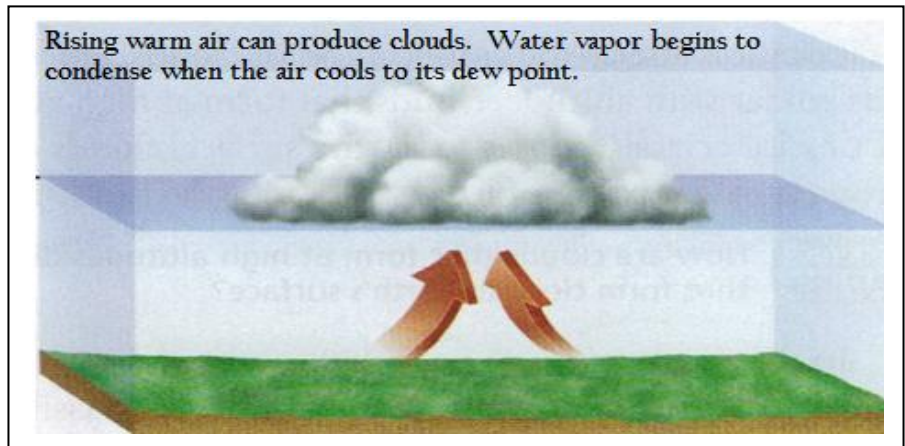


6-4.3 WEATHER STUDENT PACKET

- **WEATHER WARM UPS**
- **WEATHER VOCABULARY**
- **CLOUDS**



Clouds, Clouds Everywhere! Chant

by Mrs. Massey ☺

Clouds, clouds, clouds, everywhere I look, there's clouds!

Big puffy ones—Cumulus!

Flat pancake ones—Stratus!

Anvil shaped—Cumulonimbus! Whoa, whoa, whoa, now that's the cloud that grows! Tall and puffy, bringing rain, thunder and lightening bring you pain!

Clouds, clouds, clouds, everywhere I look, there's clouds!

High icy ones-Cirrus!

High puffy ones-Cirrocumulus!

High pancake ones-Cirrostratus! Which always look the flattest!

Clouds, clouds, clouds, everywhere I look, there's clouds!

Word part for high-cirro and for medium-alto!

Word part for low-strato and nimbus is full of rain yo!

Clouds, clouds, clouds, everywhere I look, there's clouds!

Medium puffy-Alto cumulus!

Medium pancake-Altostratus! Which always look the flattest!

Clouds, clouds, clouds, everywhere I look, there's clouds!

But just one thing before I go, a stratus cloud on the ground is fog ya know?






WARM UPS- Week of _____

Day 1 Warm Up-MATCHING CLOUD VOCABULARY

1. Cumulus: _____	A: word part meaning rain
2. Cirrus: _____	B. word part meaning high
3. Stratus: _____	C: word part meaning medium
4. fog: _____	D: puffy cloud
5. nimbus: _____	E: pancake like cloud in layers
6. cirro: _____	F: high icy clouds
7. alto: _____	G: low lying stratus cloud
8. Cumulonimbus: _____	H: tall thunderhead cloud




Day 2 Warm Up-Cloud Chart

Cloud Type	Name	Description	Associated Weather
			
			
			
			

Day 3-Warm Up-Clouds

- What are clouds? _____
- _____ clouds are white and feathery.
- _____ clouds are puffy.
- _____ clouds are low.
- Clouds that look like gray blankets are called _____.
- What is fog? _____
- List the three types of clouds below:
 - _____
 - _____
 - _____


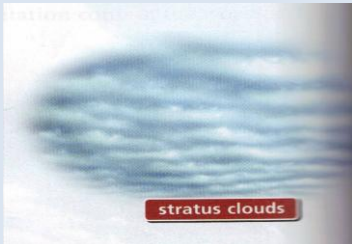



Day 4 Warm Up- Identify the cloud type and tell one trick to remember about it.

