



Classroom Guide for
A FULL MOON IS RISING
 written by **Marilyn Singer**
 illustrated by **Julia Cairns**

Reading Level

*Reading Level: Grade 3–4

Interest Level: Grade 1 and up

Guided Reading Level: R

Accelerated Reader® Level/Points: 3.9/.5

*Reading level based on the Spache Readability Formula

Themes

Moon, Science (Astronomy), Environment/Nature, Traditions, Holidays and Celebrations, Cultural Diversity, Multiethnic Interest, Poetry

Synopsis

Mysterious and evocative, the full moon is the most celebrated phase of the earth's only natural satellite. Around the world, people and other living things interact with and are affected by the full moon in fascinating ways. Sailors set out to sea on the high tides the full moon causes. Insects and migrating birds are guided by its brilliant light. Families dance, sing, and feast at full moon festivals, while traders buy and sell camels. Corals reproduce, wolves howl, and children dream of being astronauts.

In this exploration of full moon science, celebrations, beliefs, and illusions, poet Marilyn Singer and illustrator Julia Cairns take us on a whirlwind international tour. Along the way we visit Canada, Israel, Morocco, India, China, Australia, and more as we learn about the many ways people welcome and honor Earth's wondrous full moon.

BACKGROUND

From the introduction to the book: Our earth has just one moon, its only natural satellite. Cold, dusty, rocky, and dry, the moon is, on average, nearly 240,000 miles (approximately 384,000 kilometers) from us. It does not give off its own light. What we see as lunar light is really sunlight reflecting off the moon's surface. It takes twenty-eight days for the moon to orbit the earth. As it orbits, the moon's angle changes in relation to

the earth and the sun, and we see its different phases: new moon (dark phase), waxing crescent, first quarter, waxing gibbous, full moon, waning gibbous, third quarter, waning crescent, and back to new.

(For more background for each poem, refer to the "About the Poems" section at the back of the book)

Teaching Tip

A Full Moon Is Rising would be useful as part of a unit on astronomy and as a book to feature as part of your celebration of National Poetry Month in April.

The Moon and the Tides: High and low tides are caused by the moon's gravitational pull on Earth's oceans. High tides occur on opposite sides of the earth when gravity pulls the water in the direction of the moon, and it also pulls the earth toward the moon, making the water bulge out. As the earth rotates, the high tides fall gradually, becoming low tides approximately six hours later. The highest and lowest tides occur when the moon is either full or new.

Temple of Artemis: Many cultures have lunar gods and goddesses, and one of the most famous is the Greek goddess Artemis. Artemis was the protector of women and children and ruled over wild animals, hunting, and the forest. At Ephesus, which is part of present-day Turkey, Artemis was possibly also worshipped as the goddess of nature's bounty.

Sukkot: Traditionally, farmers harvested their crops by the light of the full moon, and Sukkot, the Jewish harvest festival, also commemorates the forty years the Israelites spent wandering in the desert. During Sukkot, people put up and decorate a booth called a sukkah, where families eat their meals and often invite friends and neighbors to join them.

Walking on the Moon: On July 20, 1969, Neil Armstrong, mission commander of Apollo 11, was the first person to walk on the moon. Since that day, ten more astronauts have walked on the moon, the last in 1972. At present, several countries are planning future missions to the moon.

Lunar Eclipse: A lunar eclipse occurs when a full moon passes through the earth's shadow and the rays of the sun are blocked from reaching the moon's surface. The moon becomes visible again as it moves out of the earth's shadow and the sun's rays strike it.

The Moon Illusion: When the moon is low on the horizon, it appears much bigger than when it is high in the sky. This is called the Moon Illusion. You can alter this illusion and "shrink" the moon by bending over and looking at it from between your legs.

Staircase to the Moon: The town of Broome, Australia, is famous for a natural phenomenon called the Staircase to the Moon. Along Broome's coast are mudflats, lands that are left bare at low tides. When a full moon shines on the exposed mudflats, it creates the image of a staircase leading up to the moon through the sky.

China's Moon Festival: The Chinese fall harvest festival, or Moon Festival, occurs on the fifteenth day of the eighth moon of the Chinese lunar calendar, when the moon is believed to be the most brilliant and round. Families gather outside to watch the night sky, light lanterns, and eat special foods such as moon cakes.

