

# Types of Clouds

**Low Level Clouds:** lie below 6,500 feet

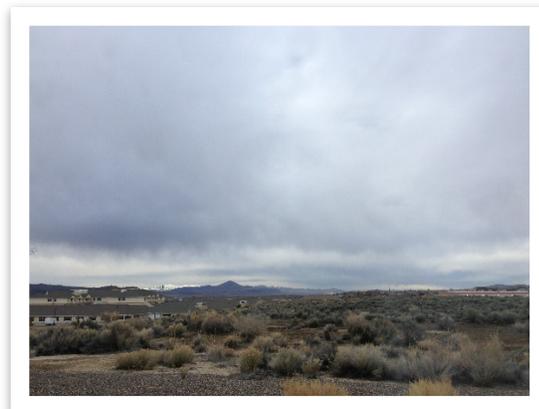
**Cumulus:** Cumulus clouds are the clouds you learned to draw at an early age and that serve as the symbol of all clouds (much like the snowflake symbolizes winter). Their tops are rounded, puffy, and a brilliant white when sunlit, while their bottoms are flat and relatively dark.

*When You'll See It:* Cumulus develops on clear, sunny days when the sun heats the ground directly below (this is called diurnal convection). This is where it gets its nickname "fair weather" cumulus. It appears in late morning, grows, then disappears towards evening.



**Stratus:** Stratus clouds hang low in the sky as a flat, featureless, uniform layer of grayish cloud. It resembles fog that hugs the horizon (instead of the ground).

*When You'll See It:* Stratus are seen on dreary overcast days and are associated with light mist or drizzle.



**Stratocumulus:** If you took an imaginary knife and spread cumulus clouds together across the sky, but not into a smooth layer (like stratus) you'd get stratocumulus -- low, puffy, grayish or whitish clouds that occur in patches with blue sky visible in-between. When viewed from underneath, stratocumulus have a dark honeycomb appearance.

*When You'll See It:* You're likely to see stratocumulus on mostly cloudy days. They form when there's weak convection in the atmosphere.



**Middle Level: form between 6,500 and 20,000 feet**

**Alto cumulus:** Alto cumulus clouds are the most common clouds of the middle atmosphere. You'll recognize them as white or gray patches that dot the sky in large rounded masses or are aligned in parallel bands. They look like the wool of sheep or scales of mackerel fish -- hence their nicknames "sheep backs" and "mackerel skies."

*Telling Alto cumulus and Stratocumulus Apart*

Alto cumulus and stratocumulus are often mistaken. Besides alto cumulus being higher up in the sky, another way to tell them apart is by the size of their individual cloud mounds. Place your hand up to the sky and in the direction of the cloud; if the mound is the size of your thumb, it is alto cumulus. (If it's closer to fist-size, it's probably stratocumulus.)

*When You'll See It:* Alto cumulus are often spotted on warm and humid mornings, especially during summer. They can signal thunderstorms to come later in the day. You may also see them out ahead of cold fronts, in which case they signal the onset of cooler temperatures.



**Nimbostratus:** Nimbostratus clouds cover the sky in a dark gray layer. They can extend from the low and middle layers of the atmosphere and are thick enough to blot out the sun.

*When You'll See It:* Nimbostratus is the quintessential rain cloud. You'll see it whenever steady rain or snow is falling (or is forecast to fall) over a widespread area.



**Altostratus:** Altostratus appear as gray or bluish-gray sheets of cloud that partially or totally cover the sky at mid-levels. Even though they cover the sky, you can typically still see the sun as a dimly lit disk behind them, but not enough light shines through to cast shadows on the ground.

*When You'll See It:* Altostratus tend to form ahead of a warm or occluded front. It can also occur together with cumulus at a cold front.



## High Level: form above 20,000 feet

**Cirrostratus:** Cirrostratus clouds are transparent, whitish clouds that veil or cover nearly the entire sky. A dead giveaway to distinguishing cirrostratus is to look for a "halo" (a ring or circle of light) around the sun or moon.

*When You'll See It:* Cirrostratus indicate a large amount of moisture is present in the upper atmosphere. They're also generally associated with approaching warm fronts.



**Cirrocumulus:** Cirrocumulus clouds are small, white patches of clouds often arranged in rows that live at high altitudes and are made of ice crystals. Called "cloudlets," the individual cloud mounds of cirrocumulus are much smaller than that of altocumulus and stratocumulus, and are about the width of your pinky finger if you hold it up to the sky.

*When You'll See It:* Cirrocumulus clouds are rare and relatively short-lived, but you'll see them convection.



**Cirrus:** Like their name (which is Latin for "curl of hair") suggests, cirrus are thin, white, wispy strands of clouds that streaks across the sky and are also known as mares' tails. Because

cirrus clouds occur above 20,000 ft (6000 m) -- an altitude where low temperatures and low water vapor exist - they are made up of tiny ice crystals rather than water droplets.

*When You'll See It:* Cirrus typically occur in fair weather. They can also form out ahead of warm fronts and large-scale storms like nor'easters and tropical cyclones. Seeing them can also indicate storms may be coming soon!



### **Low, Middle, and Upper Atmosphere:**

**Cumulonimbus:** Cumulonimbus clouds are one of the few clouds that span the low, middle, and high layers. They resemble the cumulus clouds from which they grow, except they rise into towers with bulging upper portions that look like cauliflower. Cumulonimbus cloud tops are usually always flattened in the shape of an anvil or plume. Their bottoms are often hazy and dark.

*When You'll See It:* Cumulonimbus clouds are thunderstorm clouds, so if you see one you can be sure there's a nearby threat of severe weather (short but heavy periods of rainfall, hail, and possibly even tornadoes).

