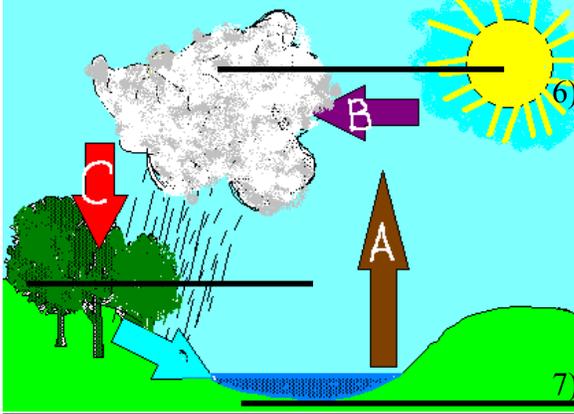


NAME \_\_\_\_\_  
 DATE January 15, 2004\_  
 GRADE 5-SCIENCE SOL  
 REVIEW-WEATHER



LABEL the 3 stages of the water cycle  
 (evaporation, condensation, precipitation.)

- 1) The sketch above shows:
  - a. a life cycle.
  - b. \*the water cycle.
  - c. a thunderstorm.
- 2) The \_\_\_\_\_ makes the water cycle go.
  - a. clouds
  - b. \*sun
  - c. moon
- 3) Energy from the sun warms the water on earth causing it to:
  - a. disappear
  - b. condense
  - c. \*evaporate
- 4) When water evaporates it becomes:
  - a. clouds.
  - b. \*water vapor.
  - c. wind.

- 5) Water vapor is water in the \_\_\_\_\_ state.
- a. solid
  - b. liquid
  - c. \*gas

As the warm moist air rises, it begins to cool, which causes the water vapor in the air to:

- a. evaporate
- b. boil
- c. \*condense

When water vapor (a gas) becomes water (a liquid), this process is called:

- a. boiling
- b. \*condensation
- c. evaporation

- 8) Water vapor in the air condenses when it:
- a. warms.
  - b. \*cools.
  - c. gets heavy.

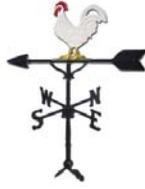
- 9) When water vapor condenses, it forms:
- a. tiny droplets of liquid
  - b. clouds
  - c. \*both - Clouds are tiny droplets of liquid.

- 10) As more and more tiny droplets of liquid are formed and combine, they get heavier. What happens next?
- a. Nothing
  - b. \*They fall as precipitation

c. They cause thunder

- 11) Clouds are made of:
- a. smoke.
  - b. \*drops of water.
  - c. frogs
- 12) When water droplets get big and heavy, this occurs:
- a. \*precipitation.
  - b. hibernation.
  - c. evaporation
- 13) Which is not a form of precipitation?
- a. Rain
  - b. Snow
  - c. \*Fog
  - d. Sleet
  - e. Freezing rain
  - f. Hail
- 14) Fog is actually:
- a. \*a low stratus cloud.
  - b. smoke.
  - c. pollution.
- 15) \_\_\_\_\_ is the amount of water vapor in the air.
- a. Air pressure.
  - b. \*Humidity.
  - c. The dew point.
- 16) This instrument is used to measure humidity:
- a. an anemometer
  - b. a spectroscope.
  - c. \*a hygrometer

Hint for the last question - think of the 'h' in both humidity - hygrometer)



- 27) The amount of water vapor in the air is the \_\_\_\_\_ of the air.
- pressure
  - \*humidity
  - temperature

- 28) A hygrometer measures the amount of \_\_\_\_\_ in the air.
- \*water vapor
  - pollution
  - smoke



A RAIN

GAUGE

- 29) A rain gauge measures:
- the type of precipitation.
  - \*the amount of precipitation.
  - the air pressure.

- 30) You could make a very simple rain gauge by putting a measuring cup or graduated cylinder outside before a rain, and checking the amount of rainfall after the rain.
- \*True
  - false

- 17) A scientist who studies weather is called a:
- zoologist.
  - etymologist.
  - meteorologist.

- 18) Clouds are formed when:
- \*warm, moist air rises and cools.
  - dust particles come together.
  - there is high humidity.

- 19) The movement of air is:
- air force.
  - \*wind.
  - thunder.

- 20) Wind speed is measured by an anemometer and wind direction is measured by a:
- anemometer
  - barometer
  - \*weather vane

- 21) What is the average weather conditions in an area over a period of years called?
- Temperature.
  - \*Climate.
  - Season.

- 22) This instrument is a
- \*weather vane
  - rain gauge
  - an anemometer

- 23) The weather vane measures:
- wind speed
  - \*wind direction
  - humidity



AN ANEMOMETER

- 24) The speed of the wind is measured by:
- a weather vane.
  - a wind gauge.
  - \*an anemometer.

- 25) Air temperature is measured by:
- a weather gauge.
  - \*a thermometer.
  - an anemometer.



