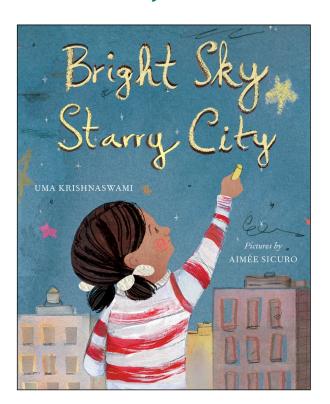


GROUNDWOOD STUDY GUIDES

Bright Sky, Starry City

Written by Uma Krishnaswami
Illustrated by Aimée Sicuro



A little girl and her father have an opportunity to appreciate the wonders of the night sky.

CURRICULUM CONNECTIONS

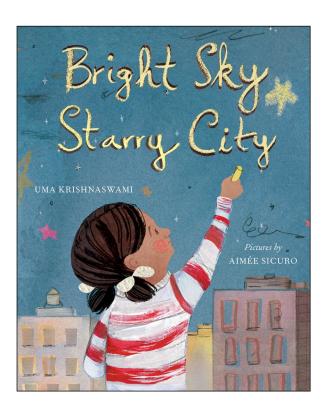
Ages 6 to 9 / Grades 1 to 4

JUVENILE FICTION / Lifestyles / City & Town Life / Science & Nature / Family
Full-color illustrations / 10.8 x 8.9 / 32 pages

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groundwoodbooks.com



BOOK DESCRIPTION

Phoebe helps her dad set up telescopes on the sidewalk outside his store. It's a special night — Saturn and Mars are going to appear together in the sky. But will Phoebe be able to see them with all the city lights?

Raindrops begin to fall, followed by lightning and thunder. Phoebe is filled with disappointment as she and her father hurry inside to wait out the storm.

But suddenly the power fails and then, amazingly, the rain and clouds disappear. Phoebe and her dad and all kinds of people spill into the street. And there, in the bright night sky, the splendor of the planets and a multitude of stars are revealed for all to see.

An illustrated afterword includes information about the solar system, planetary conjunctions and rings, moons, telescopes and light pollution. A glossary and recommended further reading are also included.

PRE-READING QUESTIONS & ACTIVITIES

As a class, perform a "picture walk" through the book. Based on the illustrations, what do students think this book will be about? Can students identify the main characters? What do they like to do?

Do students know what a telescope is? Have any of them ever looked through one? Do students know what astronomy is?

Review the elements of our solar system — the sun, moon, stars and planets. Which of these have students seen? Have any of them seen a falling star or the Milky Way?

Have students ever heard the term "light pollution?" What do they think it means? How does it affect looking at the stars? Briefly explain to them the effects of light pollution on stargazing and the environment.

Vocabulary

This story is about a girl and her love of the night sky. There are many words that have to do with the stars, planets and astronomy. Discuss the following words as they are used in this book and what they mean in this context.

Milky Way axis constellations Deneb galaxy Vega orbit Sun Mercurv planet Venus star solar system Earth Mars telescope planetary conjunction **Jupiter** light pollution Saturn **Uranus** Neptune

POST-READING DISCUSSION QUESTIONS AND ACTIVITIES

THINK-PAIR-SHARE — ALL ABOUT THE BOOK

Have students "think-pair-share" — think about the following questions, pair with another student and share information. Who are the main characters? What is the story about? What is the main problem? What is the solution? What is the theme or "big idea" of this book? Come together as a class and have pairs share their insights.

PICTURES AND WORDS

The words and illustrations in a picture book work together to tell a story. As a class, reread the story and closely examine the illustrations. Discuss how the different elements of *Bright Sky, Starry City* work together. What information do students get from the pictures? What information comes from the text? For example, what do we know about Phoebe and her father? What might have gotten Phoebe interested in the night sky to begin with? Be sure to have students cite specifics from the book (text and illustrations) to support their responses.

FIGURATIVE LANGUAGE

The text of *Bright Sky, Starry City* often verges on poetry. The words have a distinct rhythm when read aloud and the author uses figurative language to tell the story and how Phoebe is feeling. As a class, come together and read the book aloud. Have students raise their hands when they hear an instance of figurative language (metaphor, simile, onomatopoeia, or words that appeal to the senses.) Pause and discuss what feeling, emotion or atmosphere the phrase communicates to the reader. If you wish, pay special attention to the text that describes the rainstorm. Review it as a class and discuss how its repetition, alliteration and rhythms paint a picture of the rainstorm with words. What other passages are similar?

LOOKING CLOSER

The illustrations in *Bright Sky, Starry City* are integral to telling its story. Sometimes they reinforce the text, and sometimes they provide additional information. Break the class into small groups and assign each group an illustration. Have the students analyze the picture closely, comparing it to the words on that page. What does the picture convey? Why is it drawn the way it is? What is the illustrator communicating that is different from the words of the story? Which concepts are being emphasized? Have each group present their findings to the class.

IN THE NIGHT SKY

Before the blackout in the city, no one in the city notices the night sky. When Phoebe studies the sky, she finds that it is difficult, if not impossible, to see anything. Why is it hard for her and her father to see the stars? What happens to change the circumstances?