Cloud	Name	Trick
		
		
		

Friday Warm Up-Prepare for Quiz





Weather Vocabulary Standard 6-4.3



















6-4.3 Classify shapes and types of clouds according to elevation and their associated weather conditions and patterns.

1. Cloud	A collection of millions of tiny water droplets or ice crystals that hang in the troposphere over earth.
2. Cumulus Clouds 	Clouds formed at medium or low elevation, puffy with flat bottom, when white they often signal fair weather, when dark, they may signal rain or thunderstorms.
3. Stratus Clouds 	Clouds formed at medium or low elevation, spread out layer upon layer covering a large area, as they thicken, precipitation usually occurs over that area.
4. Cirrus Clouds	Clouds formed at high elevations, wispy clouds, usually consist of ice crystals, they signal fair weather or may also signal an approaching warm front.
5. Cumulonimbus cloud 	<p>Also called a thunderhead, is often part of thunderstorm conditions that may accompany a cold front (lightning and thunder).</p> <p style="text-align: center;">ANVIL-SHAPED CLOUD</p> 
6. Nimbostratus clouds	Dark stratus clouds full of rain.
7. Fog 	clouds that form when condensation occurs at or near the ground when land cools over night causing the water vapor above it to condense.
8. Alto	Word part which means medium-level for example, altocumulus or altostratus
9. cirro	Word part meaning high.
10. Nimbo/nimbus	Word part which means "rain".