Pushkar Camel Fair: The Pushkar Camel Fair is a five-day celebration attended by more than 200,000 people and 50,000 camels. Visitors come to bathe in the town's holy lake, as well as to race and trade camels, trade and sell livestock, listen to music, watch dancers, go on rides, tell stories, and feast.

Harvest: Before the invention of the electric lightbulb and modern farm equipment, farmers harvested grain with simple hand tools throughout the day and well into the evening by the light of a full moon. In the late nineteenth century, farmers began using electrical devices such as reapers and binders. Today, farmers use combines to cut, bind, and thresh grain in just one pass while moving over a field.

Julio Garavito Armero: Julio Garavito Armero (1865–1920) was a Columbian mathematician, civil engineer, and astronomer. In 1970, the International Astronomical Union named a crater on the moon's far side after him. This side of the moon, which is permanently turned away from the earth, was first photographed in 1959, and nine years later, the astronauts of the Apollo 8 mission were the first to view the crater directly.

Coral Spawning: Around the time of the full moon from August through October, in the Caribbean Sea near the island of Curacao, several types of coral spawn, sending into the water tiny, round, pink-colored packets containing both male and female cells. Once fertilized, these cells develop into larvae, some of which survive to become polyps that attach themselves to material on the ocean floor to begin a new coral reef.

Bird Migration: Flamingos are one of a few types of birds that migrate during the night. By "moon watching" on clear nights, birdwatchers can see the silhouettes of these nighttime travelers and keep count of the species as they pass in front of the full moon.

Werewolves: Most cultures in the world have myths about people changing into animals. Current legend says that to become a werewolf, a person must be bitten by one and that the change will occur during a full moon.

Phobos: Phobos, the larger of Mars's two moons, orbits the planet every seven and a half hours. Phobos is known as a doomed moon because it is likely to crash into Mars's surface sometime in the next ten million to one hundred million years.

BEFORE READING

Pre-reading Focus Questions

(Reading Standards, Craft & Structure, Strand 5)

Before introducing this book to students, you may wish to develop background and promote anticipation by posing questions such as the following:

1. Take a look at the front and back covers. Ask students to make a prediction. Do you think this book will be fiction or nonfiction? What makes you think so? What clues do the author and illustrator give to help you know whether this book will be fiction or nonfiction?
2. Have you ever seen a full moon? What did it look like to you? What did it make you think or feel?

3. Do you think a full moon looks the same or different to people in other parts of the world? Why do you think so?
4. What do you already know about special festivals, holidays, or beliefs related to the moon? Why do you think people celebrate these events or believe special things about the moon?
5. Think about some of the poems we have read. Why is it fun to read poetry? Can you also learn things from reading poetry? Why do you think so?
6. Why do you think I chose this book for us to read today?

Exploring the Book

(Reading Standards, Craft & Structure, Strand 5)

Open the book so students can see the front and back covers simultaneously, and read the title aloud. Ask students what they think the connection might be between the people holding hands under the full moon and the title of the book.

Take students on a book walk and draw attention to the following parts of the book: endpapers with a labeled map of the world, dedications, title page, acknowledgments, author's sources, introduction, poems and illustrations, and extensive "About the Poems" notes at the end of the book.

Ask students to predict what the book is going to be about. Which parts of the book did they use as clues to making their predictions?

Setting a Purpose for Reading

(Reading Standards, Key Ideas & Details, Strands 1–3)

Have students read to:

- gain scientific information about the moon
- find out about full moon celebrations, holidays, and beliefs from around the world
- develop an appreciation of poetry and a range of poetic formats

Encourage students to consider why the authors would want to share this story with children.

VOCABULARY

(Language Standards, Vocabulary Acquisition & Use, Strands 4–6)

The story contains several content-specific and academic words and phrases that may be unfamiliar to students. Based on students' prior knowledge, review some or all of the vocabulary below. Encourage a variety of strategies to support students' vocabulary acquisition: look up and record word definitions from a dictionary, write the meaning of the word or phrase in their own words, draw a picture of the meaning of the word, create a specific action for each word, list synonyms and antonyms, and write a meaningful sentence that demonstrates the definition of the word.