LIGHT POLLUTION

Review with students the sections of this book that discuss light pollution. Go over what it is, its sources and how it affects the appearance of the night sky, our environment, and our own health and well-being. Illustrate your points by showing students an image of the earth at night and the sources of light pollution from different cities. Working with an adult at home, have students go outside at night to observe and record the light pollution they see and how it affects the appearance of the sky. Come together as a class and discuss their findings. How does light pollution differ from location to location? What causes the light pollution that students have recorded — nearby cities, shopping centres, streetlights? How could this light pollution be limited or eliminated?

Images, information and statistics are available from The International Dark Sky Organization (http://www.darksky.org)

PLAN-ET SYL-LA-BLES

Have students practice recognizing syllables using the names of the planets. Instruct students to clap their hands to indicate each syllable as you say the planet's name aloud. Then repeat the exercise, this time having the class say each planet's name aloud and clapping for each syllable. Ask for volunteers to tell how many syllables are in the name. Write the names of the planets on the board and have the class organize them by number of syllables, from most to least.

COMPREHENSION TRIVIA CONTEST

Explain to students that traditionally the teacher asks the questions and the student gives the answers, but today things will be a little different. Today students will make up the questions! Discuss the "Five Ws and one H" question words — Who, What, Where, When, Why and How. Working with an adult if necessary, have each student make up five reading comprehension questions that show their familiarity and understanding of the story, with each question using one of these key words. Next, have students write each question on a separate slip of paper. Review the questions, adding any additional of your own to the mix. Break students into small teams and have them come up one at a time to pick a question and try to answer it. Each correct answer earns two points for the team. If they get it wrong, someone else on their team can answer it to earn the team one point. Encourage students to cheer for their teammates and have fun!

MY PLANET AND WELCOME TO IT

Have each student select a planet and use the Internet or library resources to prepare a short research project on it, working with an adult if appropriate. Each report should include interesting facts about the planet, including physical description, size relative to Earth, location in the solar system and composition. Have students illustrate their reports with a drawing or drawings of the planet. Their report should also list the next dates when the planet will be visible in the area and where in the sky it will appear. When revised and finalized, use the computer to combine these reports to create a classroom *Primer of Planets* to publish and distribute.

SOLAR SYSTEM

Phoebe draws the planets on the sidewalk using chalk while her father sets up the telescopes. As a class, come together and review this section. Why does she call her drawings "special effects?" Have students draw their own diagram of the solar system. They should refer to the illustrations in *Bright Sky, Starry City* and the chart at the back of the book, as well as other solar system diagrams that can be found online or in library resources. Collect students' drawings and display them in the class.

STARRY NIGHT FIELD TRIPS

Bright Sky, Starry City imparts to the reader the wonder that Phoebe and her Dad feel when stargazing. A trip to a local planetarium is a magical, transformative experience for children — and provides a solid introduction to astronomy. If equipment is available and circumstances permit, you can also plan an evening stargazing event for the class. Coordinate with an astronomy teacher or local stargazing group to provide support for this event. Be sure to prepare students for what they will see in advance so they can get the most out of the evening. A telescope will provide the best experience for all involved but can only be used by one person at a time. To keep interest and enthusiasm high, encourage students to bring binoculars as well. The moon is an impressive sight through binoculars, and a great introduction to amateur astronomy and stargazing. The next class day, discuss students' impressions. What did they learn from this experience?



RESOURCES

Nine Planets: A great resource for learning about our solar system and the objects in it.

http://nineplanets.org

The Space Place: Activities, information and images for students and teachers. http://spaceplace.nasa.gov

NASA Kids Club: Games and activities about space. Be sure to check the navigation and explore the "For Students" and "For Educators" links available from the page.

http://www.nasa.gov/audience/forkids/kidsclub/flash/index.html

SkyMaps.com: This site sells many supplies and accessories for stargazing and also provides a free sky map, revised monthly to reflect the current night sky. The map is in PDF format and can be printed or viewed on a computer. http://www.skymaps.com/downloads.html

SkyMapOnline: An interactive online simulation of the current night sky, with constellations shown. Users can also search for objects in the night sky and set the time and location to change what stars are displayed. http://www.skymaponline.net

International Dark-Sky Association: Website for an organization working to fight light pollution and preserve the night sky. http://www.darksky.org

AUTHOR AND ILLUSTRATOR BIOGRAPHIES



Uma Krishnaswami has written many highly acclaimed children's books, from picture books to middle-grade novels to retellings of classic tales and myths. Her books include *The Grand* Plan to Fix Everything (Kirkus and Publishers Weekly starred reviews), Out of the Way! Out of the Way! (Kirkus and School Library Journal starred reviews). The Girl of the Wish Garden (Kirkus starred review) and, most recently, The Problem with Being Slightly Heroic. She teaches at Vermont College of Fine Arts in the MFA program in Writing for Children and Young Adults and is an active blogger. Some of her stories are set in North America, and some in India. Some cross from one place into the other and back again, just like her.

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Aimée Sicuro is an award-winning illustrator who has also worked as a designer and gallery artist. She graduated from Columbus College of Art and Design with a BFA in Illustration. She lives in Brooklyn, New York with her husband and young son. *Bright Sky, Starry City* is her first picture book. http://www.aimeesicuro.com