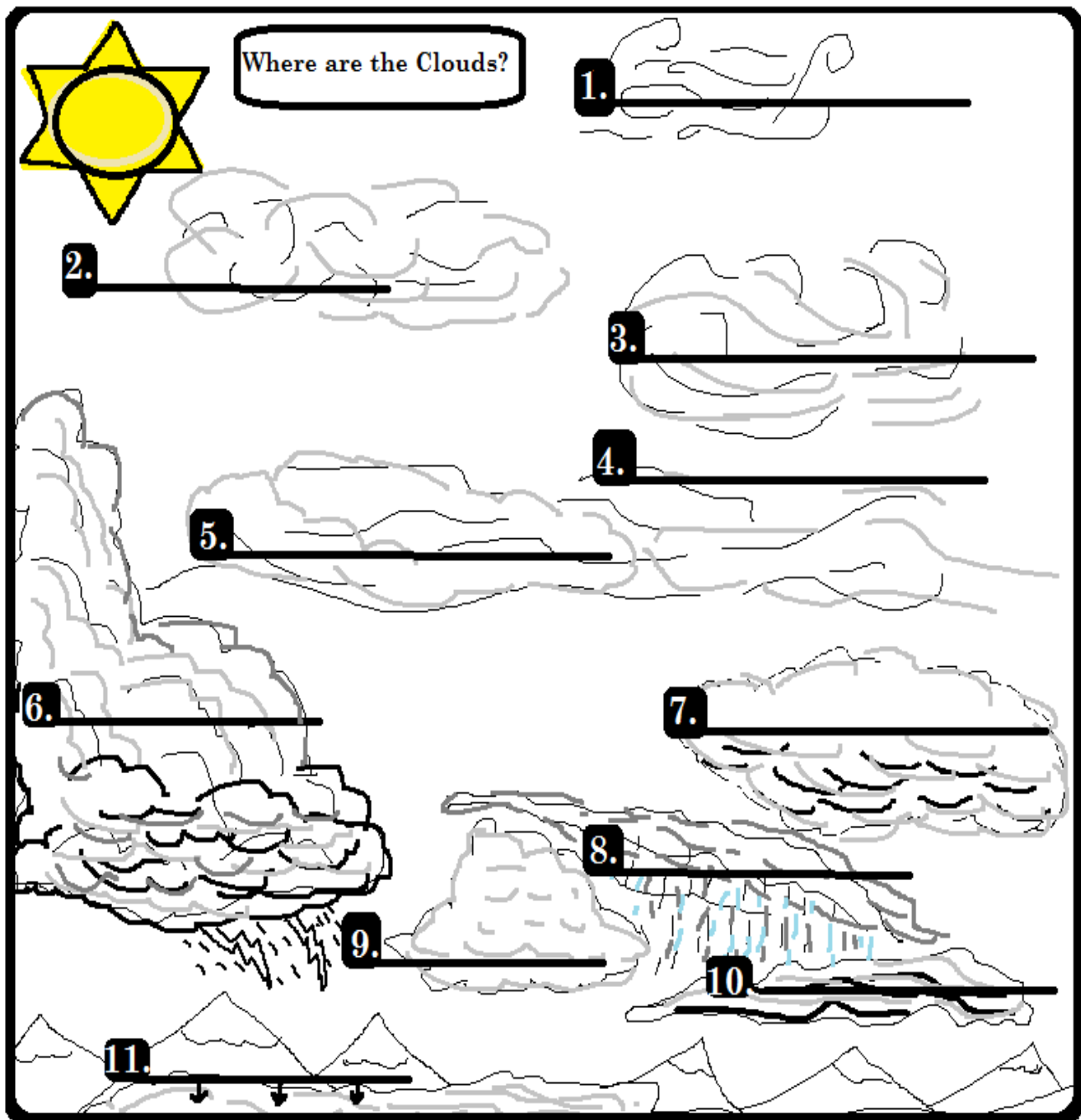
CLOUDS

Another factor that influences the weather is moisture in the air. Moisture in the air condenses and that air can then fall to the earth as rain, hail, snow, or sleet. Water vapor in the atmosphere can condense into clouds. There are several different types of clouds.

Cloud	Description
	Cumulus clouds are tall and puffy. When sunlight hits these clouds, they are bright white.
	In STRATUS clouds, water droplets collect into flat shapes like pancakes. The "pancakes" can be thick or thin. Stratus clouds can often be seen as low, grayish clouds that cover the whole sky, like fog that doesn't reach the ground.
	In cirrus clouds, water droplets collect to form thin curves with no clear shape. Cirrus clouds are found high in the sky (at about 18,000 feet or above).
	The cumulonimbus clouds can't hold all their water droplets. These drops can become so heavy that they fall as rain, snow, or hail. These clouds look tall, puffy, and gray. They may bring thunder and lightning.

CLOUD SYMBOLS AND THEIR MEANINGS	
       	<p>0% Cloud Cover - Observation: Clear Skies</p> <p>25% Cloud Cover - Observation: Scattered Clouds</p> <p>75% Cloud Cover - Observation: Broken Clouds</p> <p>100% Cloud Cover - Observation: Overcast</p> <p>Vision Obscured</p> <p>Missing Data</p> <p>Department of Atmospheric Sciences University of Illinois at Urbana-Champaign</p>
<p>CLOUD COVERAGE</p> <p>  CLEAR  1/8  SCATTERED  3/8 </p> <p>  4/8  5/8  BROKEN  7/8 </p> <p>  OVERCAST  OBSCURED  MISSING </p>	

