

Tangram Technology Periodic Table of Clouds

The Periodic Table of the elements by Mendeleev was a historic achievement in chemistry and enabled chemists to see the relationship between structure and properties of the basic elements. Clouds can be grouped by their height and opacity to provide a simple 'Periodic Table of Clouds' that allows identification and naming of the most common cloud types.

This table covers the main cloud types only and there are many more that are not included in this table.

Naming clouds

There is beauty in the diversity of cloud types and being able to name them makes them even more fascinating.

Cloud names use a hierarchical naming system similar to that used in biology. They are of the form: 'genus' + 'species', i.e., in cirrus uncinus, cirrus is the genus and uncinus is the species.

As with biology, a small amount of Latin can help to understand cloud names and their structure:

- Cumulus - heap or puffy pile.
- Cirrus - fibre or hair.
- Stratus - layer or sheet.
- Alto - elevated.

A cumulus cloud therefore looks like a heap or pile and an altocumulus is a high heap or pile.

Base Height: This chart groups clouds on the base height of the cloud, this may differ from the full height of the cloud, e.g., cumulonimbus clouds typically have a low base but will have a high vertical development.

Opacity: This is the opacity of the cloud and not the degree of sky cover. Sky cover is measured from 0 to 8 where 0 is a sky with no clouds and 8 is a sky completely covered with clouds.

Note: The standard cloud classification symbols, as used by meteorologists around the world are shown in the lower right hand corner of each cloud type, e.g., ☁ for cumulus fractus.

Increasing base height

		Increasing cloud opacity								
		Translucent			Semi-translucent			Opaque		
Increasing base height	C _H - High (6,000 - 15,000 m)	Cirrus uncinus or fibratus (C_H1) Cirrus in hooks (uncinus) or filaments (fibratus) not invading the sky. ☁	Cirrus spissatus (C_H2) Dense cirrus patches in twisted sheaves (not invading the sky). ☁	Cirrus floccus (C_H2) Dense cirrus patches with ragged edges or tufts (not invading the sky). ☁	Cirrus cumulonimbogenitus (C_H3) Often anvil-shaped and remains of C _L 3 or C _L 9. ☁	Cirrus uncinus or fibratus (C_H4) As for C _H 1 but invading the sky. ☁			Cirrocumulus stratiformis, floccus or lenticularis (C_H9) Very high clouds in patches, tufts or lens shapes. ☁	
	C _M - Middle (2,000 - 6,000 m)	Altostratus translucidus (C_M1) Flat, uniform in colour (semi-transparent) and can thicken to form nimbostratus. ☁	Altostratus translucidus (C_M3) Altostratus as a semi-transparent single layer in bands, waves or broken features. ☁	Altostratus translucidus (C_M4) Altostratus in lens shapes at various levels and continuously changing. ☁	Altostratus translucidus (C_M8) Altostratus with tufts (floccus) or castellations (castellanus). ☁	Altostratus translucidus (C_M5) Semi-transparent altocumulus in bands or layers invading the sky and thickening. ☁	Altostratus translucidus (C_M6) Spreading out of cumulus or cumulonimbus. ☁	Altostratus translucidus (C_M9) Altostratus in chaotic patterns with poorly defined clouds at many levels. ☁	Altostratus translucidus (C_M7) Altostratus (C _M 1 or C _M 5) not invading the sky and in two or more layers. ☁	Nimbostratus (C_M2) Flat, uniform in colour (opaque) and often bearing rain (also termed altostratus opacus). ☁
	C _L - Low (< 2,000 m)	Cumulus humilis or fractus (C_L1) Little vertical development and flattened. ☁	Cumulus congestus or mediocris (C_L2) Moderate/high vertical development with domes or towers. ☁	Stratocumulus & cumulus at different levels (C_L8) Mix of cumulus and stratocumulus. ☁	Stratocumulus stratiformis or castellanus (C_L5) Stratocumulus formed by lifting of stratus and not from cumulus. ☁	Stratocumulus cumulonigenitus (C_L4) Flattened and spread out cumulus. ☁	Cumulonimbus calvus (C_L3) No sharp outline and can become taller/higher than other cumulus clouds. ☁	Cumulonimbus capillatus (C_L9) Low base cumulonimbus but very high with anvil shape on top. ☁	Stratus fractus (C_L7) Broken stratus that rarely produces rain but can precede it. ☁	Stratus nebulosus (C_L6) Continuous sheet of uniform colour stratus. Opacity can vary. ☁

MAJOR
CLOUD
FAMILIES

Cumulus (Cu)

Cumulonimbus (Cb)

Stratocumulus (Sc)

Stratus (St)

Altostratus (As)

Altostratus (Ac)

Nimbostratus (Ns)

Cirrus (Ci)

Cirrostratus (Cs)

Cirrocumulus (Cc)

Low clouds

Medium clouds

High clouds