How to Predict the Weather Without a Forecast

1. Clouds

Long before technology was developed to predict the weather, people relied on observation, patterns and folklore to avoid being caught off-guard by the elements. Once you practice these methods and become attuned to the sky, the air, and animal behaviors, it's possible to predict the weather quite reliably.

Examine the clouds. The types of clouds in the sky, as well as the direction in which they're moving, can tell you a lot about upcoming weather. In general, clouds that are white and high indicate good weather, and clouds that are dark and low mean rain or storms are on the way.

- The presence of cumulonimbus clouds early in the day, with more developing throughout the day can mean there's a greater chance of severe weather occurring soon.
- Mammatus clouds (formed by sinking air) can form with both severe and non-severe thunderstorms.
- Cirrus clouds, or "mare's tails," high in the sky like long streamers, mean bad weather is coming within the next 36 hours.
- Altocumulus clouds, which are like mackerel scales, also point to bad weather coming within the next 36 hours.
- Mackerel skies and mares tails formations sometimes appear in the same sky. When that happens, rain is sure to follow the next day.
- Cumulus towers indicate the possibility of showers later in the day.
- Nimbostratus clouds hang low and heavy in the sky, and mean rain is imminent.
- Cloud cover on a winter night means you can expect warmer weather, because clouds prevent heat radiation that would lower the temperature on a clear night.

Cumulonimbus, from the Latin cumulus ("heap") and nimbus ("rainstorm", "storm cloud"), is a dense towering vertical cloud [1]associated with thunderstorms and atmospheric instability, forming from water vapor carried by powerful upward air currents. Cumulonimbus can form alone, in clusters, or along cold front squall lines. These clouds are capable of producing lightning and other dangerous severe weather, such as tornadoes.

Mammatus are most often associated with the anvil cloud and also severe thunderstorms. They often extend from the base of acumulonimbus, but may also be found under altocumulus, altostratus, stratocumulus, and cirrus clouds.
Mammatus may appear as smooth, ragged or lumpy lobes and may be opaque or translucent. Because mammatus occur as a grouping of lobes, the way they clump together can vary from an isolated cluster to a field of mammae that spread over hundreds of kilometers to being organized along a line, and may be composed of unequal or similarly-sized lobes. The individual mammatus lobe average diameters of 1–3 km and lengths on average of 0.5 km

Cirrus (cloud classification symbol: **Ci**) is a genus of atmospheric cloud generally characterized by thin, wispy strands, giving the type its name from the Latin word *cirrus* meaning a ringlet or curling lock of hair.[1][2]The strands of cloud sometimes appear in tufts of a distinctive form referred to by the common name of "mares' tails".[3]

Since cirrus clouds arrive in advance of the frontal system or tropical cyclone, it indicates that weather conditions may soon deteriorate. While it indicates the arrival ofprecipitation (rain), cirrus clouds per se produce only fall streaks (falling ice crystals that evaporate before landing on the ground).

Altocumulus (From Latin *Altus*, "high", *cumulus*, "heaped")[1] is a middle-altitude cloud genus that belongs to the *stratocumuliform* physical category characterized by globular masses or rolls in layers or patches, the individual elements being larger and darker than those ofcirrocumulus and smaller than those of stratocumulus. Like other cumuliform and stratocumuliform clouds, altocumulus signifies convection.

Altocumulus is also commonly found between the warm and cold fronts in a depression, although this is often hidden by lower clouds. Towering altocumulus, known as altocumulus castellanus, frequently signals the development of thunderstorms later in the day.

A **mackerel sky** or buttermilk **sky** describes a **sky** mostly covered by altocumulus clouds. It is rare with altocumulus and extremely rare in its cirrocumulus form. The occurrence of these clouds is an indicator of moisture and instability

Cumulus congestus clouds are a form of cumulus cloud that can be based in the low or middle height ranges. They achieve considerable vertical development (family D2) in areas of deep, moist convection. They are an intermediate stage between cumulus mediocris and cumulonimbus.

Nimbostratus is a low-to-middle étage stratiform cloud that has considerable vertical and horizontal extent and produces precipitation over a wide area. "Nimbo" is from the Latin word "nimbus", which denotes precipitation.

Although usually dark at its base, it often appears illuminated from within to a surface observer. Usually, nimbostratus is a sign of steady moderate to heavy precipitation, as opposed to the shorter period of typically heavier precipitation released by a cumulonimbus cloud.