

EXCERPT TO WRITE ABOUT

Weather!

by Rebecca Rupp

► **Directions:**

- Use two different highlighters—one to mark the bold words and the other to mark unfamiliar words.
- Annotate in the margins what you think the definition is, and sketch the types of clouds using information from the text.

We've all at some time found pictures or patterns in the shifting clouds—the shapes of dragons, cows, or elephants, castles or sailing ships. There's even a name for what we're doing: **nephelococcygia** (pronounced ne-fee-low-kok-e-JEE-a). Invented by the Greek playwright Aristophanes, the term comes from *nephos*, the Greek word for cloud. The scientific study of clouds is called **nephrology**.

The best clouds for shape-gazing are **cumulus** clouds, the fat fluffy white clouds that scatter across the sky on blue summer days, looking like woolly sheep, globs of whipped cream, or huge heaps of cotton candy. The name *cumulus*, in fact, comes from the Latin word for heap.

The cloud names we use today were invented by Luke Howard, an English pharmacist and hobby cloud-watcher, in 1803. They're in Latin, because Howard had a classical education. He also had a good eye for cloud shapes, because his classification scheme, with just a few minor rearrangements, is still used today.

Howard divided clouds into three major groups: bulbous heaped-up cumulus clouds; flat blanket-like **stratus** clouds; and thin wispy **cirrus** clouds, which look like horse's tails or curly locks of windblown hair. Eventually he added a fourth group—**nimbus**, or rain clouds.

Today meteorologists list ten different classes of clouds. For clouds that aren't quite one class or another but somewhere between, scientists run two cloud names together, producing tongue-twisting cloud combinations such as cumulonimbus, stratocumulus, and nimbostratus.

Low-altitude clouds (those that flow at around below 6000 feet) include cumulus, stratocumulus, and stratus clouds. Cumulus clouds look nice but don't do much. If these "fair-weather clouds" dot the sky on the day you've planned for a picnic, don't worry: they rarely produce rain. **Cumulonimbus**, or towering thunderheads, however, have a good chance of at least dripping on your parade.

Stratocumulus clouds are dark, dense, and depressing, and usually cover the whole sky. They periodically spit out showers or snow flurries. **Stratus** clouds are similar, but thinner, paler, and prone to drizzle.

Middle-altitude clouds, between 6,000 and 20,000 feet above sea level, include **altostratus**, **altocumulus**, and **nimbostratus** clouds. The nimbostratus types are the clouds that really mean business. These are dark, heavy, impenetrable clouds

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associated with all-day soakers and major snowfalls. Altostratus clouds are usually rainless: These are the high opaque sheets through which the Sun can just be seen, shining weakly from behind a cloudy curtain. Altopumulus clouds are thickly scattered but patchy, punctuated by stretches of open sky.

High-altitude clouds are found anywhere from 20,000 to 50,000 feet up, and all are wispy, wind-battered, and cold. **Cirrus** clouds, high, thin, and snowy white, are often blown into curls, swirls, and sweeping plumes. Sailors once called these “mares tails,” because they look like the curly tails of galloping horses. **Cirrostratus** clouds are like thin white gossamer veils. It’s these clouds that create the “rings” sometimes seen around the Sun or Moon. **Cirrocumulus** clouds are the highest clouds of all—usually appearing more than 25,000 feet up. These often appear in small patches and look a bit like fish scales. Sailors called a sky thick with cirrocumulus clouds a “mackerel sky.”

Note: Rebecca Rupp’s piece on clouds is a fine example of how nonfiction writers practice their craft. She knows her primary audience are students in elementary and middle school who may not yet be familiar with formal names for clouds. Or perhaps more importantly, she knows that readers of all ages can understand unfamiliar science concepts and terms when they are likened to familiar experiences. Notice, then, that she begins with the sweet pastime of cloud-gazing, and finding “dragons, cows, or elephants, castles or sailing ships” shapes. Skim the piece and spot other instances where she appeals to our fanciful sides as she explains additional scientific information about clouds.