A

HYGROMETER

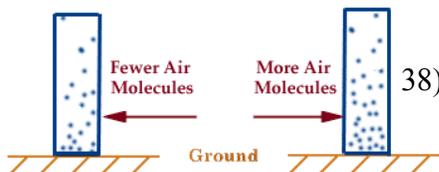
- 26) A hygrometer measures:
- air speed.
  - rain.
  - \*humidity.



BAROMETER

- 31) A barometer measures:
- wind.
  - \*air pressure.
  - bars.

- 32) A rising barometer usually means:
- \*clear, cooler weather ahead
  - warmer, rainy weather ahead.



- 33) Molecules in \_\_\_\_\_ air are closer together.
- warm
  - \*cool

- 34) Air pressure is the weight of the air. Which would weigh more and cause more air pressure?
- warm air
  - \*cool air

- 35) Remember, :  
Cool, dry air=high air pressure  
Wet, warmer air = low air pressure . A falling barometer, indicates:

- the temperature might be warming up.
- rain is likely
- \*both

- 36) Air has weight. \_\_\_\_\_ is the force exerted by the weight of the air.
- \*Air pressure
  - Wind
  - Rain

- 37) Low or falling air pressure is usually associated with:
- \*rain or snow
  - sunny weather (think of feeling low on rainy days)

- 38) What instrument is used to measure air pressure?
- Anemometer
  - \*Barometer
  - Thermometer

- 39) Weather satellites:
- are devices that collect precipitation in space.
  - machines that orbit the Earth to measure wind speed.
  - \*instruments in space that collect weather data and take pictures of cloud cover.

- 40) A weather satellite can \_\_\_\_\_ weather.
- predict
  - \*track
  - control

- change
- none of the above

### AIR MASSES AND FRONTS



- 41) An air mass is a large body of air with the same temperature and moisture. When air masses bump into each other, you get changes in the weather and precipitation.

Air mass #1 is coming from the northwest. It is bringing

- \*cold, dry air.
  - warm moist air.
- 42) Air mass #2 is coming from the southwest. It is bringing:
- warm moist air.
  - cold dry air.
- 43) Air masses usually:
- \*move
  - stay still.
- 44) Air masses in the U.S. generally move:
- from east to west.
  - \*from west to east
- 45) If a cold air mass is over Chicago (west of us), and a warm air mass is over New York (east of us), what will our weather probably be in a few days?
- warm
  - \*cold

- 46) The boundary between two air masses is called a \_\_\_\_\_.
- dog
  - \*front
  - tornado

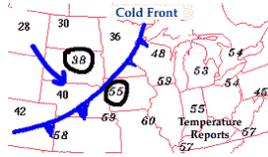
- 47) Along a front, the weather is usually:
- clear
  - \*rainy

- 48) When a cold air mass pushes a warm air mass out of the way, this is a:
- \*cold front
  - warm front

- 49) Along a warm front:
- a cold air mass is pushing away a warm air mass in front of it.
  - \*a warm air mass is pushing away a cold air mass in front of it.



- 50) On a weather map, the symbol for a warm front is:
- a line with triangular, sharp spikes.
  - \*a curved line with rounded bumps.

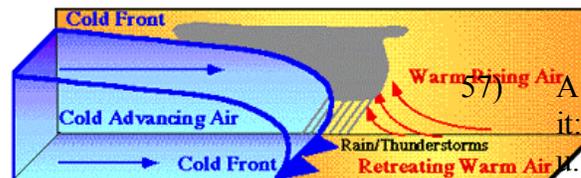


- 51) On a weather map, the symbol for a cold front is:
- \*a line with triangular, sharp spikes
  - a curved line with rounded bumps.

- 52) A cold front will bring:
- \*colder weather.
  - warmer weather.

- 53) In addition to a change in temperature, fronts often bring:
- \*precipitation
  - hurricanes

- 54) A cold front will often bring:
- \*a period of steady rain or drizzle, followed by warm temperatures.
  - Thunderstorms, or brief heavy rains, or showers, followed by sunshine and cool weather.



A COLD FRONT

The cold air mass wedges into the warmer air mass ahead of it, the lighter warm air is lifted upwards by the denser cold air and if

enough water vapor condenses, clouds develop

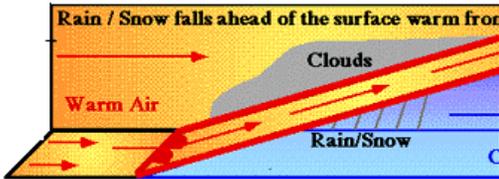
Due to the steep slope of a cold front, a sudden rising motion is often produced, leading to the development of showers and occasionally severe thunderstorms.

- 55) The sketch above shows how a cold front advances. It hits the warm front head on causing:
- The warm air to get pushed up quickly.
  - The warm air to cool quickly as it is pushed up higher in the atmosphere, where the temperature is cooler
  - The moist air from the warm front to condense quickly, causing a sudden downpour, storm, or shower.
  - \*All of the above

- 56) The sketch above shows that a cold front causes a:
- \*A very fast change in temperature.
  - A slow and gradual change

- 57) A cold front brings with it:
- A long period of rain
  - \*A short period of precipitation (though it might be heavy)

- 58) The weather change associated with a cold front is:  
 w. \*very rapid  
 x. very gradual.  
 A WARM FRONT



WARM FRONT—Lighter, warm air is lifted up over the cold air in a gradual way. As the air rises, it cools, and if enough water vapor condenses, widespread clouds and precipitation develop. As the front gets closer, the clouds thicken and eventually light precipitation begins to fall. Because the upward slope is gentler than in a cold front, lighter, steadier precipitation is more likely.

