

CLOUD CHART

https://www.weather.gov/media/owlie/cloud_chart.pdf

High Clouds: cloud bases 16,000 - 50,000 ft (5-15 km)



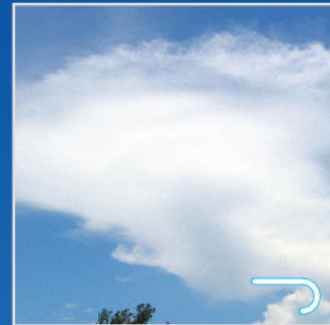
H1: Cirrus

In the form of filaments, strands, or hooks



H2: Cirrus

Dense, in patches or sheaves, not increasing, or with tufts



H3: Cirrus

Often anvil shaped remains of a cumulonimbus



H4: Cirrus

In hooks or filaments, increasing, becoming denser



H5: Cirrostratus

Cirrus bands, increasing, veil below 45° elevation



H6: Cirrostratus

Cirrus bands, increasing, veil above 45° elevation



H7: Cirrostratus

Translucent, completely covering the sky



H8: Cirrostratus

Not increasing, not covering the whole sky



H9: Cirrocumulus

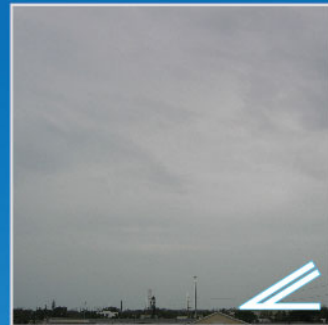
Alone or with some cirrus or cirrostratus

Middle Clouds: cloud bases 6,500 - 23,000 ft (2-7 km)



M1: Altostratus

Mostly semi-transparent, sun or moon may be dimly visible



M2: Altostratus or Nimbostratus

Dense enough to hide the sun or moon



M3: Altocumulus

Semi-transparent, one level, cloud elements change slowly



M4: Altocumulus

Lens-shaped, or continually changing shape and size



M5: Altocumulus

One or more bands or layers, expanding, thickening



M6: Altocumulus

From the spreading of cumulus or cumulonimbus



M7: Altocumulus

One or more opaque layers, w/ altostratus or nimbostratus



M8: Altocumulus

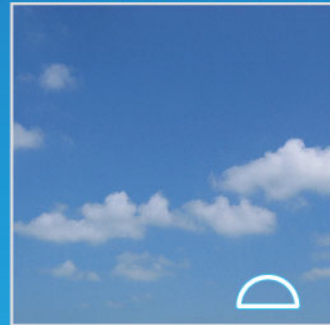
With cumulus-like tufts or turrets



M9: Altocumulus

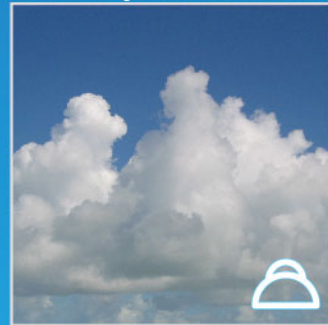
Chaotic sky, usually at several layers, maybe w/ dense cirrus

Low Clouds: cloud bases up to 6,500 ft (0-2 km)



