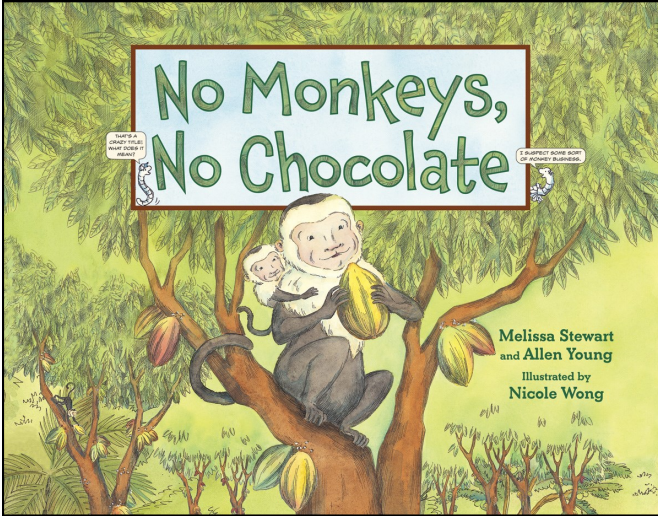


No Monkeys, No Chocolate

A TEACHER'S GUIDE

Developed by Melissa Stewart



978-1-58089-287-2 • HC • \$16.95
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Ages 5–8

This book correlates to the following
Common Core State Standards:
(College and Career Readiness) Reading Informational Text.
Grades K to 5. Standards 1 to 10.

What does a capuchin monkey have in common with a pollen-sucking midge, an aphid-munching anole lizard, and brain-eating coffin fly maggots? Chocolate! Our favorite dessert comes from cocoa beans, which grow on cocoa trees in tropical rain forests. And those trees couldn't survive without help from a menagerie of rain forest critters. This book tells their story.



A Junior Library Guild Selection

★ “Children—and more than a few adults—will find this educational you-are-there journey to the rain forest fascinating.”

—*Kirkus Reviews*, starred review

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About This Guide

No Monkeys, No Chocolate utilizes a dual-layered text to appeal to readers of a wide range in age and grade level. Throughout this guide you'll find activities to use with younger children (kindergarten to grade two) as well as older readers (grades three to five).

The activities directly address a variety of standards across the curriculum (see list below). After each activity you'll find an abbreviation of the standard addressed by that activity.

Teaching Tip! The two layers of text in this book make it ideal for Reading Buddy programs. For more information, please visit www.melissa-stewart.com/pdf/scirdbuddies.pdf.

Common Core State Standards for English Language Arts (CCSS ELA):

- Reading Informational Text #1 and 2: Identifying Key Ideas and Details
- Reading Informational Text #4: Craft and Structure
- Reading Informational Text #7 and 9: Integration of Knowledge and Ideas
- Writing #1, 2, and 3: Text Types and Purposes
- Writing #4 and 6: Production and Distribution of Writing
- Writing #7 and 8: Research to Build and Present Knowledge
- Foundation Skills: Phonological Awareness #2
- Foundation Skills: Phonics and Word Recognition #3
- Speaking and Listening: Comprehension and Collaboration #2 and 3

Next Generation Science Standards Performance Expectations (NGSS PE):

- K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive
- K-ESS3-1. Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live
- 1-LS1-1. Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs
- 2-LS2-2. Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants
- 3-LS4-2. Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing
- 5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment

Common Core Math Standards (CCSS Math):

- Operations & Algebraic Thinking A.1, A.2
- Measurements & Data A.1, A.2
- Numbers & Operations—Fractions NF.B.3d

CCSS were drawn from the Common Core State Standard Initiative at www.corestandards.org.

NGSS were drawn from the Next Generation Science Standards at www.nextgenscience.org.

Before You Read . . .

Grades K to 2:

- After looking at the cover of the book and reading the title, ask students what they think *No Monkeys, No Chocolate* will be about. Write their responses on chart paper. (CCSS ELA RIT #1 and 2)
- Provide a list of vocabulary words and discuss their meanings. (CCSS ELA RIT #4)

Grades 3 to 5:

- Ask students to predict the main idea of *No Monkeys, No Chocolate*. Write their responses on chart paper. (CCSS ELA RIT #2)
- Have students discuss the following questions in small groups. Compile the groups' answers on chart paper.
 - * What is a habitat?
 - * What kinds of plants live in a rain forest habitat?
 - * What kinds of animals live in a rain forest habitat?
 - * Would you like to live in a rain forest? Why or why not?
- Provide a list of vocabulary words. Have students look the words up in a dictionary and write a definition. This may be done individually or in groups. (CCSS ELA RIT #4)

As You Read . . .

