

Next Time You See a CLOUD


BY EMILY MORGAN


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NSTA Kids
National Science Teachers Association
Arlington, Virginia



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1840 Wilson Blvd., Arlington, VA 22201
www.nsta.org/store
For customer service inquiries, please call 800-277-5300.



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*To my friend Kay McLeod, a fellow cloud-watcher
and lover of Earth and sky.*



***“If there is magic on this planet,
it is contained in water.”***
— *Loren Eiseley, The Immense Journey*

A NOTE TO PARENTS AND TEACHERS

The books in this series are intended to be read with a child *after* she has had some experience with the featured objects or phenomena. For example, go outside on a day when you can see white clouds against the blue sky. Lie down on the ground together and observe the clouds. Notice their different shapes and sizes and the directions in which they move. Use your imagination to see different forms. Talk about what you observe and share what you wonder. *Why are clouds white? Why do they float? Where and when did these clouds form? How far have they traveled across the sky to be where you can see them? Where will they go next? Why do clouds appear, change shape, and sometimes vanish?*

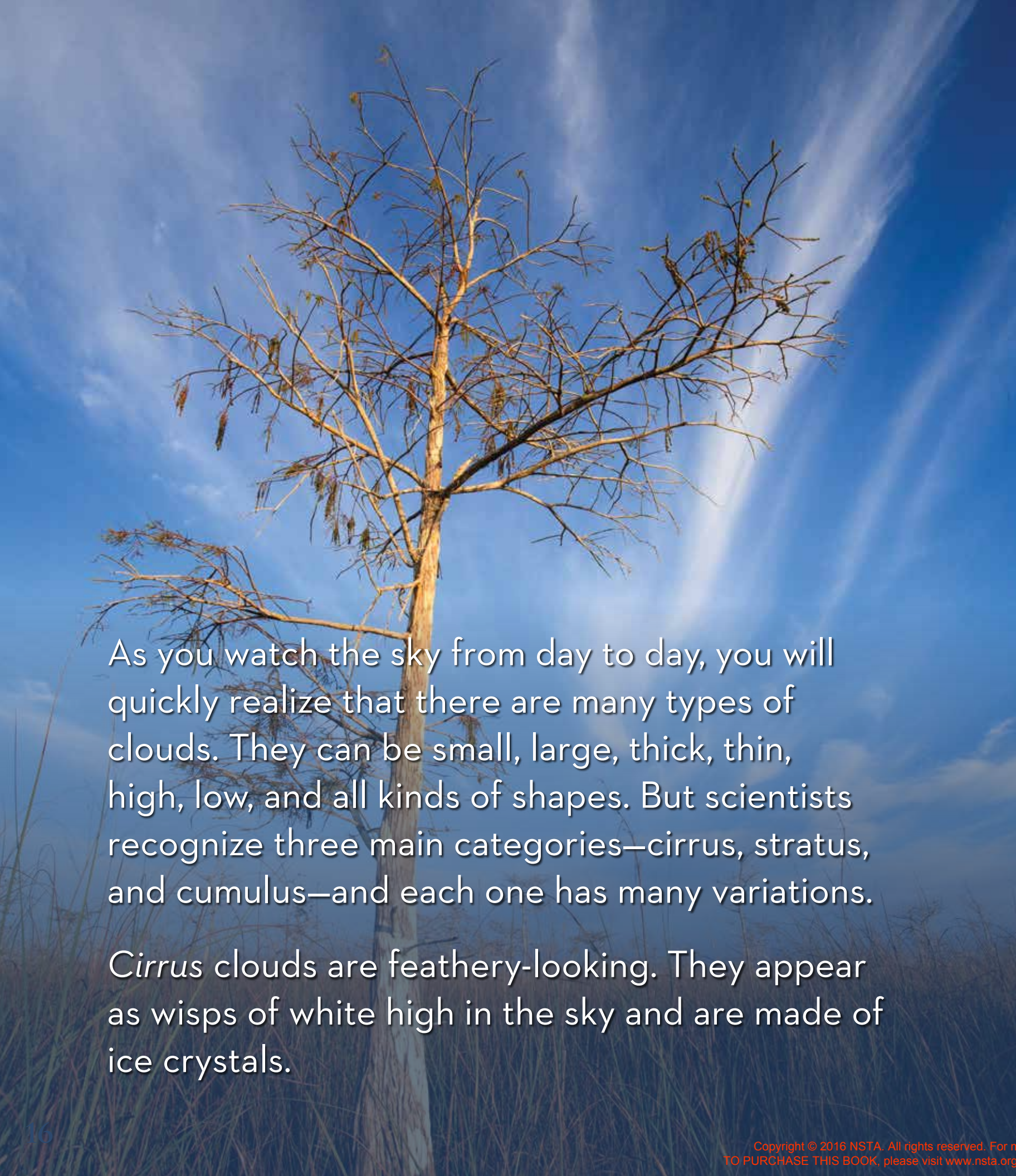
Then, after you have had some experiences observing these fascinating phenomena, read this book together. Take time to pause and share your learnings and wonderings with each other. You will find that new learnings often lead to more questions.