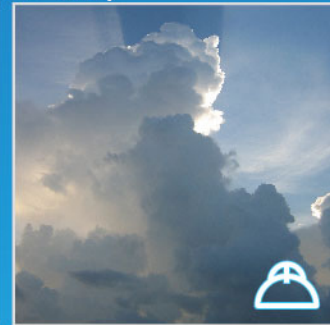
L1: Cumulus

Cumulus of fair weather with flattened appearance



L2: Cumulus

Moderate/strong vertical extent, or towering cumulus



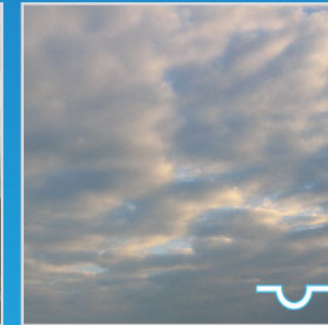
L3: Cumulonimbus

Tops not fibrous, outline not completely sharp, no anvil



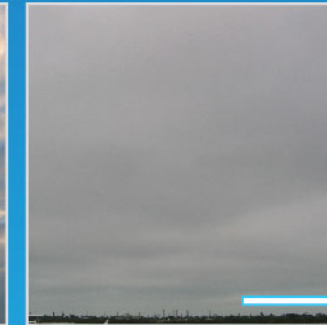
L4: Stratocumulus

From the spreading and flattening of cumulus



L5: Stratocumulus

Not from the spreading and flattening of cumulus



L6: Stratus

In a continuous layer and/or ragged shreds



L7: Stratus Fractus

and/or Cumulus Fractus occurs with rain or snow



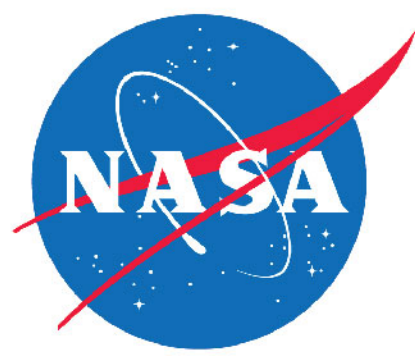
L8: Cumulus & Stratocumulus

Not spreading, bases at different levels



L9: Cumulonimbus

With fibrous top, often with an anvil



Mammatus

Drooping underside of heavy, rain-saturated clouds



Tornado

Rapidly rotating column under a cumulonimbus cloud that touches the ground



Wall Cloud

Lowering of the rain free base of a thunderstorm, often prior to tornado formation



