



Tell Me Why

WHY?

I See Rainbows



Kathryn Beaton



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A Rainbow at Recess

No recess for Caitlin and her classmates this afternoon. They all stayed indoors because it was raining. Caitlin pulled out a piece of paper and her markers and began to draw. She was surprised when a **ray** of sunlight passed over her paper. She looked out the window and saw something else surprising. A rainbow!

“Look!” she called.



ASK QUESTIONS!

Do you think rainbows appear more often in the summer or the winter? Go online with an adult or visit your library to get the answer.



Rainbows happen only during rainy weather.

Everyone went to the window and looked outside. A giant **arc** striped with lots of colors was shining above the soccer field.

“Wow,” Caitlin said. “How does that happen?”

Her teacher, Miss Burton, smiled. “Since the storm is over, let’s go outside. I’ll tell you about rainbows in science class later.”

Caitlin kept wondering about the rainbow. She could still see it in the sky.





Rainbows appear when it is rainy and sunny at the same time.

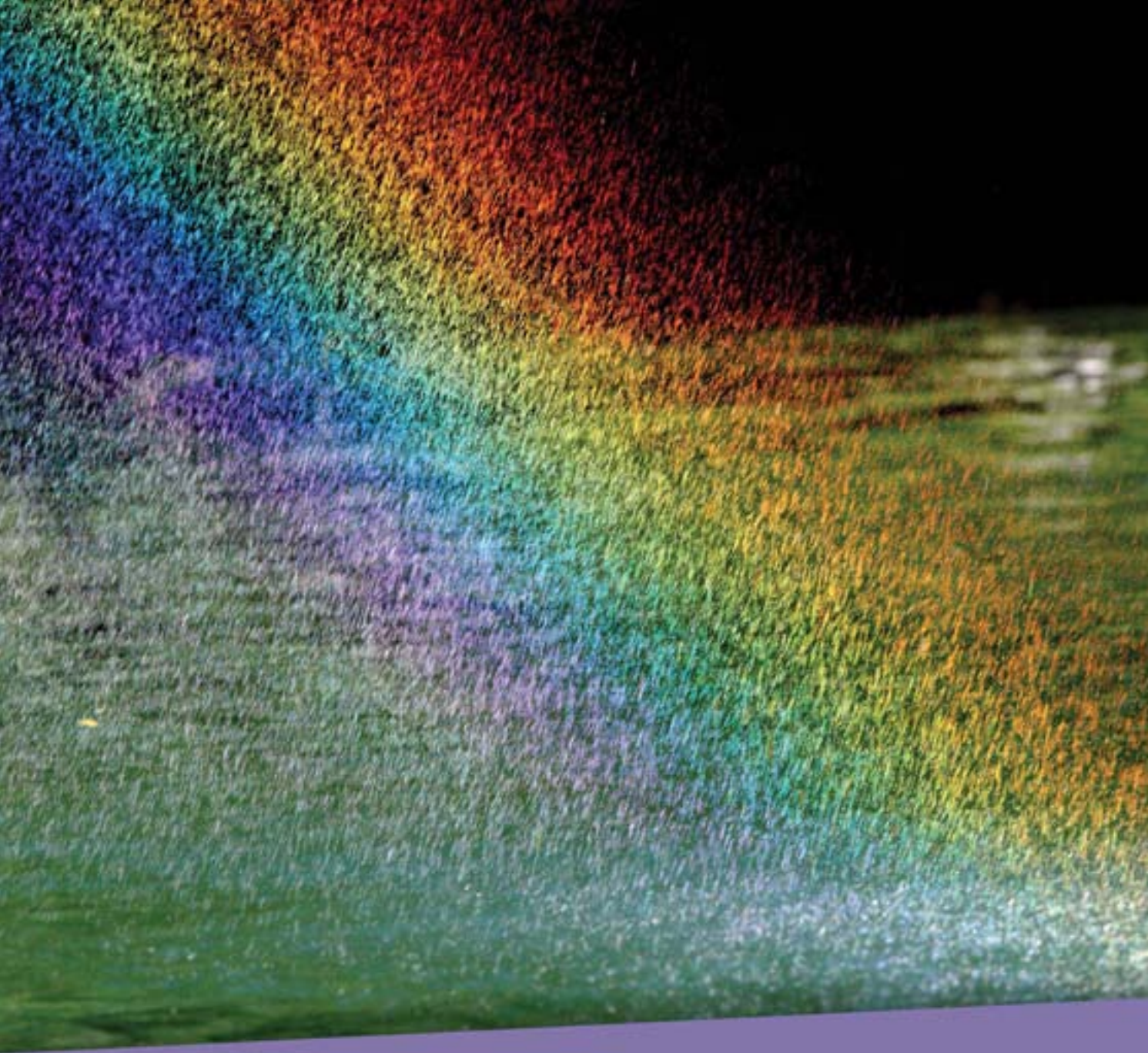
The Right Conditions

After recess Caitlin asked Miss Burton where rainbows come from.

