementary STEM framework ([www.eie.org](http://www.eie.org)) to design their birdbath or birdhouse.

ASK: *What is the problem?*

IMAGINE: *What are some solutions? Brainstorm ideas and select the best one.*

PLAN: *Make a drawing of the birdbath or birdhouse. Make a list of materials needed to construct it.*

CREATE: *Write or draw the steps for creating the birdbath or building the birdhouse.*

IMPROVE: *Share your plan with others. Discuss what works about your plan and how you might make it better.*

Correlates with CCSS.ELA-Literacy.RL.1-3.7; W.1-3.7

## Frosty Can Experiment

The farmer and his family spend a lot of time covering up the berry plants "to blank them from the winter's frosty bite." Assist students in understanding why this was an important thing to do before the winter frost and snow arrived by having them create frost on a can. This easy science exploration teaches children about frost that forms because of a change in temperature.

Materials needed:

*Small metal can*

*Water*

*Salt*

*Crushed ice*

Instructions:

1. *Fill a small metal can one-fourth full of water.*
2. *Stir 4 tablespoons of salt into the water.*
3. *Add enough crushed ice to fill the cup and then stir the solution.*
4. *Have children observe what happens on the outside of the can and write or draw their observations in their science notebooks.*





## TEACHER GUIDE

5. Revisit *Sleep Tight Farm* and the various plants and crops that were covered for the winter. Instruct students to consider what they learned from this experiment and discuss what might happen if the farmer and his family didn't protect their plants from the frost and the snow.

Correlates with Next Generation Science Standards K-ESS3: Earth's Systems: K-ESS2-1. Use and share observations of local weather conditions to describe patterns over time. 3-ESS3: Earth and Human Activity: 3-Ess3-1. Make a claim about the merit of a design that reduces the impacts of a weather-related hazard.

Correlates with CCSS.ELA-Literacy.W.K-3.7

This guide was prepared by Cyndi Giorgis, professor of children's literature. She is the dean of the College of Education at the University of Texas at El Paso.