Shelf Cloud

Represents the leading edge of strong winds in advance of a thunderstorm

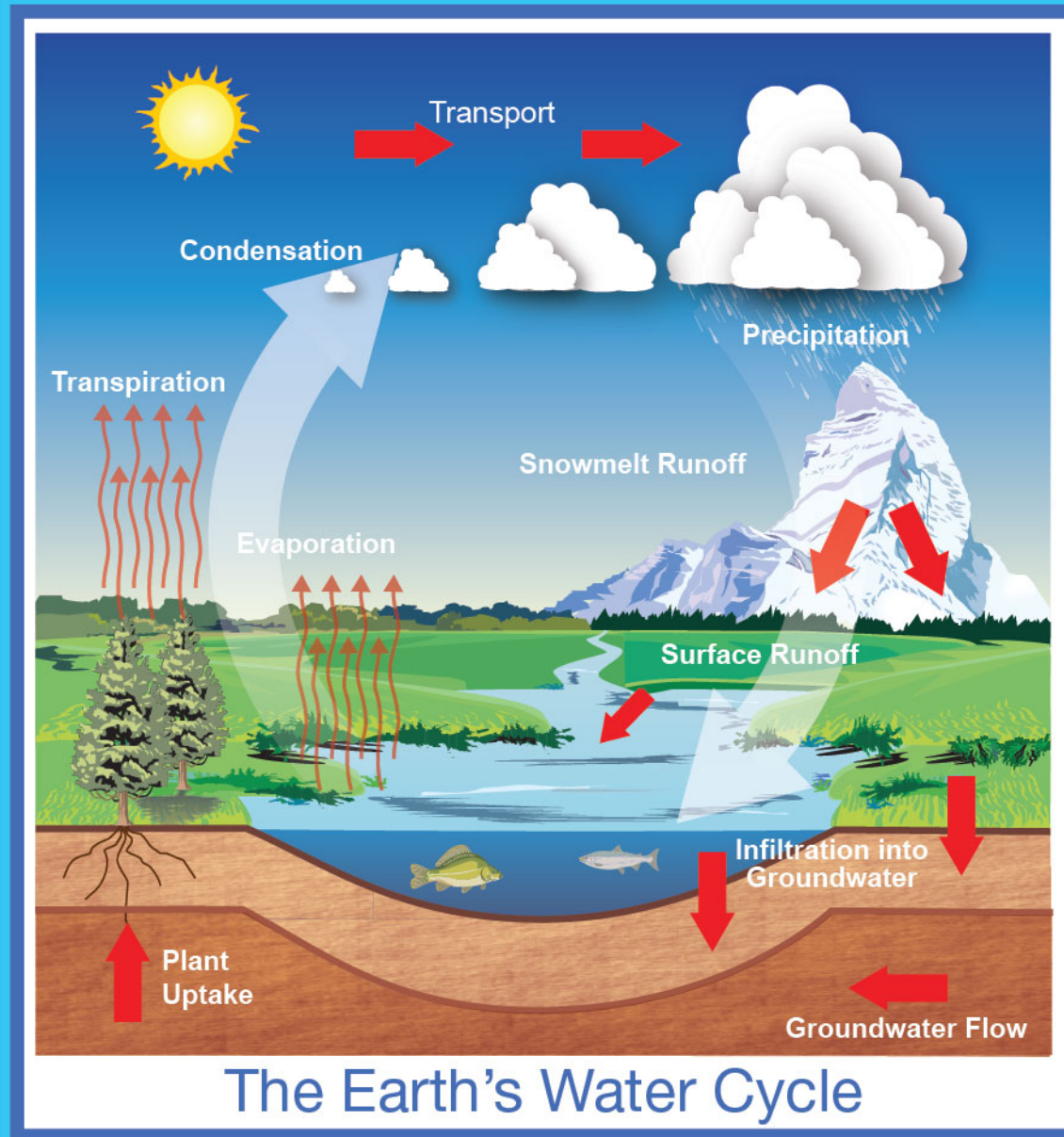


Asperitas Cloud

Waves from nearby thunderstorm rippling through base of cloud

Introduction to Clouds

https://science-edu.larc.nasa.gov/cloud_chart/



The water on Earth is always on the move, changing state from liquid to vapor back to liquid and snow and ice near the poles and mountains. The process used to describe the continuous movement of water between the Earth and atmosphere is known as the water cycle, and is often referred to as the hydrologic cycle. There is no beginning or end to the water cycle; it behaves much like a Ferris wheel at an amusement park, moving around and around.

Cloud Cover

- No Clouds 0%
- Few 0-10%
- Isolated 10-25%
- Scattered 25-50%
- Broken 50-90%
- Overcast <90%

Visual Opacity

- Opaque
- Translucent
- Transparent

Cloud Cover

Determination of the amount of cloud cover is done by estimating the percentage of the sky covered with clouds. This is one of several possible scales or categories for cloud cover.

Visual Opacity

The thickness of a cloud determines the amount of light being transmitted through the cloud. Shadows often provide a clue.

Cloud Level

Three levels of clouds have been identified based on the altitude of a cloud's base.

Ever wonder how clouds got their names? Well you may be surprised to find out!

In 1803 Luke Howard used Latin terms to classify four main cloud types. These can occur at various levels of the atmosphere, low, mid, and high :

- Cirrus – From the Latin word for “curl”. These clouds are high level clouds composed of ice crystals and are whitish, wispy, and hair-like.
- Cumulus - From the Latin word for “heap” or “pile”. They are generally individual, puffy white clouds with a flat base.
- Stratus - From the Latin word for “layer”. These clouds are featureless, broad and fairly widespread, often appearing like a gray blanket.
- Nimbus - Latin word for “rain”. Precipitation occurs from these clouds.
- Alto is used to describe mid level clouds.

Altitude of Cloud Base

6 km

5 km

4 km

3 km

2 km

1 km

CONVECTIVE CLOUDS



Cumulonimbus



Cumulus

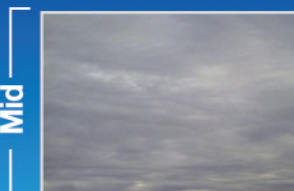
Convective Clouds form because of large updrafts of warm, moist air rising up into cold air!



Short-Lived



Cirrus



Altostratus



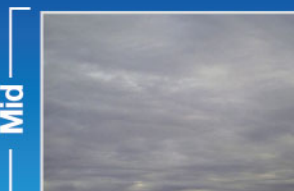
Stratus



Nimbostratus



Cirrocumulus



Altocumulus



Stratocumulus



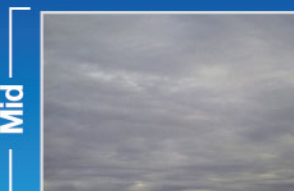
Fog



Persistent Non-Spreading



Cirrostratus



Persistent Spreading



Fog



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<https://www.noaa.gov>
<https://www.education.noaa.gov>
<https://www.weather.gov/jetstream>
<https://www.weather.gov/owlie>
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