Identifying Cloud Types



Word Box

Cirrocumulus

Cumulonimbus

Fog

Altostratus

Cirrus

Alto cumulus





Cumulus

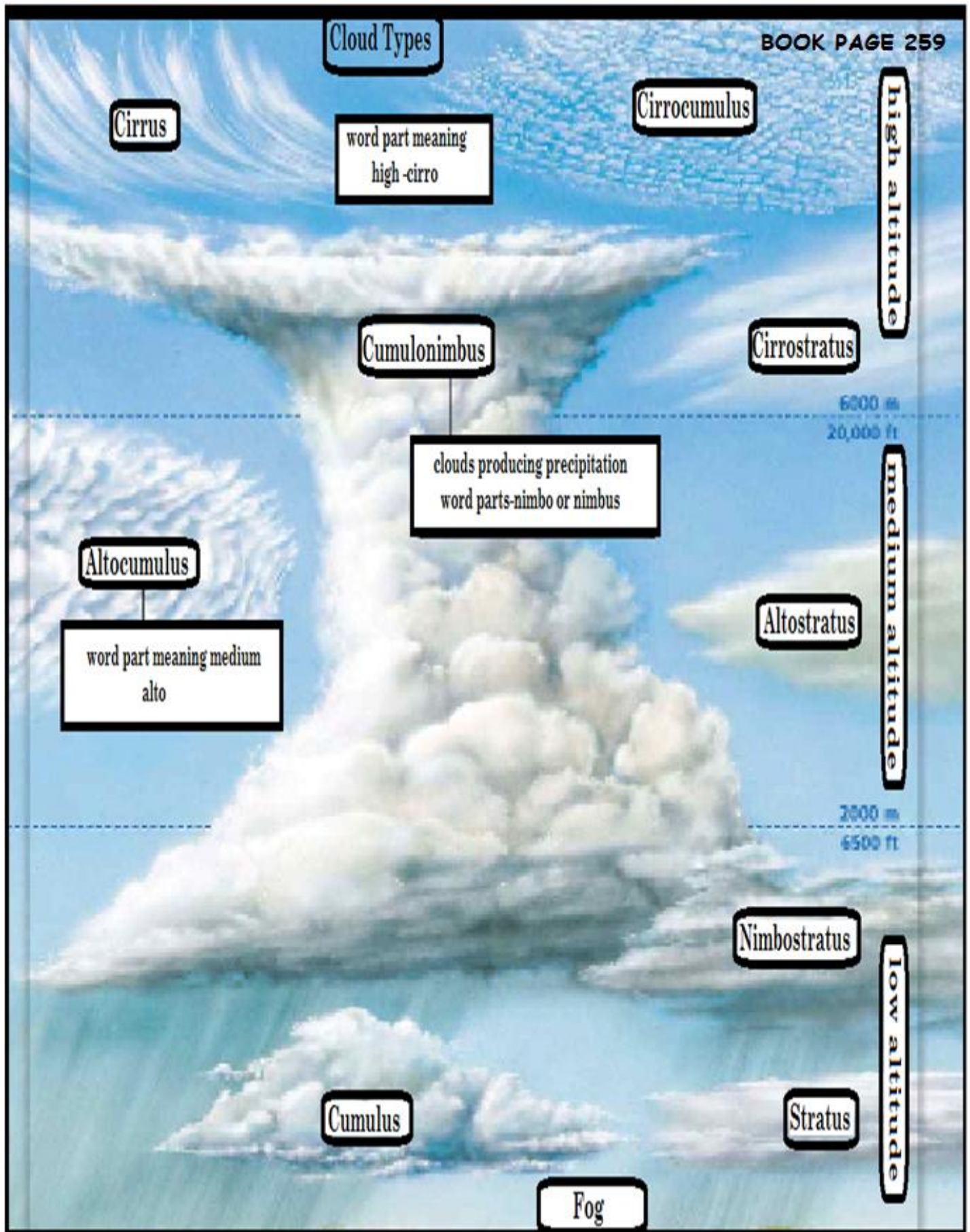
Stratus

Cirrostratus

Stratocumulus

Nimbostratus

Cloud Type	Name	Description	Weather that comes with these clouds
			Mostly clear skies, but sometimes light showers
		(means curl) thin, wispy, featherlike clouds found at high altitudes and made up of ice crystals	
	Stratus		
			thunderstorms and rain
Word Box			
(means layer) sheet-like, low, uniform layers	Stratus	Steady drizzle	Cumulonimbus
Cirrus	Fair skies	(means heap) fluffy, thick, dome-shaped, usually have a flat base	large, dark, billowing clouds



Mnemonic Device: Friends Can See New Comedies At ABC Cable Channel Company

BROCHURE PROJECT TRAVEL TO THE CLOUDS!