“Rainbows need two things,” her teacher said. “Sunshine and water. And both have to be there at the same time.”

“That doesn’t happen much,” said Max, one of Caitlin’s friends.

“That’s right,” Miss Burton said. “It sometimes happens near the end of a storm. First, the light from the sun shines through the rainwater. Then the rain **reflects** all the colors back at us.”



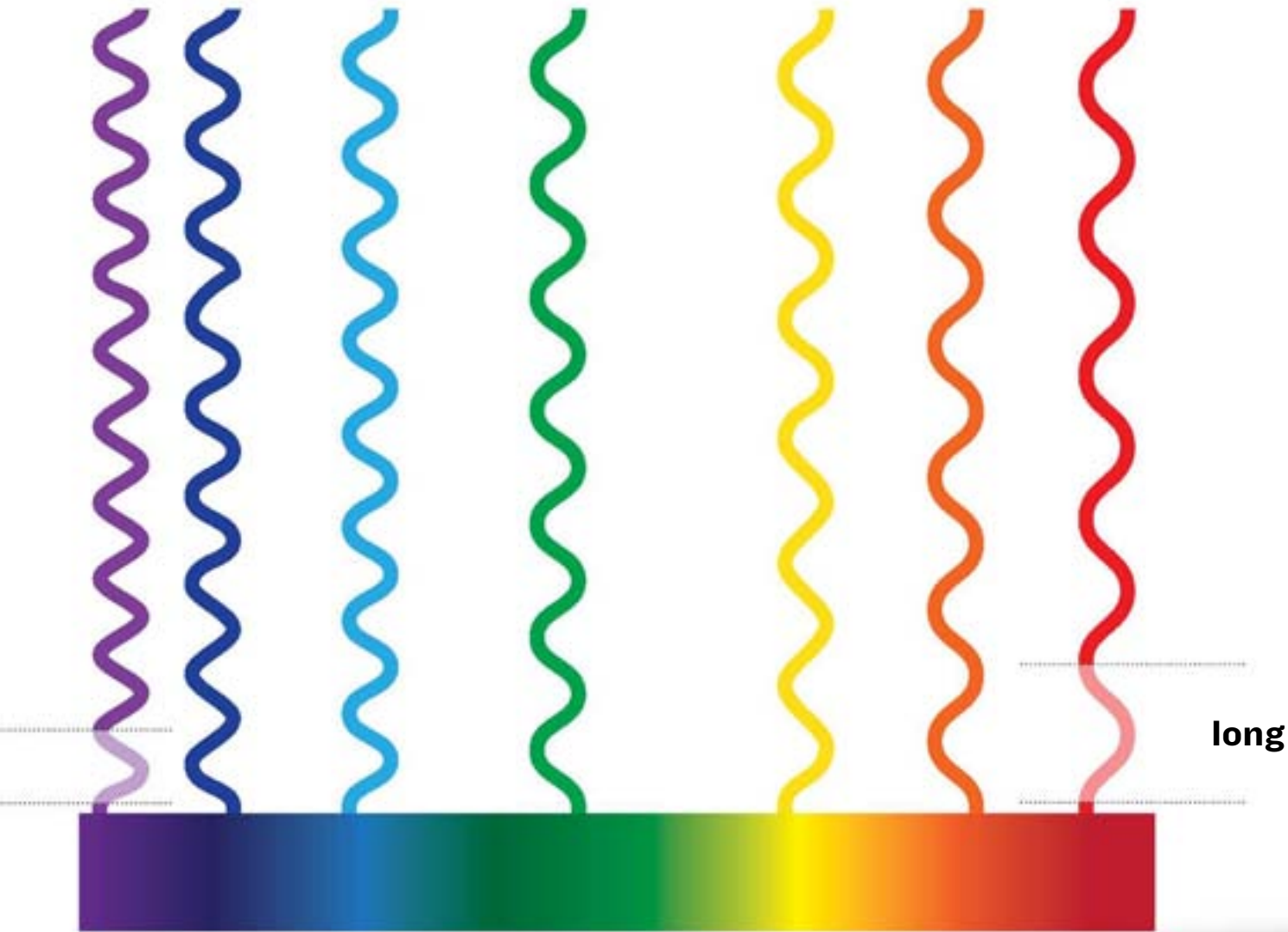
Rainbows sometimes appear in a waterfall or near its spray if the sun is shining.

“Let’s talk a little about how sunlight works,” Miss Burton said. She explained that the rays from the sun are different sizes. Light with a long **wavelength** looks red to us. Light with a short wavelength looks violet. The medium-sized wavelengths make **shades** of orange, yellow, and green.

“So the sunlight can be different colors?” Caitlin asked.

“Not exactly,” Miss Burton said. “We just *see* different colors.”

short



Violet has the shortest wavelength. Red has the longest wavelength.

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