Grades K to 2:

- Ask students to think about the main idea of the book. (CCSS ELA RIT #2)

Grades 3 to 5:

- Ask students to think about the main idea of the book. Do they hear details that can support that main idea? They may want to make notes on a piece of paper. (CCSS ELA RIT #2)
- Students should also think about the ideas you recorded on chart paper. Are there things they would like to change or add? They may want to make notes on a piece of paper.

After You Read . . .

Grades K to 2:

- Ask students to identify the main idea of *No Monkeys, No Chocolate*. Work with them to find details that support that idea. List them on chart paper. (CCSS ELA RIT #1 and 2)
- Have students make a list of animals that help cocoa trees survive. Ask them to draw a picture showing how one of these animals helps the tree. (NGSS PE K-LS1-1)

Grades 3 to 5:

- Working in groups of three or four, students should compare two members of the cocoa bean team (e.g. coffin flies, maggots, etc.). Students should consider the size, classification (insect, reptile, mammal, etc.), feeding habits, and how they care for their young.
- Explain the usefulness of a Venn diagram (overlapping circles showing similarities and differences) to your students and ask them to create one that highlights the similarities and differences between the two creatures they selected. (NGSS PE K-ESS3-1)

Curriculum Connections

Science Activities:

Grades K to 2:

Take the class outside to play Jaguar and Monkeys. Monkeys stand on one end of the field. The jaguar stands in the middle of the field. Monkeys must run to the other end of the field without getting “eaten” (tagged) by the jaguar. Have students keep track of how much **prey** (monkeys) the **predator** (jaguar) eats during each round.

Now give each child a red, yellow, green, or blue scarf. Create four bases in the middle of the field. Monkeys are safe if they’re on the base with the same color as their scarf. After each round, eliminate one base. Ask the students how they feel after their base is eliminated. Explain that this is what happens to monkeys and many other rain forest creatures when people burn or cut down rain forest trees. Have students keep track of how much prey (monkeys) the predator (jaguar) eats during each round. Did the number of monkeys who died increase or decrease as the bases (rain forest trees) disappeared? (*NGSS PE K-ESS3-1*)

Grades 3 to 5:

- Divide the class in half and have each team create a Book Fact Scavenger Hunt for the other team. Students should look through *No Monkeys, No Chocolate* and other books about rain forests. (See the bibliography on page seven for suggestions.) They should choose a few interesting facts and turn them into questions. Here are some examples:
 - * In *No Monkeys, No Chocolate*, how many cocoa beans does it take to make a regular-size chocolate bar?
 - * In *The Great Kapok Tree* by Lynne Cherry, what does the child say to the sleeping man?Type each team’s questions, print them out, and cut them so each question is on a separate strip of paper. Place the questions in two bags or boxes, so the students can pick one question at a time and compete to see which team can answer the most questions. (*CCSS ELA RIT #9, Writing #7 and 8*)
- Have each student research one of the creatures discussed in the book and write a report. Each report should include unique/important body features, habitat and range, and any fun facts the student discovers. (*CCSS ELA Writing #2, 4, 7 and 8*)

All Grades:

- As a class do some research to find out what capuchin monkeys, anole lizards, and aphids eat. Then divide the class into small groups. Assign a different animal to each group and have students create a menu poster for their animal. Younger students can draw pictures of the animals and the foods they eat or find photographs on the Web. Encourage older students to be creative with the dishes they create. (*CCSS ELA Writing #7*)

Math Activities:

Grades K to 2:

Using the information below, students should create a bar graph that compares animal sizes. Help students identify each animal as a mammal, reptile, or insect. Which animal is the largest? Does size affect how an animal helps cocoa trees? (*CCSS Math MD A.1 and A.2*)

- * Capuchin monkey, 18 inches
- * Coffin fly, less than 1 inch
- * Anole lizard, 6 inches
- * Aphid, less than 1 inch

Curriculum Connections (cont.)