Each of the 3 main panels on the inside of the brochure should include the following information: P. 259 (PREVIOUS PAGE)

1. Cloud Type
2. Shape/Description of Cloud
3. Altitude of Cloud
4. Type of Weather
5. Picture/Drawing of Cloud

The outer front panel should include:

- Title (such as "Travel to the Clouds")
- Catchy introduction paragraph to identify purpose of brochure- to travel through the clouds
- The process of condensation as it applies to cloud formation

<u>Cumulus</u>	<u>Cirrus</u>	<u>Stratus</u>
<u>CUMULONIMBUS</u>		<u>FOG</u>

The outer back panel should include:

- FAQ section (Frequently Asked Questions)
- Include 5 multiple choice questions about clouds (provide at least a,b,c answer choices for each question)

**** Before decorating- the group should fold the chart paper into the brochure tri-fold and then cut about 3 inches from the top and bottom. This will ensure that the brochure will fit through the laminator.**

Travel to the Clouds Rubric	
Cloud type and info	75 points (25 points for each cloud type)
FAQ	15 points
Decorations/Creativity	10 points
Total Grade	100 points

(Project continued on next page.)



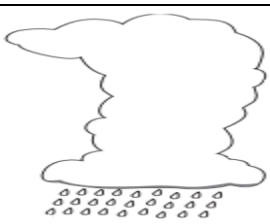

Duty Descriptions


Student 1	Student 2	Student 3	Student 4
Cumulus Cloud information and pictures	Cirrus Cloud information and pictures	Stratus Cloud information and pictures	Front cover and the FAQ section (write rough draft of information in science notebook) and then all students at the table-draw and fill out the Title page and FAQ section).
*All students at the table-draw and fill out the Title page and FAQ section using Student 4's notes in their science notebook.			

Clouds Study Guide

- _____ clouds are those that are formed at medium or low elevation (puffy with flat bottoms). When these clouds are white they often signal _____ weather, but when they are darker, they may signal _____ or _____.
- _____ clouds are those that are formed at high elevations; _____ clouds usually consisting of _____ crystals that signal _____ weather or may also signal an approaching _____.
- _____ clouds are those that are formed at medium or _____ elevation; spread out _____ upon layer covering a large area. As these clouds thicken, _____ usually occurs over that area.
- The names of many clouds are a combination of one of the _____ basic shapes and a prefix or suffix. The basic shape name can be combined with the appropriate prefix or suffix. Combinations of those shapes can be used with _____, which means "rain", for example, _____ or nimbostratus.
- A _____ cloud, also called a thunderhead, is often part of thunderstorm conditions that may accompany a _____ front.
- The prefix _____ - may also be used to indicate medium-level clouds formed at about 2-6 kilometers up into the atmosphere, for example, _____ or altostratus.
- Clouds that form when _____ occurs at or near the ground are called fog.












Identify these cloud types:

8.	9.	10.	11.
			



M

CLOUD COVERAGE

 CLEAR	 1/8		 3/8
 4/8	 5/8		 7/8
	 OBSCURED		 MISSING

The Cloud Crossword



Anvil, 8 miles



Cirrus, 7 miles



Cirrocumulus, 6 1/2 miles



Cirrostratus, 6 miles



Altostratus, 5 miles



Alto cumulus, 4 1/2 miles



Stratocumulus,
3 1/2 miles



Cumulus, 3 miles



Cumulonimbus, 2 miles



Stratus, 1 mile



Nimbostratus, 3000 ft.

Across

1. Called Thunderheads, they go from ground level to the greatest heights.
6. Thin sheets of cloud at high levels.
7. Rain clouds, dark and close to the ground.
8. Puffy clouds with dark, rippled undersides.
9. Wispy clouds looking like a horse's tail blowing in the wind.
10. Thick, dull-gray, low-hanging yielding drizzle and mist.

Down

2. High thick sheets of pale gray cloud.
3. Clouds of ice crystals at 25-30,000 ft. altitude.
4. "Fair-weather" clouds form in warm air on sunny days.
5. Very high clouds with tops which are spread out and flattened.

