

THE HUNTINGTON

Cloud Journal

Name _____



HIGH-LEVEL CLOUDS:
CIRRO



Have you ever seen thin clouds trailing through the sky? These are **contrails**. They form when an aircraft flies through cold, high altitudes and emits exhaust. The cold conditions condense the exhaust and leave a trail behind.

Cirrus clouds are high up where it is -4 degrees F, which is about as cold as your freezer. It is so cold that these wispy, feathery clouds are primarily made of ice crystals.

20,000+ FEET

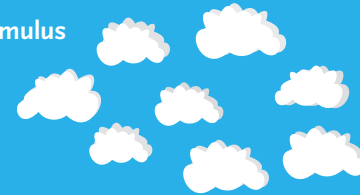
MID-LEVEL CLOUDS:
ALTO

Clouds in the middle of the troposphere are **altostratus** and **altocumulus**. They can be made up of water droplets, ice, or both.



Altostratus

Altocumulus



6,500-20,000 FEET

LOW-LEVEL CLOUDS

Stratus clouds are flat and horizontal clouds. Stratus clouds that form on the ground are called fog.



Stratus

Stratus clouds can produce rain when combined with cumulus clouds. This combination creates a **nimbostratus** cloud, or "rainy stratus."

Nimbostratus



Cumulus clouds look like vertical, fluffy piles of cotton. These clouds form when warm air rises in a process called convection. A **cumulonimbus** cloud is one with heavy rain and thunderstorms. Sometimes the heat from a large fire forms fluffy, pillowy clouds full of steam. These are called **pyrocumulus** clouds.



Cumulus

Cumulonimbus

0-6,500 FEET

How does a cloud form?

Warm air rises. As air climbs in altitude, pressure goes down, and the air gets colder and reaches its dew point (when air can't hold water in its gas form).

Where do clouds form?

Earth's atmosphere has many layers. The troposphere is the layer of atmosphere closest to the Earth's crust and where 99% of water vapor is held.

Why are clouds white?

Light refracts off millions of droplets in all different directions, which can look white to our eyes. As the sun moves throughout the day, the angles of light refraction can make a cloud appear different colors.

CLOUD OBSERVATIONS

Make a prediction: Will the clouds look different throughout the day?

Use this blank chart to collect data over the course of a day. Draw the clouds in the sky in one of the wedges six times throughout that day. Record your data below.

The chart consists of a large outer circle and a smaller inner circle. The space between the circles is divided into six equal wedge-shaped sections by radial lines. In the center of the inner circle, the word "Date:" is written above a horizontal line. Each of the six wedge-shaped sections has the word "Time:" written vertically along its inner edge, indicating where to record the time of each observation.

Try this again during another season to see if your observations differ!

Look up and explore the world of clouds by making observations and collecting data.

CLOUD OBSERVATIONS

Date: _____

Drawing:

Time: _____

Location: _____

Cloud Color: _____

Cloud Type: _____

Observations:

Date: _____

Drawing:

Time: _____

Location: _____

Cloud Color: _____

Cloud Type: _____

Observations:

Date: _____

Drawing:

Time: _____

Location: _____

Cloud Color: _____

Cloud Type: _____

Observations:



Date: _____

Drawing:

Time: _____

Location: _____

Cloud Color: _____

Cloud Type: _____

Observations:

Date: _____

Drawing:

Time: _____

Location: _____

Cloud Color: _____

Cloud Type: _____

Observations:

10

9

8

7

6

5

4

3

2

1

1

2

3

4

5

6

7

8

9

10

CLOUD COUPLETS

On the following pages, explore the ways writers and artists have been inspired by clouds.



Create your own couplet about clouds.

Poets have frequently been inspired by clouds. Chinese couplets often reflect a sense of natural balance or harmony between contrasting or natural objects. Couplets consist of two lines of poetry that typically have similar rhythm and usually have the same parts of speech in the same order. Write a couplet with one line about clouds and a second line about something that contrasts with clouds. Fill in the blanks to the right to make your own couplets.

Line 1 Try to contemplate the clouds and mists
beyond the three peaks;
試觀烟雲三峰外

Line 2 all are in the palm of a numinous immortal
都在靈仙一掌間

—Michael Cherney 秋麥
(b. 1969, New York; active China), 2018

Line 1: Consider making this about clouds. _____

Line 2: Consider making this about something contrasting with clouds. _____

Line 1: . _____

Line 2: _____

Line 1: . _____

Line 2: _____

Line 1: . _____

Line 2: _____

Line 1: . _____

Line 2: _____

Line 1: . _____

Line 2: _____

Line 1: . _____

Line 2: _____

What inspired you today?



Mindful Cloud Moment



Storm Cloud



Growing and Knowing



VISIT

Wed.–Mon., 10 a.m.–5 p.m.

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THE HUNTINGTON

Library, Art Museum, and Botanical Gardens

Above: Photo © Jamie Pham.

On front: John Constable, *View on the Stour near Dedham*, oil on canvas, 1822.

The Huntington Library, Art Museum, and Botanical Gardens.

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