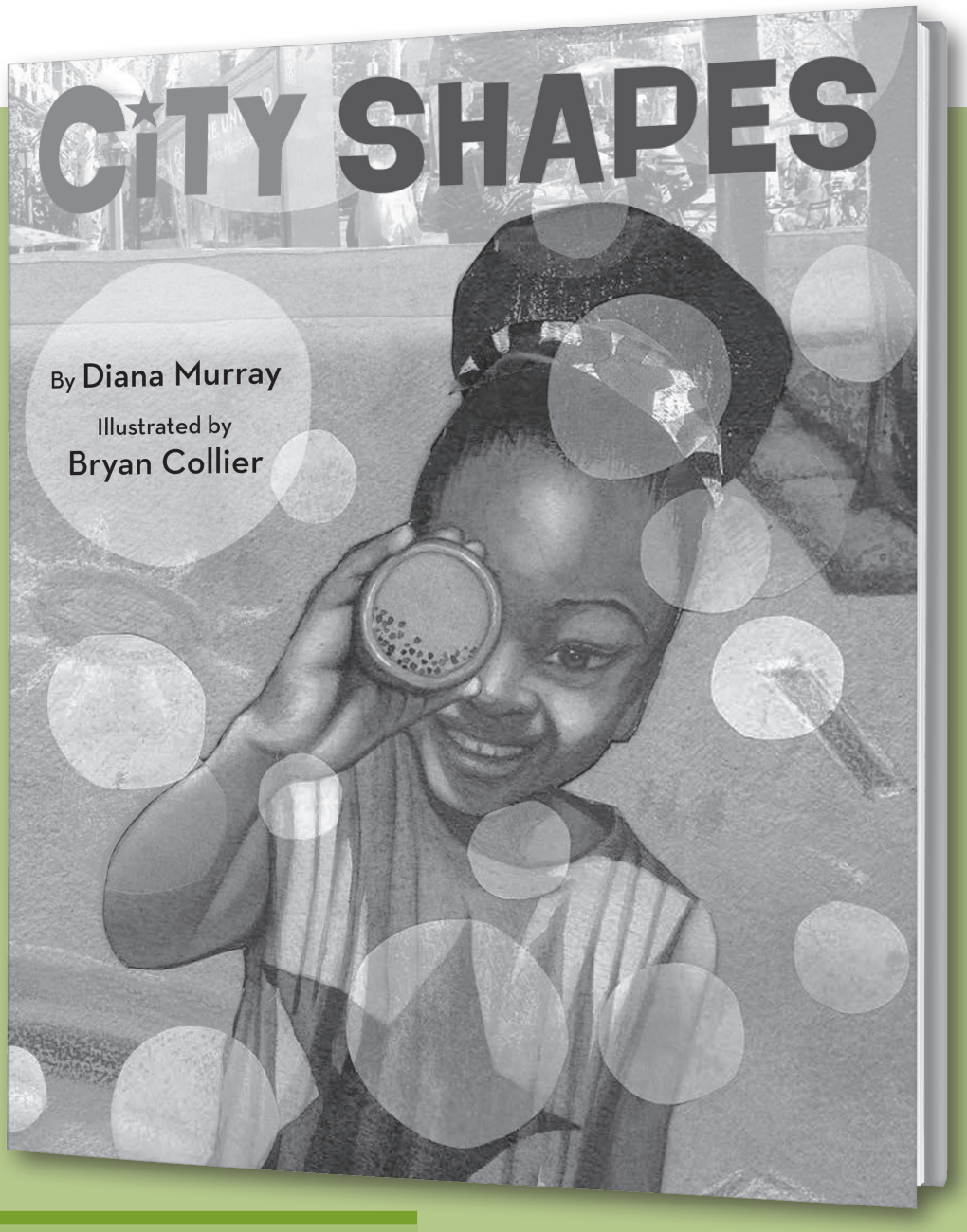
educator's guide

CITY SHAPES



Curriculum connections

- Concepts: Size & Shapes
- City & Town Life

Ages: 4 – 8

By Diana Murray

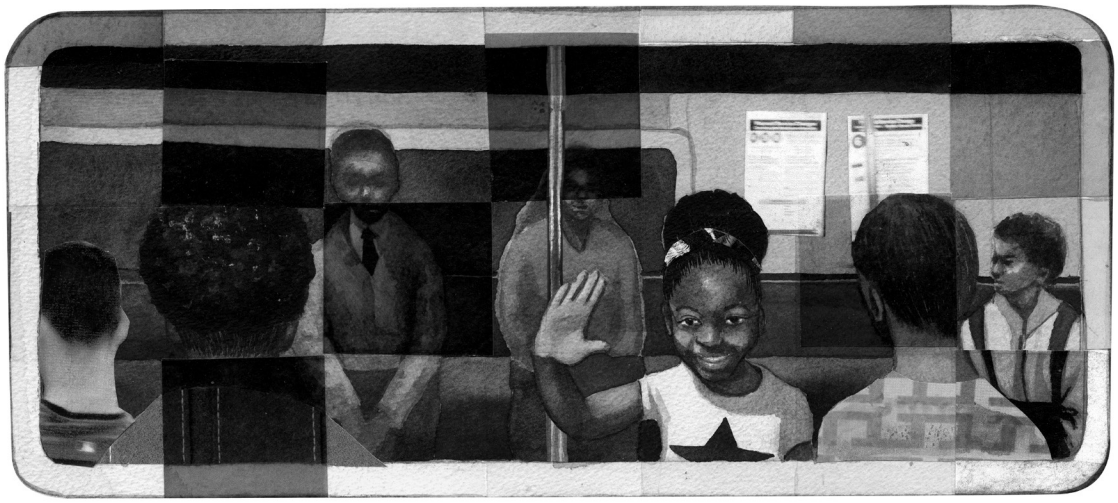
Illustrated by Bryan Collier

Dear Teachers,

City Shapes is no ordinary picture book. At first glance, it could be mistaken for just another book about shapes. Upon closer examination, it's so much more: an insider's view of a child's wonder at the world around her; a celebration of life in a bustling, beautiful city; a call to readers to pay close attention to the details of their own neighborhood; and an ode to the function, versatility, and distinctive qualities of each individual shape. Preschool and primary grade students will not only learn about the features and properties of shapes, but also explore the usefulness and charm of them in everyday life.

Take, for example, the square. Instead of including a factual description about the number of corners and sides it has, author Diana Murray focuses readers' attention first on the sounds and motion of a mail truck, followed by the gleaming sight and palpable temperature of a pretzel cart, and then the view and weight of stacks of packages being carried up stairs. Enhanced by Caldecott Honor illustrator Bryan Collier's vibrant watercolor and collage illustrations, these squares are given texture. Observing them injects us with excitement and curiosity. Where are the letters in that mail truck going? What do those pretzels in that square cart taste like? Who are those square packages for, and what's inside them? When Murray reveals on the next page that these shapes are indeed "on-the-go SQUARES," Collier spotlights the delightful little girl whose discoveries we are following in yet another square—the window of a subway train.

Children and adults will revel in the many possibilities for learning that this extraordinary book offers. The sample of activities described in this guide cover a range of content areas and offer various approaches to incorporating this book into your curricular and pedagogical goals. Let *City Shapes* inspire a host of educational possibilities in your classrooms!



STEAM (SCIENCE, TECHNOLOGY, ENGINEERING, ARTS, AND MATH) ACTIVITIES

Community Shape Hunt

City Shapes encourages readers to look anew at their surroundings. Lead students on a community walk around the school. Ask students to point out the shapes they see, and take photographs of those images with a digital camera or a smart phone. When you return to the classroom, project the photos in front of the class. Have them identify the shapes they see in the photographs, using pointers to trace the shapes' outlines. Keep track of the shapes by creating a class chart listing the different shapes they name and all the items and structures in the photographs they find that match each shape. Then, have students identify and discuss which items are shaped by humans and which ones are shaped by nature. Older students might extend the inquiry to investigate how natural forces, such as wind, water, and gravity, carve objects into different shapes.