GENERAL VOCABULARY

satellite

kilometers

migrating

astronauts

debut

tides	skyscrapers	peak	heed	tonnes
goddess	gazelle	temple	sukkah	harvest
canvas	pomegranates	fragrant	staircase	wail
desert	illusion	township	horizon	jewel
mudflats	pluck	carp	lanterns	glorious
red bean	lotus paste	pilgrims	holy men	vendors
tourists	reaping	combines	binders	scythes
dimple	spawn	flippers	astonished	packets
goggles	flamingos	silhouetted	werewolves	silvery
majestic	misshapen	extraterrestrials	proclaims	encore

MOON-RELATED VOCABULARY

lunar	waxing crescent	waxing gibbous	waning gibbous	orbit
phases	waning crescent	moonlight	moonbeams	crater
lunar sea	lunar eclipse	astronomer		

AFTER READING**Discussion Questions**

After students have read the book, use these or similar questions to generate discussion, enhance comprehension, and develop appreciation for the content. Encourage students to refer to passages and/or illustrations in the book to support their responses. **To build skills in close reading of a text, students should cite evidence with their answers.**

Literal Comprehension

(Reading Standards, Key Ideas & Details, Strands 1 and 3, Craft & Structure, Strands 4, and Integration of Knowledge & Ideas, Strands 7–8)

1. Turn to the page at the beginning of the book with the words “Northern Hemisphere” at the top. What information did you learn from this page? How far away is the moon? What is lunar light? What are the different phases of the moon? How do you know the full moon is important?
2. In the poem “Broadway Moon,” what does the moon hide behind before it appears? What clues are in the poem? In the illustration?
3. In the poem “High Tide,” what scientific event is the poet describing? How do you know? What clues are in the poem? In the illustration?
4. Who is the poem “The Temple of Artemis” about? Who was she? What special skills did she have?
5. In the poem “Sukkot,” what is being celebrated? What clues are in the poem? In the illustration?
6. In the poem “Desert Moon,” what does the boy dream of doing?
7. In the poem “Lunar Eclipse,” what do the people believe they have to do to bring back the moon?
8. What is the illusion referred to in the poem “Moon Illusion?” What does the boy do to shrink the moon? What clues are in the poem? In the illustration?

9. Is the staircase mentioned in the poem "Staircase to the Moon" real? How do you know?
10. What do people do to celebrate in the poem "Moon Festival?"
11. What are some things you might see if you attended the Camel Fair in Pushkar, India? What might you hear?
12. In the poem "Cloudy Night," why is it impossible to see the moon? What does the girl know is in the sky, even though she can't see it? How does she know this?
13. What scientific event does the poem "Coral Spawning" describe? Who are the black figures in the illustration? What do they see? How do you know?
14. What is Phobos? What did you learn about Phobos from the poem "Thinking About Phobos?"

Extension/Higher Level Thinking

(Reading Standards, Key Ideas & Details, Strand 3, Craft & Structure, Strands 4 and 6, and Integration of Knowledge & Ideas, Strand 7)

1. Turn to the page at the beginning of the book with the words "Northern Hemisphere" at the top. What is the purpose of this page? Why do you think the poet chose to include it?
2. In the poem "Broadway Moon," what is "the brilliant actor?" What literary device is the poet using? In this poem and in the last poem, "Broadway Moon Again," why is it appropriate that acting metaphors are used in poems set in the Broadway neighborhood of New York City?
3. In the poem "High Tide," what do the following lines mean? "Waters spring up to their peak/to heed the lunar pull." What is "the lunar pull?" What do you think a "tonne" is?
4. Refer to the poem "The Temple of Artemis" and the accompanying illustration. Why does only one column of Artemis's temple still stand today?
5. Refer to the poem "Sukkot." What do you think it is like to eat under a sukkah? What kinds of foods, other than those mentioned in the poem, do you think might be eaten to celebrate Sukkot? What clues do the poem and illustration provide?
6. In the poem "Lunar Eclipse," what scientific event is referred to? What causes the moon to disappear and reappear in an eclipse? What is the local belief in Mali about what happens? Why do you think people in Mali believe this?
7. Refer to the poem "Staircase to the Moon." What is the "jewel up high?"
8. In the poem "Moon Festival," what does the salty egg in the middle of a sweet cake represent? Why do you think so?
9. Who/What is singing the song at the end of the poem "The Camel Fair?" What is the purpose of the song? What makes you think that?

10. In the poem "Harvest Time," how has farming changed since Grandpa's grandfather was farming? What is different? What is the same?
11. What is the "special dimple" mentioned in the poem "Cloudy Night?" How do you know?
12. According to the poem "Coral Spawning," why is the full moon important for the development of a coral reef?
13. How does the poet use humor in the poem "Wolf Moon?"
14. How is the poem "Thinking About Phobos" different from all the other poems in the book? Name three differences.