Math Activities (cont.):

Grades 3 to 5:

- Give each student a copy of **Activity Sheet One**, page 8 of this guide. Ask students to illustrate and then solve each problem. (*CCSS Math OA A.1 and A.2, MD A.2*)

Answers:

- 1) 11 fungi
 - 2) a. 3 eggs; b. 5 eggs
 - 3) a. 124 grasshoppers and lizards; b. 308 grams; c. 231 grams
- Students can use **Activity Sheet Two** (page 9) to practice converting inches to feet and feet to inches. Some of the problems also involve working with fractions. (*CCSS Math NF.B.3d, MD A.1 and A.2*)

Answers:

- 1) 1 ½ feet
- 2) 36 inches; 3 feet
- 3) 8 inches
- 4) 96 inches
- 5) 2 ½ feet; 30 inches

English Language Arts Activities:

Grades K-2:

- Have students create as many words as possible with the letters in “No Monkeys, No Chocolate.” Ask the children to sort the words by number of letters in each word or word families, such as *at, ate, or one* (suggestions below). They can also alphabetize the words. (*CCSS ELA FS #2*)
 - * First round: *at, sat, mat, hat, hats*
 - * Second round: *ate, late, mate, mates*
 - * Third round: *one, none*
- Ask students to compare this book to another rain-forest-themed book they have read. How are the books similar? How are they different? Which book did they like better? Why? (*CCSS ELA RIT #9*)
- Give each child in the class a small piece of chocolate and ask the students to use their five senses to describe it. (*CCSS ELA Writing #3*)

Grades 3-5:

- Have students do research to learn more about rain forests, one of the animals mentioned in *No Monkeys, No Chocolate*, or the chocolate-making process. Use a digital camera with a video setting to film the students as they present reports orally. Then work with the class to create short videos using Adobe Premiere Elements or another inexpensive video editing software program (see examples at www.melissa-stewart.com/video). The videos can be posted on the school website, a classroom blog, or TeacherTube (www.teachertube.com). Author Melissa Stewart would also be happy to post them on her website. You can contact her at mas@melissa-stewart.com. (*CCSS ELA RIT #9, Writing #6, SL #2 and 3*)
- Give students three minutes to write down as many different foods as they can that include chocolate as an ingredient. Then have students take turns reading their words out loud. If other students have a word on their list, all students must cross it out. The winner will have the greatest number of unique chocolate-containing foods. (*CCSS ELA FS #3*)
- Have students pretend they are a cocoa bean. Ask them to write how it feels to be released from their pod, deposited in soil, and to grow into a new tree. (*CCSS ELA Writing #3, NGSS PE 3-LS4-2*)

Curriculum Connections (cont.)

English Language Arts Activities (cont.):

All Grades:

- Have students write letters to or draw pictures for author Melissa Stewart, telling or showing her what they liked best about *No Monkeys, No Chocolate*. Send the letters to Melissa Stewart, c/o Charlesbridge Publishing, 85 Main Street, Watertown, MA, 02472. If you include an e-mail address, Ms. Stewart will send an e-mail to your class. (CCSS ELA Writing #1)
- Pass out copies of **Activity Sheet Three** (page 10 of this guide) and ask students to complete the word search.
- Author Allen Young spent many years studying cocoa trees in Costa Rica. He discovered that midges, the tiny insects that pollinate cocoa trees, can only survive when the forest floor is covered with a rich layer of leaf litter. Have students pretend they are Dr. Young. Ask them to write a journal entry in which they describe the excitement of making that discovery. (CCSS ELA Writing #3, NGSS PE 2-LS2-2)

Art Activities:

Grades K-2:

- Ask students to create an imaginary animal that would have no trouble surviving in the rain forest. They should think about its size, color, type of body covering, number of legs, and specialized features. (NGSS PE K-LS1-1 and 1-LS1-1)
- As a class create a mural that explains how a cocoa tree depends on midges, maggots, monkeys, and lizards. The mural should also show how those animals depend on the cocoa tree. Alternatively you can divide the class into groups of four and assign each member one of the animals. Then each group can create its own poster that explains how the tree and the animals depend on one another. (NGSS PE K-LS1-1)

Grades 3-5:

Have students look carefully at the background art on each two-page spread of *No Monkeys, No Chocolate*. As a class list all the questions the book's illustrator, Nicole Wong, had to ask herself and then research to make the art realistic and accurate. Possible questions include: Where is this rain forest? Besides cocoa trees and the animals mentioned in the book, what else lives in the rain forest? What time of day is it? Using their list of questions, have students research and create a mural that depicts a natural habitat in your community. (CCSS ELA RIT #7)

Advanced Activities:

- Have students research organizations that promote rain forest conservation. They should contact one organization and find out about its recent work. Students should write a report or deliver an oral presentation about what they have learned. (CCSS ELA Writing #6 and 8, NGSS PE, 5-ESS3-1)
- Have students write a poem about ways we are helping and harming the natural world. (CCSS ELA Writing #1 and 4)
- Divide students into teams of three or four and ask each group to pretend it is a news team. They should make a video of a mock news report about an effort that is helping to preserve rain forests or the creatures that call rain forests home. (CCSS ELA Writing #7 and 8, NGSS PE 5-ESS3-1)

Curriculum Connections (cont.)