More Shapes!

Although *City Shapes* depicts the shapes that are perhaps most familiar to students, a wide variety exists for students to explore. What other shapes can students identify that are not named in the book? Compile a class list of these shapes and see if students can find examples of them in the book's illustrations. Have them gather items throughout their day that match those shapes. Then, create a gallery in your classroom or online showcasing the shapes they named and the examples of those shapes they discovered.

Shape-scapes

If you take a closer look at the colorful end pages of the book, you'll see that Bryan Collier illustrated a vast cityscape just by using geometric shapes to represent the various buildings in it. Challenge students to illustrate their own shape-scapes in a similar manner, using only the outline of geometric shapes to represent the natural and human-made structures one would expect to see there. For example, an ocean or beach scene might be illustrated using only circles and ovals (to represent seashells, beach balls, crabs, etc.), triangles and diamonds (to represent fish, beach umbrellas), or a combination of shapes (e.g., rectangles and triangles to represent boats). Invite students to use the artistic medium they are most comfortable with or that would make the most sense for their shape-scape—tissue paper collage, watercolor, sculpture, etc.

Shapes in Other Environments

Project images of different natural and constructed environments—a farm, a beach, outer space, a forest, a shopping mall, a desert, the ocean—for the class to study. Challenge them to find the geometric shapes within those scenes. If you can, take students on a field trip to those places so they are surrounded on all sides by the shapes of that place, just like the young girl in *City Shapes*. Once they identify as many shapes as possible, have them reflect on those discoveries. Do certain shapes appear more commonly in natural environments versus constructed environments? Why might that be so? Which shapes appear more often across different environments, and why?

Functionality of Shapes

The unique attributes of each shape allow it to be ideal in creating particular items and structures. Engage students in an inquiry into the special characteristics and functionality of each shape. Why would a triangle make sense as a roof or a bridge? Why are circles, ovals, and cylinders often used to craft musical instruments? Why are squares and rectangles ideal for boxes and crates? Encourage students to experiment with different shapes to see what happens (e.g., create a drum with a square body or a car with triangle tires). Invite them to formulate theories about why some shapes are more ideal for certain functions than others. To enhance their learning, you might want to share some books that feature specific characteristics of shapes, such as Denise Fleming's *Go Shapes Go!* and Karen Nagel's *Shapes that Roll*, which explores how shapes move, Marilyn Burns' *The Greedy Triangle*, which considers how different polygons work for different purposes, and Aileen Friedman's *A Cloak for the Dreamer*, which contemplates how shapes are used in clothing design.

Shapes within Shapes

Because geometric shapes are formed with distinct mathematical properties, many of them can be used to create other shapes. For example, rectangles can be folded into triangles, diamonds, or squares. Challenge students to take one shape and see what other shapes they can create from it. There are a number of ways to do this. One way is to provide students with paper or cloth shapes and challenge them to fold them into new shapes using every part of the original shape. Another way is to use tangrams, which are wooden or plastic shapes dissected into other shapes like puzzle pieces. You can even find online games that challenge students to create shapes with other shapes.

ARTS, LANGUAGE ARTS, & HUMANITIES ACTIVITIES

Creative City-Shape Descriptions

City Shapes showcases the wondrous presence of geometrical shapes throughout every inch of an urban landscape. Reread the book with students, highlighting the ways that everyday objects and structures within a city are compared with shapes, as well as how shapes are compared with those objects and structures. For example, Diana Murray describes kites as "diamonds that fly" and mail trucks as "on-the-go squares." Invite students to follow suit, comparing everyday artifacts to geometric shapes and turning those comparisons into creative descriptions. Have them write down those descriptions and illustrate them with a city scene. Display students' illustrated written descriptions in a classroom or online gallery. Pair this book with *Round is a Mooncake*, written by Roseann Thong and illustrated by Grace Lin, to accentuate figurative descriptions of shapes.