The *Next Time You See* books are not meant to present facts to be memorized. They are written to inspire a sense of wonder about ordinary objects or phenomena and foster a desire to learn more about the natural world. Children are naturally fascinated by the ever-changing clouds, but when they realize that clouds are clusters of liquid water droplets and ice crystals floating above their heads, they find the clouds even more remarkable. My wish is that after reading this book, you and your child feel a sense of wonder the next time you see a cloud.

—Emily Morgan




Clouds are white for the same reason that snow is white. When liquid water droplets or ice crystals are bunched together, they reflect and scatter the light that hits them. They do not scatter one wavelength (or color) of light more than any other. All of the colors of light are scattered equally and combine to make white. Every once in a while, you can see the white light separated into different colors—creating a rainbow—but most of the time the reflected light is white.

A photograph of a bare, leafless tree standing against a clear blue sky. Thin, white, feathery cirrus clouds are visible high in the sky, some appearing as long, wispy streaks. The tree's branches are dark and intricate, contrasting with the bright sky.

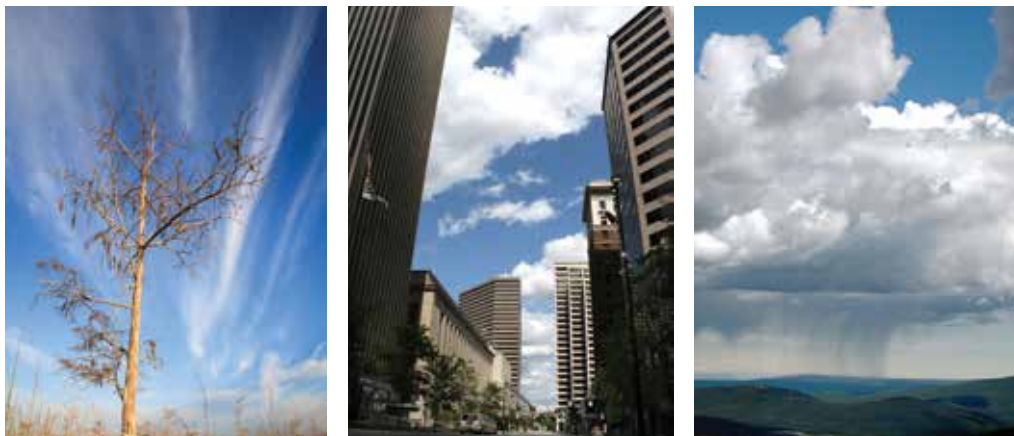
As you watch the sky from day to day, you will quickly realize that there are many types of clouds. They can be small, large, thick, thin, high, low, and all kinds of shapes. But scientists recognize three main categories—cirrus, stratus, and cumulus—and each one has many variations.

Cirrus clouds are feathery-looking. They appear as wisps of white high in the sky and are made of ice crystals.

A photograph of a landscape featuring rolling hills and mountains. The sky is filled with a thick, uniform layer of gray stratus clouds, which are blocking most of the sunlight. A thin layer of orange light from the sun is visible just above the horizon, creating a hazy, atmospheric effect over the distant hills.

Stratus clouds are sheets of clouds that cover a large area. Blankets of stratus clouds can block some of the sunshine from reaching your eyes, making the clouds look gray. Stratus clouds sometimes produce a steady rain or snow.

Next Time You See a CLOUD



Next time you want to see a show, go outside and look at the sky. The clouds will put on a pageant for you with their ever-changing shapes and sizes. This book reveals some fascinating science behind these beautiful displays. Author Emily Morgan answers all kinds of questions: What are clouds made of? Why are some white? Which clouds mean fair weather is coming, and which ones mean rain is on the way? If you could reach those fluffy, floaty puffs, could you jump on them like a trampoline? *Next Time You See a Cloud* is an engaging look at the science behind a sky-high spectacle. Make it a habit to keep looking up—there's a new show every day!



Awaken a sense of wonder in a child with the *Next Time You See* series from NSTA Kids. The books will inspire elementary-age children to experience the enchantment of everyday phenomena such as spiderwebs, sunsets, fireflies, the Moon, and more. Free supplementary activities are available on the NSTA website.

Especially designed to be experienced with an adult—be it a parent, teacher, or friend—*Next Time You See* books serve as a reminder that you don't have to look far to find something remarkable in nature.

Grades K–5
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