Advanced Activities (cont.):

- Ask students to pretend they are real estate agents trying to sell large areas of rain forest. After they have done some rain forest research and read samples of property listings, ask them to create a real estate listing for the tract of rain forest. (CCSS ELA Writing #7 and 8)

Related Reading:

- Burleigh, Robert. *Chocolate: Riches from the Rain Forest*. New York: Abrams, 2002.
- Cherry, Lynne. *The Great Kapok: A Tale of the Amazon Rain Forest*. San Diego: Harcourt, 1990.
- Guiberson, Brenda. *Rain, Rain, Rain Forest*. New York: Holt, 2004.
- Jenner, Caryn. *The Story of Chocolate*. New York: DK, 2005.
- Johnson, Rebecca L. *A Walk in the Rain Forest*. Minneapolis, MN: Carolrhoda Books, 2000.
- Markle, Sandra. *Smart About Chocolate: A Sweet History*. Grosset & Dunlap, 2004.
- Yolen, Jane. *Welcome to the Green House*. New York: Puffin, 1997.

About the Creators

Melissa Stewart is the award-winning author of more than 150 books for children. She holds degrees in biology and science journalism and serves on the board of advisors for the Society of Children’s Book Writers and Illustrators. Melissa speaks frequently at conferences for educators and is available for school visits. She lives in Acton, Massachusetts. Visit her online at www.melissa-stewart.com.

Allen Young is the curator emeritus of zoology at the Milwaukee Public Museum and former member of the board of directors of the Tirimbina Rainforest in Costa Rica. He is the world’s leading expert on cocoa pollination and growth. He is the author of *The Chocolate Tree: A Natural History of Cacao*. Allen lives in Fox Point, Wisconsin.

Nicole Wong is a graduate of Rhode Island School of Design and has illustrated many books for children, including *Maxwell’s Mountain*, *The Candy Shop*, and *Wild Rose’s Weaving*. She lives in Fall River, Massachusetts.

Activity Sheet One:

Cocoa Tree Word Problems

Name: _____

Date: _____

1. Five rotting logs are lying on the ground in a Costa Rican rain forest. Three fungi are growing on each of the two logs at the east end of the rain forest. The log at the south end of the pond has one fungus on it. The other logs have two fungi. How many fungi are there all together?

2. A female anole lizard laid 10 eggs in four different nests.
 - a. If the first nest had one egg, and the other nests each had the same amount of eggs, how many eggs were in each of the other nests?

 - b. If two eggs hatched in the second nest and one hatched in each of the other nests, how many of the lizard's eggs didn't hatch?

3. A capuchin monkey in a Costa Rican rain forest eats four grasshoppers a day and three lizards a week.
 - a. How many little critters does it eat each month (4 weeks)?

 - b. If a grasshopper weighs 2 grams and a lizard weighs 7 grams, what is the monthly weight of the monkey's meat diet?

 - c. If 75 percent of the monkey's diet is fruit and nuts, how many grams of plant material does it eat each month?

Activity Sheet Two: Converting Rain Forest Units

Name: _____

Date: _____

1. An average adult capuchin monkey is 18 inches long. How many feet is that?
2. A capuchin monkey's tail is about the same length as its body. What is the total average length of the monkey's body and tail in inches? In feet?
3. Mrs. Cloutier's fourth grade students went on a field trip to a rain forest in Costa Rica. Caroline spotted an anole lizard scurrying up a tree branch. It was $\frac{3}{8}$ feet long. How many inches is that?
4. Rubin saw a toucan in the rain forest understory. It was about 8 feet off the ground. How many inches would that be?
5. Mrs. Cloutier saw a cocoa tree that her class had measured and tagged last year. According to her notes, the tree was $6\frac{1}{2}$ feet tall last year. This year the tree is 108 inches tall. How many feet did the tree grow in one year? How many inches?

Activity Sheet Three: Cocoa Tree Word Search

Name: _____

Date: _____

S U G N U F D R A Z I L
T C O F F I N F L Y A E
E H P L A N T M R O E A
M O T F L A M M A M M F
S C R L D K N E I O R E
C O C O A B E A N S E S
E L A W F U O K F D P M
Y A T E M R E I O T T I
E T T R O Y A P R O I D
R E I N S E C T E O L G
P R E D A T O R S R E E
T D C C O C O A T R E E

The following words may appear horizontally, vertically, diagonally, backwards, or forwards.

chocolate
cocoa bean
cocoa tree
coffin fly
flower

fungus
insect
leaf
lizard
mammal

midge
monkey
plant
pod
predator

prey
rain forest
reptile
root
stem