Shape-spiration

A number of wonderful picture books showcase the wonders of dozens of different shapes in the world around us. After they have read *City Shapes*, share some other books with them, such as *Swirl by Swirl*, written by Joyce Sidman and illustrated by Beth Krommes, or *Mysterious Patterns: Finding Fractals in Nature*, written by Sarah C. Campbell and photographed by Richard P. Campbell. Have students pick a shape that inspires them and find examples of that shape in each book and in everyday objects as they go about their day. Encourage them to list, sketch, or photograph those examples. Then, have students study their examples as inspiration for a writing project. Invite students to write poetry, essays, feature articles, or even their own picture book about that shape.

Written and Illustrated Point of View

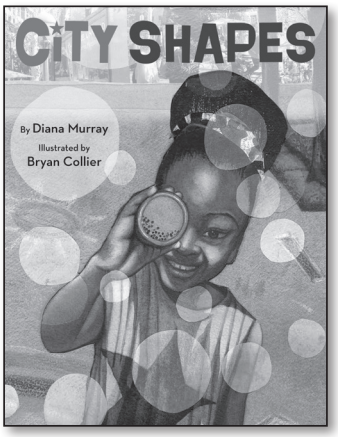
Diana Murray's text begins with a pigeon soaring through the city and ends with the pigeon settling at night into its nest. Simultaneously, Bryan Collier's illustrations depict a young girl (his illustrator's note at the end of the book reveals she is his daughter observing and discovering the wonders of the city). Engage students in a discussion about who is narrating the text, stressing close reading of both text and illustration to provide supporting evidence for their answers. Are there words and phrases that are unique to a pigeon's perspective? Are there illustrated scenes that would only make sense from a child's point of view? What information is lost if it is only the pigeon or the young girl speaking? What is gained if it's the other, or both? To structure this discussion more formally, have students debate the question of who is narrating the story, gathering and presenting their evidence in an oral debate or in opinion, persuasive, or argument writing.

Bryan Collier Illustrator Study

Renowned illustrator Bryan Collier is the recipient of multiple awards, including an ALA Caldecott Honor, a Coretta Scott King Award, and a NCTE Orbis Pictus Award. Invite students to conduct an illustrator study on Bryan Collier. With the help of the school or a local librarian, gather a collection of Collier's picture books. Have students read the books, examining the illustrations to learn more about Collier's artistic style. What media does he most often use in his illustrations? What patterns do they notice about his style or subject matter? Have students research Collier's education and training as an illustrator, his influences and sources of inspiration, and any of his artistic idiosyncrasies. Guide students' gathering of information from their school or local library, the Internet, and other biographical sources. Once students have a good sense of Collier's style, invite them to create their own illustrations in the vein of this celebrated artist.

CITY SHAPES

ABOUT THE BOOK



CITY SHAPES
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From shimmering skyscrapers to fluttering kites to twinkling stars high in the sky, everyday scenes become extraordinary as a young girl walks through her neighborhood noticing exciting new shapes at every turn. Far more than a simple concept book, *City Shapes* is an explosion of life. Diana Murray's richly crafted yet playful verse encourages readers to discover shapes in the most surprising places, and Bryan Collier's dynamic collages add even more layers to each scene in this ode to city living.

PRAISE FOR THE BOOK

★ "A visual feast of cityscape shapes." —*Kirkus Reviews*

★ "A colorful look at city life as well as a fun way to teach shapes to young children." —*School Library Journal*

about the author

Diana Murray is an award-winning writer of stories and poems for children. She is the author of *Grimelda, The Very Messy Witch* and several other picture books. Her poems have appeared in many magazines, including *Highlights for Children* and *Spider*. She grew up in New York City and still lives nearby with her firefighter husband, two children, a goldfish, and a bearded dragon. One of Diana's favorite shapes is a blank rectangle of paper. Visit her online at dianamurray.com.

about the illustrator

Bryan Collier has illustrated more than 25 picture books, including the award-winning *Dave the Potter*, *Knock Knock*, and *Fifty Cents and a Dream*, and has received numerous awards, including three Caldecott Honors and five Coretta Scott King Awards. He lives with his wife and children in Marlboro, New York. Visit him online at bryancollier.com

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