**CONDENSATION: Sunlight causes water to \_\_\_\_\_\_\_\_\_\_\_\_ into the \_\_\_\_\_\_\_\_\_\_\_\_. This air containing the water vapor is \_\_\_\_\_\_\_\_\_\_\_\_at the surface of the earth and \_\_\_\_\_\_\_\_\_\_\_\_. As the air rises, it \_\_\_\_\_\_\_\_\_\_\_\_ and the \_\_\_\_\_\_\_\_\_\_\_\_condenses on some form of \_\_\_\_\_\_\_\_\_\_\_\_ matter such as dust, ash, or smoke to form \_\_\_\_\_\_\_\_\_\_\_\_. The particulate matter is called ­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**

**Importance of Clouds**

* **What is a cloud? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
* **What do clouds tell us? The presence of clouds in the sky is one type of signal to \_\_\_\_\_\_\_\_\_\_\_\_ (scientists that study weather) that there will be changes in the \_\_\_\_\_\_\_\_\_\_\_\_. Predicting the weather requires the \_\_\_\_\_\_\_\_\_\_\_\_of the different types of clouds.**

**Identifying Clouds  
To better communicate and understand the many cloud forms in the sky, meteorologists identify clouds based on five basic cloud characteristics:**

1. **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
2. **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
3. **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
4. **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
5. **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**From this information, we can identify three basic cloud types and seven other common cloud types.**

**Cloud Type by Form**

* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Cumulus Clouds:**

* **Cumulus clouds are most \_\_\_\_\_\_\_\_\_\_\_\_ during the summer months (\_\_\_\_\_\_\_\_\_\_\_\_ weather).**
* **Cumulus or \_\_\_\_\_\_\_\_\_\_\_\_ clouds form when air is forced up \_\_\_\_\_\_\_\_\_\_\_\_ and therefore rises \_\_\_\_\_\_\_\_\_\_\_\_.**

**Stratus Clouds**

* **Stratus clouds are \_\_\_\_\_\_\_\_\_\_\_\_, sheet-like clouds.**
* **\_\_\_\_\_\_\_\_\_\_\_\_ with some \_\_\_\_\_\_\_\_\_\_\_\_, and cover \_\_\_\_\_\_\_\_\_\_\_\_ portions of the sky.**
* **Frequently \_\_\_\_\_\_\_\_\_\_\_\_ and thick.**
* **Stratus clouds are formed when air is forced up \_\_\_\_\_\_\_\_\_\_\_\_.**

**Cirrus Clouds**

* **\_\_\_\_\_\_\_\_\_\_\_\_, white clouds with a \_\_\_\_\_\_\_\_\_\_\_\_ appearance.**
* **\_\_\_\_\_\_\_\_\_\_\_\_ of all clouds forming at heights of \_\_\_\_\_\_\_\_\_\_\_\_ feet or more above the earth's surface.**
* **Formed by \_\_\_\_\_\_\_\_\_\_\_\_­­­­\_\_\_\_.**
* **\_\_\_\_\_\_\_\_\_\_\_\_ in the direction of air \_\_\_\_\_\_\_\_\_\_\_\_ at their \_\_\_\_\_\_\_\_\_\_\_\_.**
* **Usually the first sign of an approaching \_\_\_\_\_\_\_\_\_\_\_\_.**

**Cirro**

* **High clouds: \_\_\_\_\_\_\_\_\_\_\_\_**
* **\_\_\_\_\_\_\_\_\_\_\_\_: less than 25oC & made up of ice crystals**
* **Cirrostratus: high, \_\_\_\_\_\_\_\_\_\_\_\_ clouds. They give the sky a \_\_\_\_\_\_\_\_\_\_\_\_ white appearance.**
* **\_\_\_\_\_\_\_\_\_\_\_\_: delicate clouds appearing in bands or ripples across the sky. They are one of the least common of the cloud types.**

**Alto**

* **These clouds usually form from the \_\_\_\_\_\_\_\_\_\_\_\_ lifting of air in advance of a \_\_\_\_\_\_\_\_\_\_\_\_ front.**
* **\_\_\_\_\_\_\_\_\_\_\_\_ level clouds: 2-7 km**
* **0-25oC & composed of both \_\_\_\_\_\_\_\_\_\_\_\_ and ice crystals**
* **The presence of altocumulus clouds on a \_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_ summer morning is commonly followed by c later in the day.**
* **Altostratus: thin, \_\_\_\_\_\_\_\_\_\_\_\_ clouds that are blue-gray or whitish in color and often cover large portions of the sky. They are thinner if formed at \_\_\_\_\_\_\_\_\_\_\_\_ altitudes but are \_\_\_\_\_\_\_\_\_\_\_\_ and more \_\_\_\_\_\_\_\_\_\_\_\_ if closer to the ground.**
* **\_\_\_\_\_\_\_\_\_\_\_\_ :oval or eliptical in shape, and can have gray \_\_\_\_\_\_\_\_\_\_\_\_. They often have a "cottonball-like" appearance.**

**Strato**

**Low level clouds: 0 - 4 km**

* **Greater than 5oC & composed of water**
* **Stratus: Dense, \_\_\_\_\_\_\_\_\_\_\_\_ dark gray layers.**
* **Stratocumulus: groups of dense, \_\_\_\_\_\_\_\_\_\_\_\_ clouds that cover the sky in dark \_\_\_\_\_\_\_\_\_\_\_\_ masses, long and gray. The often form in \_\_\_\_\_\_\_\_\_\_\_\_ across the sky.**

**Cloud Type by Rain**

* **Finally, we can classify them based on the presence of \_\_\_\_\_\_\_\_\_\_\_\_**
* **\_\_\_\_\_\_\_\_\_\_\_\_: any cloud that \_\_\_\_\_\_\_\_\_\_\_\_**
* **Cumulonimbus: taller, \_\_\_\_\_\_\_\_\_\_\_\_versions of cumulus clouds. Their \_\_\_\_\_\_\_\_\_\_\_\_can be from two to five miles. These clouds often form \_\_\_\_\_\_\_\_\_\_\_\_.**
* **Nimbostratus: low, \_\_\_\_\_\_\_\_\_\_\_\_clouds that are often associated with steady \_\_\_\_\_\_\_\_\_\_\_\_and occur in thick, \_\_\_\_\_\_\_\_\_\_\_\_layers and are often dark \_\_\_\_\_\_\_\_\_\_\_\_in color.**