- 59) A warm front brings:  
 a. \*warmer temperatures, and often a steady rain.  
 b. thunderstorms and downpours.
- 60) On a weather map, which front is indicated by a curved line with sharp spikes?  
 a. \*A cold front  
 b. A warm front



## Cirrus Clouds

Thin and wispy, feather-like  
 High in the sky. NO rain.



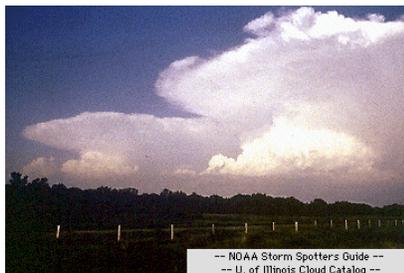
## Cumulus Clouds

Puffy cotton balls floating in the sky. Lower than cirrus. NO rain.



## stratus clouds

RAIN clouds. Steady rain or snow.  
 Form a dark, wet, blanket on the sky. Stratus means layer



## Cumulonimbus Clouds

STORM clouds. Nimbus means rain..Puffy, like Cumulus, but bigger and darker. Thunderstorm clouds

- 61) A stratus cloud looks like:  
 a. a cotton ball.  
 b. a funnel cloud.  
 c. \*a flat, gray blanket.

- 62) This cloud is low to the ground, flat and gray. It

often brings steady rain or snow. What is it?  
 a. \*A stratus cloud  
 b. A cumulous cloud.  
 c. A cumulonimbus cloud.

- 63) What kind of clouds are thunderstorm clouds?  
 a. Cumulus  
 b. Stratus  
 c. \*Cumulonimbus
- 64) Cirrus clouds look:  
 a. \*thin and wispy.  
 b. dark and dangerous.  
 c. large and puffy.
- 65) Cirrus clouds can be found:  
 a. \*high in the sky.  
 b. close to the ground.  
 c. only in summer.
- 66) Cumulus clouds are often:  
 a. \*found in a blue summer sky.  
 b. indicators of rain coming soon.  
 c. thin and featherlike.
- 67) Cumulonimbus clouds are:  
 a. \*thunderheads that bring stormy weather.  
 b. flat and gray.  
 c. high in the sky and feather-like.
- 68) A funnel-shaped cloud is a:  
 a. hurricane.  
 b. typhoon.  
 c. \*tornado.

- 69) A storm of heavy rain, lightning and strong wind is a:  
 a. \*thunderstorm.  
 b. tornado.  
 c. blizzard.
- 70) A blizzard is a:  
 a. shake from McDonalds.  
 b. \*very heavy snowstorm.  
 c. Static electricity interferes with hearing.
- 71) Clouds closest to the ground are called:  
 a. stratus.  
 b. \*fog.  
 c. cirrus.
- 72) When "nimbo" is part of a cloud name, you should think of:  
 a. sunshine.  
 b. \*rain.
- 73) What 2 types of clouds produce rain?  
 a. Cirrus, stratus  
 b. \*Cumulonimbus, nimbostratus (stratus with rain)  
 c. Fog, cirrus
- 74) Cumulonimbus clouds:  
 a. look puffy like cumulous clouds, except they are dark in parts, and usually larger.  
 b. extend very high in the sky and widen at the top like anvils.  
 c. bring heavy rain, and thunderstorms.  
 d. \*All of the above
- 75) What is not true about cirrus clouds?  
 a. They are the highest clouds.  
 b. They are thin and wispy.  
 c. \*They usually bring light rain.  
 d. The word "cirrus" means feathery.
- 76) What is not true about cumulus clouds?  
 a. They look like cotton balls.  
 b. They are sometimes called cauliflower clouds.  
 c. \*They are often seen on rainy days.  
 d. They are often seen on a blue sky, and they do not threaten rain.
- 77) On a sunny day, you won't see:  
 a. cumulus clouds.  
 b. cirrus clouds.  
 c. stratus clouds
- 78) If you are at the pool in the summer, you may want to think about leaving when you see this kind of cloud moving in.  
 a. Cumulus  
 b. \*Cumulonimbus  
 c. Cirrus
- 79) It is very unlikely you would consider going to the pool on a day with this type of clouds.  
 a. Stratus  
 b. \*Nimbostratus  
 c. Cirrus
- 80) The largest and most powerful storms are:  
 a. thunderstorms.  
 b. blizzards.  
 c. \*hurricanes.
- 81) Hurricanes start:  
 a. in the western part of the U.S.  
 b. in Europe.  
 c. \*over the Atlantic Ocean near the Gulf of Mexico and the Caribbean