Literature Circles

(Speaking and Listening Standards, Comprehension and Collaboration, Strands 1–3 & Presentation of Knowledge and Ideas, Strands 4–6)

If you use literature circles during reading time, students might find the following suggestions helpful in focusing on the different roles of the group members.

- The **Questioner** might use questions similar to the ones in the Discussion Question section of this guide.
- The **Passage Locator** might use the "About the Poems" section in the back of the book to find information that further explains the poems.
- The **Illustrator** might create images to illustrate elements of the poems not shown in the illustrator's images.
- The **Connector** might find nonfiction books that give more factual information about the full moon.
- The **Summarizer** might provide a brief summary of the group's reading and discussion points for each meeting.
- The **Investigator** might look for information about full moon celebrations, customs, and/or beliefs not covered by the poems in the book.

*There are many resource books available with more information about organizing and implementing literature circles. Three such books you may wish to refer to are: GETTING STARTED WITH LITERATURE CIRCLES by Katherine L. Schlick Noe and Nancy J. Johnson (Christopher-Gordon, 1999), LITERATURE CIRCLES: VOICE AND CHOICE IN BOOK CLUBS AND READING GROUPS by Harvey Daniels (Stenhouse, 2002), and LITERATURE CIRCLES RESOURCE GUIDE by Bonnie Campbell Hill, Katherine L. Schlick Noe, and Nancy J. Johnson (Christopher-Gordon, 2000).

Reader's Response

(Reading Standards, Key Ideas & Details, Strands 1–3, Craft & Structure, Strands 4–6, and Integration of Knowledge & Ideas, Strands 7–9)

Use the following questions and writing activities to help students practice active reading and personalize their responses to the book. Suggest that students respond in reader's journals, essays, or oral discussion. You may also want to set aside time for students to share and discuss their written work, if they wish to.

1. How can you tell that the poet, Marilyn Singer, is passionate about science and social studies? What clues does she give in her writing?
2. Compile a list of sentences from the poems and classify them as either facts or opinions. Explain how you knew each sentence was a fact or an opinion.

3. Which poems meant the most to you? Why? Which poems did you have a hard time connecting with or understanding? Why?
4. Point of view is important in poetry. How might the following poems be different if they were told from another perspective: "Thinking About Phobos" from Phobos's perspective? "Moon Watching" from the flamingoes' perspective? "Lunar Eclipse" from the moon's perspective? Choose one poem from the collection and try rewriting it from another perspective.
5. Marilyn Singer uses some strong words in her poems that help the reader visualize what is happening where and to whom. In each poem, identify strong descriptive or active words and phrases. How do they help you understand and/or visualize the poem?
6. Have students write a book recommendation for this text explaining why they would or would not recommend this book to other students.

ELL Teaching Activities

(Speaking & Listening Standards, Comprehension & Collaboration, Strands 1–3 and Presentation of Knowledge & Ideas, Strands 4–6)

(Language Standards, Vocabulary Acquisition & Use, Strands 4–6)

These strategies might be helpful to use with students who are English language learners.

1. Assign ELL students to partner-read the book with strong English readers/speakers. Students can alternate reading between pages, repeat passages after one another, or listen to the more fluent reader.
2. Have each student write three questions about the text. Then let students pair up and discuss the answers to the questions.
3. Depending on students' level of English proficiency, after the first reading:
 - Review the illustrations in order and have students summarize what is happening on each page, first orally, then in writing.
 - Have students work in pairs to retell either the plot of the book or key details. Then ask students to write a short summary, synopsis, or opinion about what they have read.
4. Have students give a short talk about the moon celebration described in the book they most admire.
5. The book contains several content-specific and academic words that may be unfamiliar to students. Based on students' prior knowledge, review some or all of the vocabulary. Expose English Language Learners to multiple vocabulary strategies. Have students make predictions about word meanings, look up and record word definitions from a dictionary, write the meaning of the word or phrase in their own words, draw a picture of the meaning of the word, list synonyms and antonyms, create an action for each word, and write a meaningful sentence that demonstrates the definition of the word.

INTERDISCIPLINARY ACTIVITIES

(Introduction to the Standards, page 7, "Students establish a base of knowledge across a wide range of subject matter by engaging with works of quality and substance. They become proficient in new areas through research and study. They read purposefully and listen attentively to gain both general knowledge and discipline-specific expertise. They refine and share their knowledge through writing and speaking.")

Use some of the following activities to help students integrate their reading experiences with other curriculum areas.

Social Studies

(Reading Standards, Integration of Knowledge & Ideas, Strands 7 and 9)

(Writing Standards, Research to Build & Present Knowledge, Strands 7–8)

1. Ask students to select one of the following poems: "Sukkot," "Moon Festival," or "The Camel Fair." Encourage students to find more information on the festival referenced in the poem.
2. The map at the front and back of the book shows the countries and cities referenced in the poems. Let each student choose a poem he or she likes and conduct research to find out more about life in the city or country where the poem is set.

Science

(Reading Standards, Integration of Knowledge & Ideas, Strands 7 and 9)

(Writing Standards, Research to Build & Present Knowledge, Strands 7–8)

1. Ask students to select one of the following poems: "High Tide," "Desert Moon," "Lunar Eclipse," "Moon Illusion," "Staircase to the Moon," "Cloudy Night," "Coral Spawning," "Moon Watching," or "Thinking About Phobos." Encourage students to find more information about the scientific event referred to in the poem or that provides background for the poem.
2. In the poems "Coral Spawning" and "Moon Watching" we learn about animal behavior that is affected by a full moon. Students may wish to research other animal behavior that responds to the full moon or other phases of the moon.

Math

Choose several bodies of water in your state and/or nearby states and research the tides for those bodies of water. How much does the water rise during high tide? How much does it fall during low tide? How does the season affect the tides? Graph the results, including the tide information for the Bay of Fundy. Then encourage students to make observations, generalizations, and predictions based on the information on the graph.

Language Arts

(Speaking & Listening Standards, Comprehension & Collaboration, Strand 1 and 2)

An audio recording of *A Full Moon Is Rising* is available from Live Oak Media. If you have access to the recording, play it for students. They will notice that each poem is read with appropriate inflections, and sometimes accents, and includes subtle sound effects. Encourage students to read the poems aloud themselves, giving the words their own interpretations for emphasis and sound effects. (This activity can be done even if the recording of the poems is not available as a model.)

Art

Students may enjoy making paper lanterns that might be used to celebrate the Moon Festival. Simple instructions can be found online at websites such as [creativebug](http://creativebug.com) and [Oh Happy Day](http://OhHappyDay.com). There is also a YouTube video showing how to make a Chinese paper lantern by Kidspot.com.au

ABOUT THE AUTHOR

Marilyn Singer is the author of more than eighty-five children's books, including many poetry collections. For her book *Mirror Mirror*, Singer even created a new poetic form: the reverso. Her works have won numerous honors, including the Lee Bennett Hopkins Poetry Award Honor and the Orbis Pictus Honor, and several Notable, Parents' Choice, and Children's Choice Awards. Singer's lifelong fascination with the moon led her to explore moon customs, beliefs, and celebrations of different peoples and cultures. She and her husband live in Brooklyn, New York, and Washington, Connecticut. Visit her online at marilysinger.net

ABOUT THE ILLUSTRATOR

Julia Cairns is a full-time fine artist and illustrator known for her colorful images and joyous, whimsical style. In addition to creating illustrations for children's books, Cairns has exhibited her fine art in numerous shows and galleries. "The moon always inspires me," says Cairns, and it often appears in her paintings. *A Full Moon Is Rising* gave her many more opportunities to paint her favorite celestial body. Cairns lives in Galisteo, New Mexico, with her husband and their two children. You can find her online at juliacairns.net.

Awards and honors *A Full Moon Is Rising* has received include:

- Best Children's Books of the Year, Bank Street College
- Best of the Best Books, Chicago Public Library
- Lasting Connection Title, Book Links
- 2014 Notable Children's Recordings, Association for Library Service to Children

Book Information

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RESOURCES ON THE WEB

Learn more about *A Full Moon Is Rising* at:

http://www.leeandlow.com/books/410/hc/a_full_moon_is_rising

BookTalk with Marilyn Singer and Julia Cairns on *A Full Moon Is Rising*:

http://www.leeandlow.com/p/full_moon_rising.mhtml

Order Information**On the Web:**

<http://www.leeandlow.com/p/ordering.mhtml> (general order information)

http://www.leeandlow.com/books/410/hc/a_full_moon_is_rising (secure online ordering)

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